

gotten out. In some places the strata is like clay, and you can scratch it off with your fingers. I took out my penknife and dug out the soil containing the ore. Think of mining gold with your finger-nails. Still, that is what might be actually done in some parts of this mine. In other places the gold is in a part of the gravel or crushed quartz. You could easily dig it down with a pick. Again it is found in solid quartz mixed with deposits of arsenic and sulphur. The arsenic is pure. You could commit suicide at almost every step if you wanted to, and the sulphur is so strong in places that with your candle you can burn it and fill the caverns about you with flames of brimstone. In other places the gold is found in a black rock which looks for all the world like slate, and other wheres it appears in solid rock. It is not found in nuggets, or grains, or pockets, but it seems to be a consistent part of the clay and rock, distributed in infinitesimal particles at the rate of a quarter of an ounce and upward to the ton of rock. A quarter of an ounce to the ton would be about as much as one part in 96,000 and if you will take 96,000 shot and imagine one of them to be ground up and its dust to be distributed equally through all the others you will have some idea of how the gold runs through a ton of this rock.

The average last year was only \$12 to the ton, or just a little more than half an ounce to the ton, or about one part in 48,000. Still, it is out of these low grade ores that most of the product of the world's gold is coming today. The ore of this region is so easily gotten out that it can be mined at a great profit. The rock of the Golden Gate mines is said to be much richer than that of the Mercur, but it is mixed with arsenic to such an extent that a great loss occurs in reduction. All of the large mills about Mercur have their chemical laboratories, and at the Golden Gate there is an experimental mill in which the most expert chemists and metallurgists that money can command are at work trying to find the most economical and best methods for getting out the gold. The Mercur, as well as the Golden Gate, and all the other mines here, is run on business principles. No money is spared to cheapen the cost of production, and the cents are as carefully saved as in the Wall street counting house where the broker saves the envelopes of his correspondence to figure on. As it is, however, the Mercur still loses 17 per cent of its gold. It has mountains of refuse about its cyanide mill, and every ton of these mountains contains from \$1.50 to \$2 worth of gold. In the future some one may discover a process by which this refuse may be worked at a profit.

Think of riding down through silvery mountains on a bed of gold! It was in this way that we came from Mercur to the Utah valley. Our party consisted of Mr. John Dern, the millionaire of the Mercur; Mr. Heintz of the Rio Grande railroad, Mr. Hanson, the city editor of the DESERET NEWS, and myself. Squatting on a rock pile of gold-bearing dirt and rock worth at least \$300, holding on to the jagged stones for dear life, we flew round and round and in and out on our way down over one of the most remarkable railroads of the world. It was built in 1894, at a cost of \$150,000. It is only four miles in a straight line from the point where it begins to the point

where it ends, but it takes more than eleven miles of winding curves to make the journey. It begins at a little over 5,000 feet above the sea, and in this distance it carries you upward an altitude of almost half a mile. I have gone up the little narrow-gauge railroad which takes you from the plains of India to Darjeling in the Himalaya mountains. It is only two feet wide, and its cars are not much bigger than the steer boxes. The Mercur and Salt Lake railroad is of the standard gauge, and it has curves so short that standing on the rear of the train we could at times almost touch the engine as it flew around them. Now the engine seemed to be climbing an inclined plane and we were pitched almost straight down to the level below. We could see the line running in parallel tracks down the mountain, and it seemed as though we could easily have jumped from one track to the other, thus cutting off the distance, which by curves required several miles. As we went down we hung in places, as it were, on the sides of the mountain. We could see the great Utah valley stretched out below us, the Utah lake shining like silver in the horizon, and beyond it, on the opposite side, a wall of mountains, the Wasatch range, whose silvery peaks with their ragged edges cut the azure sky. And so we went on and on, winding in and out like a snake, now traveling toward the east, now to the west, now the south, and again to the north in making curves, until we came to the foot of the mountain. Here we stopped before a large frame building. Our cars carried us up on a trestle work, and we stood on the track and watched the ore dumped into the crushers of the Mercur cyanide mill. We were shown the various processes of reduction, and then taking the train, found ourselves in little more than an hour back home in Salt Lake City.

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### THE BATTLE OF SHILOH.

LINCOLN, Nebraska, August 29th, 1896. —The most memorable event of the week that has just closed in Lincoln was the graphic description of the battle of Shiloh by General B. M. Prentiss, of Missouri, at the encampment of the Grand Army of the Republic here. He spoke to an audience of 20,000 people. His appearance on the stand was the signal for an ovation. When silence was restored, he said he would have to abbreviate a description of the battle. He declared he knew more about it than any living man today, and that its history had never been published. There was a secret history, too. He said the battle began at 5 o'clock on the morning of Sunday, April 6th, 1862. On the evening of that day he became the honored guest of the enemy which he and his men had been fighting all day. Of the "Hornet's Nest" he said no enemy of this government got through it that day. One colonel who came nearer than any one else, paid the penalty with his life.

The speaker said he was placed in command of the Sixth division of the army of the Tennessee, and without ever having met any of its officers was conducted to that battlefield, March 25, by J. B. McPherson. After describing

the position of the Union lines, he explained that the troops were scattered because the river water was bad, and there were numerous desirable springs on the battlefield. "In that position we were prepared to march on Corinth," said the speaker, "but, by George, Corinth came to us." A little story was told about the quartermaster who smiled with satisfaction when told that there would be a battle at Corinth, and then he could account for fifteen stolen mules by reporting them lost in action.

Thirteen companies were sent out in advance of any other troops. It was agreed that General Prentiss should go out on the 6th to see what the enemy was doing. [Colonel L. C. Pace was here led forward by the speaker and introduced as one of the men.] Early breakfast on Sunday was over when a horseman approached General Prentiss and delivered the most singular message of the war. It was: "Compliments of General Moore, who says he has met the enemy, and if you will send him the rest of his regiment, by —, he will lick 'em."

Here was General Moore with a handful of men struggling with a force of 60,000 rebels. Colonel Peabody was sent to General Moore's aid. The first guns of the battle of Shiloh were fired by the army of the United States in defense of the flag in a beautiful little glade. Sherman's lines were soon struck, and the enemy poured through. General Prentiss described the gradual opening of batteries. Few officers at that time believed a battle was waging, and other generals were still in their tents. Finally General Prentiss and his troops fought their way back to the old road and formed a line known as the "Hornet's Nest," and orders were given to keep all stragglers from going through.

There has been some dispute as to what troops were there. The speaker named the following: The Second, Seventh, Eighth, Twelfth and Fourteenth Iowa, Eighteenth and Twenty-first Missouri, a portion of the Twelfth and Sixteenth Wisconsin, all of the Eighteenth Wisconsin, the Twenty-third Missouri and a portion of Hurlburt's division. The Third Iowa and the Twenty-third Missouri were in the Peach orchard, also a section of the Ohio battery, and a section of the Michigan battery, and also the Eighteenth Wisconsin. This peach orchard comprised twenty acres, but owing to the existence of small patches of peach trees many soldiers think they were in the famous orchard where dead bodies lay so thick at night.

Passing hurriedly on, the speaker told how he went to rescue the silenced Union battery. The horse of the speaker was killed under him, and three volunteer aids were killed by his side. But the guns were taken and turned upon the rebels. "There," the speaker said, "occurred the only hand to hand conflict I ever saw, and the survivor is here in this audience today."

Continuing, General Prentiss said he thought the battle was over. It was then in the afternoon and the Union lines on the right were forced toward the river. Vivid descriptions of charges followed. Mention of General Grant's name brought out cheers. General Grant rode up and said, "General Prentiss, you're still holding them."