

if we do so wisely and prudently. They are all designed for our good.

Now let us not encourage pauperism, or beggary; let us not encourage the thought that the Church or that the world owes any man a living, except it be the worthy poor—the Lord's poor—or by his honest labor he earns it. I heard a fellow one time say, "the world owes me a living and I will be damned if I don't have it." Such a man as that would have it if he had to steal it, and after a while he would have it if he had to murder some man who had riches, in order to rob him of his possessions. This is the spirit of murder and robbery. The spirit which creeps into the hearts of men to receive aims and obtain something for nothing, making them believe it is due them without honest work is, in part, the same spirit, at least it is a spirit that leads on to murder and robbery, in order that its passion might get what "the world owes" him, as he imagines. Now the world owes me a living provided I will go to work to produce it by honest labor. The earth has been good and generous to all those who have honestly labored upon its bosom, and who have sought succor and assistance from it. It has been a good mother. It has yielded in its strength for the good of man when he has put his labor upon it industriously and faithfully; such have reaped their harvest in its season and have partaken of its fruits in abundance. Let us seek then to obtain our living in this way, if the Lord permits us to do it; and if He calls us to any other business let us attend to that as faithfully as we would attend to the cultivation of the soil if we were permitted to occupy ourselves in that direction.

God bless you in my prayer in the name of Jesus. Amen.

THE GOLD MINES OF BOLIVIA.

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La Paz, Bolivia, June 20, 1898.—Bolivia and Peru are among the richest mineral regions of the world. Bolivia has produced more than \$3,000,000,000 worth of silver. She now stands third among the silver-producing countries, and if what American mining prospectors here tell me is true, she bids fair to soon come to the front as a rich gold territory. I went out yesterday to watch the week's clean-up of a little placer mine which belongs to a number of Bolivians of La Paz. The diggings were on the Chugulagullo river, which runs by the city not two miles from where I am writing. This river has cut a gulley several hundred feet deep in the side of the plateau or basin in which La Paz is situated, and above the cut a high wall of gravel extends to what is known as the Alto, far above the city. It is in this gravel that the gold is found. A score of Indians were at work digging down the hill, carrying off the gravel in wheelbarrows and dumping it into troughs or sluice boxes through which water from the river was conducted. On the bottom of the troughs were iron ladders or frames so laid that they would catch the heavier parts of gravel and gold as the water carried the dirt on into the river. There was no quicksilver used, and the miners depended entirely on the weight of the gold to catch the particles as they went through. Shortly after I arrived the water was turned partially off and the gravel panned for gold. The panning was done by three Indians, who sat with their bare legs in the water on the sides of the sluices and dipped the gravel up into wooden bowls just about as big as those which we use for making bread or chopping hash. These bowls are the gold-washing pans of the

Indians. They are called bateas, and are to be found in all the mining regions of Peru and Bolivia. The miners dipped the bowls of gravel from time to time into the water and, mixing the gravel with their hands, caused the dirt to flow off. Now and then they picked up a handful of the gravel and after looking it over, cast it back into the sluice box. As they went on you could see little yellow bits of metal among the dark stones. After a while the gravel was all washed out, and in each bowl there was a little pile of gold pebbles or small nuggets. There was no gold dust, the deposits ranging from bits of pure gold the size of the head of a pin to nuggets as big as your little finger nail. One of the nuggets which I saw taken out weighed more than half an ounce, and it was worth, I was told, at least ten dollars. The total amount cleaned up was not large, but it was all of this coarse gold.

This is the character of the gold found in Bolivia. It lies in the earth not in pockets, but distributed with great regularity through the layers of gravel of some parts of the country. Now and then large nuggets are found. These same gravel beds have been burrowed into by the Indians for more than two hundred years, and out of almost the spot upon which we stood there was found, in the seventeenth century, a mass of gold which sold for \$11,200. It was sent to the museum at Madrid, where it is said one of the keepers had a dummy nugget made to imitate it, and then stole the original, and melted it up and sold it. While we were at the mine, the skeleton of an Indian was dug up. He had probably been mining here generations ago and the earth had caved in and buried him.

I went out to this mine with Mr. H. H. Strater of Philadelphia and Prof. A. A. Hard of Denver. Prof. Hard is a well-known mining engineer, and he has been brought here by Mr. Strater in connection with some Philadelphia capitalists, who have taken up a large placer claim on the Palka river, about thirty miles from La Paz, at the foot of the great Illimani mountain. They have tested the property thoroughly, and it promises to be one of the great placer mines of the world. The best hydraulic machinery for its development has already been ordered from San Francisco, and within a few months they will begin active work. The machinery is all made in sections, no piece weighing more than 150 pounds, as it must go to the mines on the backs of mules. Prof. Hard has traveled extensively over this part of the Bolivian mining regions. He tells me there is no doubt but that there is a great deal of gold here. Said he to me today:

"I believe that the whole mountain range running from Mt. Sorati, or Llampa, as it is here called, to Mt. Illimani, a distance of 150 miles, contains quantities of gold, and I shall not be surprised if there is here within a few years a gold excitement equal to the Klondike. This range forms a mountain wall containing some of the highest peaks on the globe. The formation is a curious one. It has many alternate layers of gravel and clay, and it seems to me that the whole country between here and Lake Titicaca is a sedimentary deposit which was during the ages under the sea with only the peaks of the mountains showing above it. Wherever prospecting has been done in this deposit very coarse gold has been found. The gold everywhere runs in little nuggets like that you saw, and there is little of what we call gold dust. These nuggets are very scattered. Much panning results in nothing, but almost every yard seems to contain some gold. I know of one instance where 400 yards of gravel run

through a sluice box produced 433 ounces of gold, worth between seven and eight thousand dollars. Most of the gravel will only pay when worked with machinery and on a large scale.

"Where does this gold come from, Mr. Hard?" I asked. "Are there quartz ledges in the mountains?"

"Yes, I am sure of it," replied the mining expert. "In all the gravel which I tested from near La Paz to far up Mt. Illimani I found some gold. I saw numerous quartz ledges on the Sorati mountains when I crossed them the other day, and I doubt not but that there will be extensive quartz mines in Bolivia in the future. So far the expense of bringing in machinery and the difficulties of development have been so great that the people here have not prospected for quartz ledges. In fact, there has been little systematic prospecting in Bolivia. The country has not been scratched, and the examinations made have been of the hit and miss order. The gold that could be gotten out without the aid of machinery has been pretty well worked by the Indians and Spaniards. The fact that no fine gold is found I consider an evidence that there must be somewhere very rich quartz ledges."

There are a number of Americans here who are about to start to the Tipuani (Tip-oo-wah-ne) gold fields. A Mr. Yost and his wife from Denver recently arrived, and two young Ohio men, Messrs. Scott and Rathbun of Lima, who represent the Deshlers and other capitalists of Columbus, are now there prospecting. The most important undertaking in this country is that of a Denver syndicate in the charge of E. S. and C. T. Wilson of Denver, from whom I get the following information: The syndicate has a concession of seven miles along the bed of the Tipuani river, and it has had a powerful dredge constructed with which it can dredge the river bed to a depth of forty feet and to bed rock. The dredge was made at Denver and was tested there. It was constructed so that it could be sent here in pieces, and it is now being taken into the gold region on the backs of mules and Indians. The whole dredge weighs eight tons, but no section of it weighs more than 125 pounds, while the average piece is not heavier than seventy-five pounds. The cost of getting the dredge from Denver to the mine will be more than \$10,000. It took more than six months to get it here, and its journey on to mine is attended with all sorts of dangers. It has to go over high mountain passes, to be carried along the edges of precipices. In some places llamas will transport it and at others men will have to do the work. This machine has a capacity of 200 yards of gravel a day. It will be put in the river and will excavate pits to bed rock, the gravel coming up being washed upon the dredge. The bed rock will be swept and scraped by men in diving suits, and the prospects are that a vast amount of gold will be secured. The Tipuani river is one of the most famous of the Bolivian gold streams. It was worked in the days of the Incas, and the Spaniards have had large amounts from it. The Tipuani is a rushing stream 300 feet wide, lying on the eastern side of Cordillera, about two weeks' travel from La Paz. The river flows into the Maperi and thence into the Beni, in which its waters find their way to the Amazon. In the rainy season it is a rushing torrent and the Indians cannot work in it. It is so deep that with their crude methods of panning with wooden bowls they have not been able to get to the bed rock of the center of the river, although they still wash along the edges