

gaged in a severe and sanguinary hand-to-hand fight the one mad desire of each combatant is to kill or severely maim his opponent, even though he be a man whom he has never seen before, who has done him no harm, and against whom he can have no personal animosity. Yet, notwithstanding, he seizes him by the throat and runs his sword through the most vulnerable part, or he dashes his brains out with the butt of his rifle, and then immediately throws himself upon the next man in a frenzy of rage, and cleaves his skull in twain, or nearly severs his head from his body, continuing, if fortunate in escaping serious wounds himself, to kill and maim all within his reach with fierce and violent fury, until, drenched with gore, his own and his enemy's, he only ceases his slaughter when, the victory having been won, there is no more fighting to be done.

But now the man who a few hours before was mad with rage and fury, embroiling himself in the blood of his foes, is transformed into an angel of mercy, and is helping and alleviating the pain of perhaps the very men whom previously he had been savagely fighting, giving one a cup of water to assuage his parching thirst, holding up the head of another who is in his death agony, and gently placing him down when all is over, and doing his utmost to relieve and to succor the wounded and the dying around him.

And what a spectacle must now be presented; imagination must altogether fail to realize the horrors of such a charnel-house of hideous death and agony; thousands of human beings in the last throes of anguish, heaped on each other in great throbbing piles of dead and dying; the air filled with shrieks and prayers, and, alas! with imprecations, and cries for help or for water, and the choking death-rattle sounding all around. But enough! A veil must be drawn over the gruesome scene; and the imagination must desist from attempting to picture it.

A battle at sea, or a bombardment of a fortress by men-of-war, while sometimes attended by great bloodshed, yet must necessarily be calculated to arouse less violent and raging passion and fury than a hand-to-hand fight upon land; a bombardment, however, of an unprotected coast town must be a cruel affair, and it is to be hoped that the humanity of Christendom, which has decreed that those who use needlessly cruel missiles shall be considered as being outside the pale of civilized nations, will before long, under certain safeguards, decree that unfortified and ungarrisoned open towns shall not be exposed to bombardment. For a single battle-ship, armed with great guns, could, without the slightest injury to itself, in a short time destroy the homes of thousands of peaceable inhabitants for these gigantic pieces of ordnance throw with precision an iron missile weighing a ton to a distance of more than five miles. Every grain of the powder is as large as a fair-sized lump of coal, and the roar of the great bolt cleaving its furious course through the air is like the uproar of an earthquake; the rush of air near the gun being so great that every hat not securely fixed to the head is blown off, while, if the missiles are shells charged with dynamite, the wide-spread destruction and desolation which must ensue where they strike must be appalling; churches, schools, houses razed to the ground in one great cruel ruin.

But when an answer is vouchsafed to the daily prayer of Christendom—"Thy kingdom come"—then will swords be beaten into ploughshares and spears into pruning hooks, and then will the Prince of Peace reign over a renewed world from which war has been banished, and in which many of those who

are now serving Him, and walking in righteousness, will be allotted special positions near Him, of startling honor and power.

#### A CHEMICAL LABORATORY OF THE GODS.

Iquique, Chile, July 30, 1898.—For the past three weeks I have been traveling through a vast chemical laboratory of the gods. I have ridden over miles of plains covered with salt, have visited lakes of the whitest borax, have wound in and out among mountains rich in tin, copper and silver, and now write almost in the midst of the vast nitrate fields of Chile like unto which there is nothing on the face of the earth.

Leaving the silver mining town of Oruro, Bolivia, I came down the mountains on the little narrow gauge which connects that town with the seaport of Antofagasta. The distance is 600 miles, or about as great as that between New York and Cleveland. The track is only two feet six inches wide, and the road is, I believe, the longest one of this gauge in the world. The cars are of the American style, having been built in Massachusetts. The seats on one side of the car are not wider than a kitchen chair and on the other where they are supposed to hold two, not more than thirty inches. It was, in fact, more like riding in a toy car than on the through trunk line which forms the only rail connection between two great countries. Still the road is smooth and well laid. Its ties are of Oregon pine and the stations upon it are as a rule built of corrugated iron from Europe. The fares are exceedingly high. I paid 51 silver dollars for my ticket, and in addition \$36 extra baggage, as nothing whatever is allowed free. My meals at the dining stations each cost me \$1.50 in silver, and when I stopped at night, as I was forced to do twice on the road, the hotel rates were \$4 per day. The chief purpose of the road is to carry the silver and other metals to the seacoast. The most of the cars of our train were loaded with little chunks of silver ore, and we passed train loads of tin on its way to the Pacific.

It was a ride through a desert. Shortly after leaving Oruro we entered the salt plains of Bolivia. These are of vast extent, lining the roads for hundreds of miles. In fact there are but few places between Oruro and the sea where the ground is not more or less mixed with salt, and in some districts it covers the land like a sheet of dirty white snow. Along some parts of the line it looks hard and icy, and you feel like jumping off the cars for a skate. At others it lies like gullies and again it only sprinkles the ground and a ragged growth of shrubby vegetation struggles up through it. The road runs for nearly the whole of its length through a desert valley, and this salt reaches away on each side to the hills. Here and there along the road are lakes upon which seem to be floating great cakes of ice. The cakes are not ice, however. They are borax, and in the great borax lake of Ascotan, Bolivia, there is enough borax to wash the heads of all humanity. This lake has, it is estimated, more than 100,000 tons of pure borax ready to be shipped to the markets of the world. I saw it on my left as I rode over the railroad on the way to the coast. It is about six miles square, and the borax in it lies in great masses, which, when taken out look for all the world like the finest of pure white spun silk wadded up or woven into lumps. The stuff is borax of lime, and is not so good, I

am told, as the borax that comes from similar lakes in California. Still it is of considerable value, for the lake has just been sold to a syndicate of Germans for 90,000 pounds sterling.

This lake, however, is not a drop in the ocean compared with the enormous value of the nitrate fields through which I crossed as I neared the Pacific. These fields extend north and south through this part of Chile for a distance of more than three hundred miles, and their product is so valuable that they almost pave the desert of Chile with gold. They have produced millions upon millions of tons of nitrate of soda, and it is estimated that more than twelve hundred thousand tons of nitrate will be shipped from them this year. The value of these nitrate deposits runs high into the millions of dollars. When they were in the hands of the Peruvians they were rich, and now they belong to Chile as a result of her war with Peru, she gets more than half her revenue from the export duty which she collects from them. The working of the fields is in the hands of foreigners, and more than one hundred million dollars' worth of English capital is invested in the great oficinas or factories by means of which the nitrate is taken from the earth and prepared for the markets of the world. Vast fortunes have been made out of these nitrate fields. I met in England some years ago the late Col. North, the nitrate king, and visited him at his magnificent country place at Eltham, near London. He lived there like a prince, and was at the time fairly rolling in wealth. All of his money was made in this region, and his champagne which he had at dinner, though its taste showed no evidence of the fact, was effervescent with nitrate of soda. The nitrate which the United States imported from this Iquique district alone in 1897 cost more than three million gold dollars and the amount was more than two hundred and thirty-four million pounds. The greater part of this has gone into the making of powder and high explosives, and much of it has already been used in the war with Spain. Another part of it has been sold as fertilizers, and is now enriching the soil of American farms. It is as a fertilizer that the chief demand for the nitrate comes, the bulk of the product going to Germany, where it is used in the growing of the sugar beet. Just now, however, the nitrate business is not as prosperous as it has been. A number of the factories are idle, and the markets are overstocked.

My first view of the nitrate fields was on the railroad going to Antofagasta. The deposits in that part of Chile, however, are not so good as those further north, and I have taken ship and come to Iquique, which is the chief shipping port of the best nitrate fields of the world. I have traveled from here to some of the richest fields, and have spent a day at the great nitrate oficina of the Agua Santa company, which has a capital of \$3,000,000, and which produces millions of pounds of nitrate a month. But before I describe the method of getting this product out of the earth, let me show you where these wonderful fields are. In the first place, the word fields is misleading. In conveys the idea of fences and fixed boundaries. The nitrate fields are scattered over the desert, and their only boundaries are white posts at the corners or the different properties. Outside of these there are no marks. There is not enough waste wood in the whole desert to make a line fence about a city lot. There is not a blade of grass, and with the exception of here and there a scrubby tree, all is bare, gray desolate sand, with here and there a rock has caught the rays of the sun. There are few more barren places in the world than the Chilean desert. The coasts of the upper part of the country