

## MINING.—Continued.

Operations on the Hudson mine have not yet been resumed.

Referring to the mining law, I would suggest that prospecting licenses for one year be granted at the rate already charged for six months. No prospecting license to issue for any ground that had been under lease. The rent of areas under lease leave as at present, say \$2 per area, but if the areas were worked during the year so as to yield royalty, the rent paid so far as it would go to be credited to royalty. You would thus abolish rent for actual miners. Licenses of areas which were not worked to expire at the end of one year without notice.

Parties holding leases of areas for one year without performing any labor on them to be required to pay four dollars per year rent on re-applying for the same areas. This also to be refunded if royalty was required to be paid during the year.

That a working plan of every mine be forwarded regularly with the quarterly returns to the mines office. This plan need only be a rough sketch with measurements, etc., for each quarter, showing the location in the mine where the work for the quarter was done. Those plans would be valuable where the mine had been abandoned for some years, or where an area adjoined such abandoned mine, there would be some certainty how near it could be worked to the abandoned mine without tapping the water. It would also give better ideas of the inclination or dip of the pay streaks in veins.

I would have those plans plotted down in presentable shape in the Mines Office.

**PURE GOLD.**—It is a pleasant thought indeed, for the poor man, to know that gold is even now still growing. Mr. Brough Smyth has shown that it can be deposited nowadays in appreciable quantities within comparatively short periods. Bits of mineralized timber and beams from the galleries of the older workings in Australian mines have been found to exhibit, under the microscope, particles of gold, intermixed with crystals of iron pyrites, all through the central parts of the wood; and this gold must, of course, have gathered there from solution in water during the few years that have elapsed since the first discovery of the precious metal in America. Mr. Ulrich similarly notes that in the gold-drifts auriferous pyrites is often found incrusting or replacing roots and twigs, and samples of such gold-bearing wood, when submitted to an assay, have yielded amounts of the pure metal varying from a few pennyweights to several ounces per ton. Mr. H. A. Thomson further mentions a specimen of pyrites which had gathered in the centre of an old tree trunk, and which yielded at the rate of as much as thirty ounces. Whether the gold and the quartz got into the veins (or, rather, the fissures) laterally or from below is still a moot point among the learned in minerals. Probably both theories are more or less true. A certain amount of dissolved material may doubtless filter in under certain circumstances from surrounding rocks, and this may be the origin of a few mineral veins, both of gold or silver, and of more useful though less noble metals—nobility and usefulness being, here as elsewhere, roughly in the inverse ratio of one another. But it is almost certain, according to Professor Geikie (who ought to know), that the mineral matter which makes up most metalliferous veins came from below. There is good reason to believe, indeed, that the minerals and ores which fill the fissures were introduced into their present home dissolved in steam or hot water, or even by igneous fusion and injection. It is known that at the present time mineral matters and metallic sulphides are so being deposited in fissures up which hot water rises. It is also known that one of the richest mines in Nevada, the great Comstock Lode—a perfect Tom Tiddler's ground, from which fabulous quantities of gold and silver have been extracted—is closely connected with the seething hot Steamboat Springs, in the same volcanic district, and is itself still permeated by almost boiling water. There is something highly refreshing to the orthodox mind in this modern notion that gold—the wicked metal—has thus an origin from below, and is so intimately bound up in its first beginnings with very warm regions and sulphurous exhalations. Nothing can be more interesting than the light cast upon the appearance of gold at the surface by this volcanic Nevada region. The rock at Steamboat Springs is traversed by numerous fissures, from some of which hot water issues, while others give off only clouds of steam. On the side of these fissures a flinty incrustation is now being laid down, containing quartz crystals, iron, and other mineral matters; and in the older among them, now almost dormant as regards the hot-water apparatus, gold also occurs in small quantities. Seven miles off lies the still more ancient Comstock Lode, exactly like these modern fissures in all its main physical characteristics, but now entirely silted up throughout, and enormously rich both in gold and silver. The most interesting point about the lode, however, is this, that as the workings have descended into the bowels of the earth, the water has got constantly hotter and hotter, and now, at a depth of three thousand feet, the miners are distinctly inconvenienced by the warmth of the temperature. It is difficult to avoid the conclusion that the material which fills up the Comstock Lode was deposited there by the hot water in the same manner as at Steamboat Springs, and that the gold and silver were bred up from greater depths beneath by the semi-volcanic agency of steam and geysers. If this be so, it is easy to understand why heavy metals like gold and silver should be found so seldom in ordinary rocks, but should occur with comparative frequency in the quartz veins or other silicious deposits of open fissures, forced up to near the surface from immense depths in the earth's interior by igneous activity.—*Cornhill Magazine*.

The total tin supply of the world, according to figures furnished by W. Russell & Co., was 11,587 tons, March 31, as compared with 13,193 the same date in 1886, and 14,488 in 1885.

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