

GOLD MINING IN AUSTRALIA.

ONE OF THE DEEPEST MINES IN THE WORLD — THE "GOLDEN CITY" AND "QUARTZOPOLIS"—HALF A MILE UNDERGROUND—THE GOLD YIELD OF TO-DAY.

[Written for MASSEY'S ILLUSTRATED by our Australasian Correspondent.]

IN commencing a series of articles on matters Australian, I, a native born Australian, do not think I could do better than place before the readers of MASSEY'S ILLUSTRATED some facts and figures regarding the great gold mining industry in Australia, and more especially Victoria.

It is to gold that the leading colony of the Australias owes its great wealth and world-wide fame, and the colonists of the great Dominion of Canada will not, I trust, think that gold mining as carried on throughout this continent is in any way uninteresting. A visitor to these lands has certainly missed something when he or she has neglected to take advantage of any opportunity for inspecting some of the most important mines.

My fellow colonials will by a stretch of the imagination leave what has been described here only a few days ago as "Icy Canada" for the more genial climate that is to be enjoyed in Australia. Here in December Nature is at her best, the trees and the foliage put on the most remarkable and varied dress, the crops are about to be harvested, and in many parts of the colony the heat stands at about 117 degrees in the shade. In a short article, such as this must necessarily be, your readers will understand that the vast subject can only be very slightly sketched.

The first mining city we will visit is Sandhurst. For miles and miles the earth is nothing but quartz reefs, and in all mining centres the term "quartzopolis" is used to denote one of the leading mining districts in the colony. Time can only be spared to go down one mine here, and therefore we select the deepest mine in Australia—Lansell's 180. This mine is owned by an old gentleman named Mr. George Lansell, who is recognised as one of the pluckiest of fortune's favorites. His residence situated in the midst of his mines is a perfect paradise, and visitors are accorded every information and a thorough Australian welcome—frank, hearty and sincere. After an exchange of courtesies we are taken to the mine. First of all we inspect the beautiful machinery and the admirable arrangements.

Everything is as clean and bright as any workshop, and as yard after yard of the broad steel rope is payed out until the electric bell announces to the engineer that a "truck" of dirt is near the surface, no one watching the proceedings from this point would dream for a moment that everything outside was dirt. The machinery is to the visitor like other machinery. That is to say that it is only an engineer who would be very much interested in the question as to how the engines worked. Well, to get on with the story. We are invited up two or three flights of stairs or steps leading up to nearly the poppet heads and the mouth of the shaft. The poppet heads is that portion of the structure over the mine on which are placed the large grooved wheels over which the ropes going down the mine are worked.

The stairs are always referred to by miners as the "brace,"—why, I do not know. Well, there is a large platform around the mouth of the shaft from which radiate dozens of small tramway lines. For a time we watched the operations in silent wonder. A ring of the bell and we see coming from the

shaft a large iron frame called a "cage" in which there is a truck on wheels holding perhaps a couple of hundredweight of stone. It is all stone here, and we are told that there is less trouble because everything almost can go to be crushed at the battery. With alluvial mining however, it appears that a big lot of the earth brought up is valueless and has to be trucked away into heaps until there is formed quite a miniature range of mountains.

To get back to the trucks. The cage is stopped at the platform on which we stand and the truck is run on to one of the many tramways, thence for perhaps fifty yards along a staging until it is tipped up into the heap waiting to go under the great heavy stampers, where it is crushed into sand and runs down over blankets. The gold naturally goes to the bottom, and gets either on to the blankets or the copper plates that are inserted to receive it. The material left on the plates, etc., is then taken and washed until there is nothing left but the pure shining gold.

The din of the stampers as they crush the quartz is a little too much to listen to for any length of time, and we go back to the mouth of the shaft. I omitted to say that before reaching such an elevated position we had been given some overalls and waterproof clothing.

We are invited to take our places in one of the trucks which has been run on to the cage. There is a nervous sort of feeling when you go down a mine for the first time; and when the signal is given and the cage begins to be lowered, at what appears to be lightning speed, deep down, down into the bowels of the earth it is more than probable that the curious visitor will be sorry in his heart that he came. For sometime we can see each other's faces, but the light gets less and less until we are rushing through space in perfect darkness. One of the miners with us makes some remark, but it is probably imagination that makes us think that it sounds hollow and weird-like.

The shaft is damp, and we can fancy that we hear the drip, drip of the water at the bottom long before we can do so in reality. It seems an interminable time while we are going almost we know not whither, and there is a sigh of relief when one feels the speed slackening until at last the cage stops and we are, wonders of wonders, deep down in one of the greatest of Australian gold mines, over half a mile in the bowels of the earth, and completely shut off from all inhabitants of the earth of which we formed a part. It seems lighter below than it was 1,500 feet nearer the heavens, and we are surprised to find that the air instead of being cold is actually warm—almost hot. The mine is being worked at different parts, but all on the same principle. Tramways run from the shaft far away back into the earth. The lamps show us what a busy life it all is.

The trucks with the golden quartz run along the "drives," and seated in one of these we are rushed along through pitchy darkness until we come upon a number of the miners who are working at the "face"—that is the very end of the drive. The miners are fine men, both physically and mentally, and they have many very interesting things to tell us.

We are shown the stone. It looks common enough, but when one of the miners breaks it with his pick-head, we take it up again and see a perfect vein of gold running through it. Then the reef is shown to us. It is clearly defined and forms a solid mass of stone. The way the men work it, the reef is before you all the time. The miners are stripped to their flannels, and are now working their eight hours shift—sometimes a good deal less.

No man in Victoria—or at least, no tradesman—works more

than eight hours in the day, and the work of the miners is so heavy on the constitution that many of them are only worked seven hours at a wage of eight shillings per day. The miners suffer many complaints in their search for the precious metal—one of which is the miner's consumption. A Royal Commission has now this disease to enquire into. We only go into one drive, but the manager tells us that the earth all around is honeycombed, and men are working all over the mine, some at 1,000 feet, some at 1,500 feet, others at 2,000 feet and so on throughout the shaft. Wherever there has been work done is known as a "level." The finding of rich gold at so great a depth has put an end to a great deal of controversy, as it was one time popularly supposed that no good gold would be

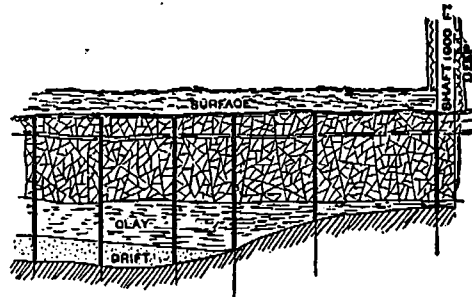


FIG. 2.

obtained at a greater depth than 2,000 feet from the surface. Now, however, Mr. Lansell has proved the contrary with a mine over half a mile deep, and others all over the colony are following suit.

We are thankful to reach the surface again. For the first time a trip down a mine is certainly a bit uncanny, but it is something to tell one's friends that you have seen where the gold comes from, and that many exaggerated ideas as to what is beneath the earth's surface are dispelled.

Mining managers are generally proud of their mines, and I can recommend any Canadian visitor to Australia to visit the leading mines before he leaves the colonies.

Perhaps the best mine in the colony to give figures about is the Madame Berry Mine at Creswick, which is in the Ballarat District. Ballarat is the greatest mining centre of the world—known everywhere as the "golden city," and justly entitled to its name. If ever there were streets paved with gold it must have been in this fair Ballarat, which in the midst of all its gold mines is also a city of trees.

Creswick is a great mining district, and the Madame Berry is one of the greatest mines. The difference between it and Lansell's 180, is that the latter is quartz while the Creswick mine is alluvial. Everything is the same with this exception, and, of course, the different measures that have to be used to treat the golden dirt.

Figure 1 is a photo of the mine, and represents most Victorian gold mines. Figure 2 will show how the "lead" or "gutter" containing the wash-dirt runs through the earth. Your readers will see how well defined it is and how different from the material on either side of it. As the miners take the whole of the "face" out the valuable and valueless portions are sent up separately. One lot goes to be "puddled" for the gold while the other is thrown away.

The lines down the figure are different "shoots" or shafts put in to cut the gutter while the lines across are the drives that run from the different shoots. Of course they are of different depths as a lead 100 feet deep in one place may "dip" very quickly and be half as deep again a hundred yards further on. At some depth or other, however, quartz reefs and alluvial leads have been known to run for twenty or thirty miles—that is the same vein of stone or dirt has been worked at different places for this distance.

The cost of timber every year in the Madame Berry Mine averages \$75,000, and the mines throughout the colony have so stripped the Victorian forests that elaborate arrangements have now been made for forest conservation.

The Madame Berry group has been working for about nine years. The yield of gold obtained up till June last was 271,924 ounces, worth \$5,439,480. The dividends paid to shareholders come to \$2,840,000, and the royalty on the gold paid to the Crown \$393,445. The dividends for three months just passed came to \$168,375. The total yield of the whole of the Madame Berry group since its first commencement is ten tons, two cwt. Surely that is something to think of.

The area in square miles being worked throughout the colony by mines in June was 86,760, and the yield of gold for the quarter 115,845 ounces, valued at \$3,111,910. The total value of machinery employed is \$9,317,385. The grand total of gold raised in the colony from its first discovery thirty-seven years ago up till the end of last year was 55,035,959 ounces, or reduced to other weights the stupendous and magnificent amount of 1,981 tons of solid gold. This at an aggregate value of £4 per oz. is in Canadian coin worth \$1,112,719,180. The yield during 1888 was 625,026 ounces, valued at \$12,500,520. The dividends paid throughout the colony for the last three months amounted to \$649,354.

During the last few years the gold yield in the colony has shown a decrease, but there is not the shadow of a doubt that hundreds of miles of country almost unexplored will yet be found to contain the precious metal. Your readers have now some facts and figures of the Australian gold fields and gold yields. I trust that it will not be altogether uninteresting. At some future time I may tell you tales of joy and misery that have been the result of the gold fever, of fortunes made and lost, and many stirring incidents in the sometimes maddening search for the precious metal referred to by Hood in his well-known lines:

Gold! Gold! Gold! Gold!
Bright and yellow, hard and cold
Molten, graven, hammered and rolled
Heavy to get, and light to hold;
Hoarded, bartered, bought and sold,
Stolen, borrowed, squandered, doled,
Spurned by the young, but hugged by the old
To the very verge of the churchyard mould,
Price of many a crime untold
Gold! Gold! Gold! Gold!
Good or bad a thousandfold.

Melbourne, Dec. 1889.

H. C. JONES.

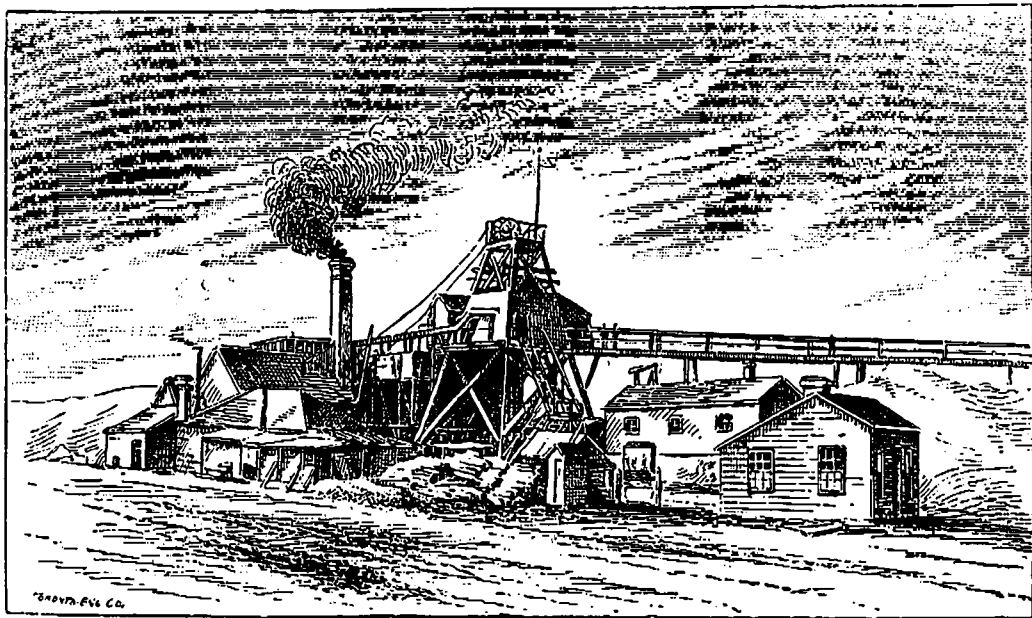


FIG. 1.—MADAME BERRY CO'S. MINE, CRESWICK.