

## ALASKA AS A MINING FIELD.

In some remarks published by us not long since and directed to a consideration of the proper course to be pursued by the general government in its management of our Alaskan possessions, we urged the policy of encouraging a thorough exploration of that region for deposits of the precious metals, pointing out how speedily it would be overrun by the hardy miners, in the event of either gold or silver being found there in remunerative quantities, and the government thus be relieved from the necessity of protecting the white settlers by the presence of soldiers as well as other care about the future of that country. Since the publication of that article we are in receipt of a letter from a reliable party now operating a quartz mill and mine on the island of Baranof, and in which a very favorable account is given of the gold-bearing veins in that neighborhood, these, according to this authority, being not only numerous but of good size and promise. These mines are close to Sitka, so near, in fact, that the town is included within the boundaries of the mineral district organized since their discovery.

The finding of the precious metals in this section of the country is not a recent occurrence. They have been known to exist there for many years. The Indians, at the time the country was taken possession of by the Russians, were in the habit of wearing gold and silver ornaments of their own make, the metal having been first pounded from the ore with rocks and afterwards rudely shaped by smelting. Nuggets of gold, some of them of considerable size, have been picked up or pounded from the quartz croppings at various points since the American occupation of the country, and the Hudson Bay Company, as much as ten years ago, shipped from the adjacent Prince of Wales island a quantity of gold-bearing quartz, that on being reduced was found to pay well.

The mines here alluded to are, however, of recent discovery, these lodes having been first noticed by the United States officers stationed at Sitka some five or six years ago. These parties made a number of locations, on which some work was afterwards done. But being little acquainted with this style of mining and unable to cut the gold out of the rock with hatchets, according to their notions of the business, they desisted from its further prosecution, and, upon their being removed elsewhere, the mines suffered temporary abandonment.

Some two years later parties from Portland, Oregon, visiting the country took up what is known as the Stewart mine, formerly owned by and named after Major Stewart, of the army. This party proceeded to open their lode and put up a 10-stamp mill, but the work having been committed to inexperienced hands was so badly performed that the company was forced to employ a more competent superintendent, the party now in charge, who has been compelled to partially reconstruct the mill, which, only within the past month, has been got in condition for active operations. A clean-up has since been had and the quartz found to pay at the rate of a little over \$30 per ton, the bullion running about seven-eighths gold and one-eighth silver. The ore may be considered free milling, though carrying a large percentage of sulphurets that require separate treatment.

According to the statements of our correspondent, there are, in the district where he is operating, a great number of auriferous quartz lodes, nearly all of them well formed and of large size, being easily traceable by a bold and well-defined outcrop for a long distance, and from 3 to 10 feet in width. With one exception, no ore has yet been milled from these lodes, but assays made and the prospecting done denote for them a milling value of about \$30 per ton. The natural facilities here for both milling and mining are good, there being an abundance of water, and a superabundance of wood in the district. The whole coun-

try is, in fact, so heavily timbered, that it is difficult to get about, or construct wagon roads over it, while they have rain on an average, 20 days in every month. The streams being numerous and never failing, afford ample water power for the propulsion of machinery close to the mines.

From the foregoing it would look as if they might have a considerable extent of vein mines in the locality described, enough, if not to lay a sure foundation for a great mining industry in these north lands, at least enough to serve as a starter. With a mill already in successful operation, backed by resources so considerable, we have a good beginning in this branch of mining. As there is evidently room for more mills in this district, more will no doubt soon be put up there. Indeed, with the footing it has gained, we may consider quartz mining an assured industry in far-off Alaska. It will now be able to go on and take care of itself. But this is not a rapidly expanding and aggressive industry. It is cumbersome and slow of movement, and capable of invading the wilderness but slowly. What is now required to hasten the conquest of these savage lands and people, and take from the hands of the Government the heavy charge that now rests upon them of looking after the same, is the discovery, away in these wilds, of paying placers—the swift, rough civilizers, the forerunners of enlightenment, the advanced frontiers.

But it is an awful country, this that stretches away—indeed, we don't know where! Awful in its extent—almost as big as the whole United States besides—awful in the gloom and solitude of its forests, in its mountains, enveloped in mist and flaming with volcanic fires, and in its majestic rivers flowing into the unknown: A country, the exploration of which even the California prospector should not be expected to undertake without some special aid and encouragement. We therefore here repeat the suggestion made when before alluding to this matter, that the general government extend some assistance to such of our adventurous population as may feel disposed to undertake a trip to Alaska in search of mines and more especially placer deposits. If there are any such in that country this is the way to find them, and once found such a rapid influx of brave and hardy immigrants is sure to follow as will at once relieve the authorities at Washington from any more trouble about it, and convert a now useless and troublesome dependence into a populous and self-sustaining appendage of the government. If Alaska has anywhere in all her icy wastes even a moderate extent of surface diggings, our veteran prospectors will with a little help find their way to them and make them the means of infusing life into that dead and distant Territory. With a colony of miners up there it would not again become necessary for the English to dispatch an armed vessel to Sitka for the protection of American citizens, nor would the latter have cause to longer fear their savage neighbors. Let the government furnish a vessel giving free passage to as many miners as might choose to emigrate to Alaska, carrying also their provisions free and providing means for their return, and we doubt not a sufficient number of the right kind of men would be found ready to embark for that country, and that the results of such policy would prove highly satisfactory to all concerned.—*Mining and Scientific Press.*

**COLOR OF THE ELECTRIC LIGHT.**—By the combination of the suitable chemicals during the manufacture of the carbons, or by saturation afterward, almost any colored tint may be obtained. The natural violet rays are neutralized by the addition of a few grains in each carbon of chloride of sodium, producing a yellow tint like the sunlight. Magnesia produces a very white light, and is well adapted to photography. A mixture of arsenic, on the contrary, produces a light almost devoid of chemical effect. Various proto-salts and sulphates of the metals may be so combined as to produce almost any desired color.

## IS GLUCOSE CANDY WHOLESOME?

If a manufacturer is really conscientious, he must give up the use of glucose in candies, or at least use it very sparingly. We know it will be a sacrifice, as glucose can now be had for from three to four cents a pound, while cane sugar costs about four times as much; but we are of the opinion that it is decidedly injurious, especially for those who have a tendency to dyspeptic sourness of the stomach, and this for the following reason: When cane sugar ferments, it changes first into grape sugar; it is the same with the starch in corn, wheat, barley, potatoes, etc., which, with the help of plenty of water and some heat, break up into dextrine and glucose—we say break up, as the fermentation is a destructive process, which in its gradual career of disorganization changes elaborate organic compounds into more simple ones. If the fermentation is stopped by drying the grape sugar it is the end of it for the time being, but if the grape sugar is again dissolved in water and properly diluted, fermentation will go on to a further stage, and the result will be alcohol or vinegar, according to the temperature; if this is kept down to about 50° Fah. alcoholic fermentation will take place, and every molecule of grape sugar will be broken up into two molecules of alcohol and two molecules of carbonic acid; if the temperature is above 70° Fah., acetic fermentation will take place, and the grape sugar will be broken up into acetic acid, hence two kinds of fermentation are acknowledged by chemists—the alcoholic and the acetic. Brewers always want the first kind, as otherwise they would brew sour beer. This is why they use so much ice in summer; in older times, before the use of ice was so common, they had to close their breweries during the summer, as they could not work—at least could not brew good beer. Now, in the human stomach the temperature is always above 70° Fah., and the conditions for acetic fermentation are favorable. If the digestion is vigorous the sugar is absorbed before fermentation takes place, and persons with strong digestive powers can often absorb grape sugar before it has time to ferment and become acid; but when the stomach is in the least weak or slow in its action, it has time for this, and sourness or dyspepsia is the result; such persons may be able to digest cane sugar, as this takes much longer to enter into acetic fermentation, as it must first turn into grape sugar or glucose. For these reasons it is not advisable to use grape sugar, and therefore we earnestly warn all persons troubled with weak digestion or sourness of the stomach to avoid the new-fashioned candies, even if they are called "old-fashioned molasses candies." They are most all made of glucose, and nothing else. If you want sweets, take a lump of good white or crystallized cane sugar, then you know what you are eating; but when you eat candies you do not.—*Manufacturer and Builder.*

**INDIAN STEEL.**—The remarkable metal known as wootz, or Indian steel, is now imitated with considerable success in some of the workshops of Europe, the process being as follows: Small pieces of very good forged iron or steel are put in a crucible and covered with charcoal; air is carefully excluded, and the mass exposed to heat until it turns dark gray—carburet of iron, this is easily pulverized, and in this state it is mixed with alumina and subjected for 2 long times to a white heat in a crucible, when it becomes white and brittle. If 1-16 to 1-12 of this white mixture is melted with some good steel, a very good imitation of Indian steel is said to be the result. Commercially speaking, the genuine raw steel, or wootz, comes in three forms, namely: in bullet-shaped pieces of certain weight, as they cool in the pots, and which comes from Calcutta; in cakes of two and a half pounds, from Bombay; and in cylindrical rods of about the same weight, from Golconda.

Up to the present time \$10,523,574 has been expended in the construction of the Brooklyn bridge.