

## THE SILVER MINES OF BOLIVIA.

Are Among the Richest in the World—An American Enterprise and Its Wonderful Success.

Special Correspondence.

La Paz, Bolivia, Sept. 25.—From time immemorial the gold and silver mines of Peru and Bolivia—both these modern republics having been included in one province under the old Spanish regime—have been celebrated in history and tradition as the very richest in the world. During the last two centuries about \$500,000,000 worth have been taken from Peru alone; and official data proves that the single mountain of Potosi in Bolivia has yielded the inconceivable sum of almost \$2,000,000,000 worth of money since its discovery in 1545. The ores of Potosi, Cerro del Potosi and other noted mines are so rich that a yield of \$200 per ton is common, even with the primitive methods now employed. Remembering that miners of the United States find it profitable to work mineral worth only \$10 per ton, one may form some idea what these Andean treasure houses might be made to disclose in the hands of wide-awake workmen aided by modern machinery. The gold and silver fields of these countries are producing comparatively little nowadays, owing to the poverty and ignorance of the people, their poor methods and worse management. For many years numbers of the mines most famous in history have had nothing done to them beyond the reduction by modern processes of the refuse of the ancient miners.

### "AN ERUPTION OF SILVER."

Perhaps the richest region on the globe is that of Potosi, the name itself signifying "An eruption of silver." And the mountain is well named for it is broken out all over with precious metal, like a well defined case of smallpox. More than 5,000 tunnels and openings have been made in it, every one of which has produced gold, copper, iron,

lead, tin, quick-silver, zinc, antimony or some other mineral, and silver in greatest abundance. Gold has been found in many places but has never been extensively mined, being much harder to get at by the processes in vogue, while silver is so plentiful that the people can afford to expense with the more precious but troublesome metal. To this day big nuggets of pure gold are occasionally picked up by some wandering prospector and these bring a higher price when sold as curios than the value of the bullion. Years ago Potosi received its greatest boom by means of a stroke of lightning, which deluged a mass of solid gold from some unknown cliff away up the mountain side and dropped it at the feet of a group of miners in the vale below. For a long time this mysterious nugget was the wonder of the world; then it was sold at a fabulous price to the royal museum at Madrid, where it may still be seen. Early in the seventeenth century the city of Potosi boasted more than 100,000 inhabitants, but today it has hardly 20,000. Of late years its mines have been comparatively neglected, so that the output of them all does not exceed \$2,500,000 a year. If the spirit of revolutionary war remained "cold" long enough for capitalists to feel secure in investing their money here, and if roads are constructed so that the products of interior Bolivia may find an easy

### OUTLET TO THE SEA

and proper machinery for working the mines find ingress by the same means a renaissance may occur which will remind the world of the El Dorado of olden times.

At present the most prosperous mining enterprise in Bolivia is a purely American one, carried on exclusively by United States money and machinery, and is owned by M. W. H. Christy, a young millionaire of Boston, Mass. His principal mine, of silver-lead ore, lies at the base of Soroto, the great mountain near the southeastern shore of Lake Titicaca, which is one of the grandest snow-capped giants of the Andean system. He had also some exten-

sive smelting works, and has been granted by the government a monopoly of the smelting business in Bolivia for a period of 15 years. He has imported a diamond drill from Chicago, and the president gave him the exclusive right to use such a machine in the so-called republic for 10 years. All this business, of which Mr. Christy is the sole owner goes under the general name of "Empress Titicaca" and includes not only one of the most extensive silver-lead mines known to man, and the drill and smelting works above mentioned, but several smaller silver mines in the adjacent region and the only coal mine in Bolivia. The latter, in a comparatively treeless country where only the fuel from earlier times has been llama-dung and a species of fungus, a mine of good bituminous coal is worth about as much as so many loads of gold. The Indians of these high altitudes use llamas exclusively for beasts of burden, and the general cure-all among them for any injury or ailment to which the queer little animals are heir has been petroleum for external application. It is a very expensive remedy, however, for these poor Indians, the most ignorant of the world, pay \$1.50 per gallon in La Paz, and goodness knows how much more in remote districts. An Indian coming through the untraveled portion of the Soroto region one day, came upon a pool of greasy mud, which he applied to an ailing llama with the very best results. In course of time the story spread and Indians from far and near brought their animals, until the place became a regular llama sanitarium. Thus it reached the ears of Mr. Christy's men. Their intelligent prospecting discovered the coal beds aforesaid, and later the general manager of the "Empress Titicaca" found the coal and sunk an oil well. One of the first things Mr. Christy did after securing the monopoly of the smelting business for a term of years, was to purchase the accumulation of dumps, or "tailings" from many of the old Spanish mines, more than half

### A MILLION TONS

of which were piled up near the shore of the lake, to be used as a reserve for the smelters. At present the Soroto mines are providing a daily output of 500 tons of silver-lead ore, with an average yield per ton of 37 per cent lead and 20 ounces of silver. Following the general rule of this country, the ore increases in richness as depth is gained; fortunately being so situated as to be worked entirely by tunnels. As the

works of nature are on a grander scale here than elsewhere, so are the deposits of mineral wealth greater in comparison and the main tunnels of the "Empress" are run parallel to one another, on a vein of solid metal 50 feet wide, gaining a descent of 2300 feet in a run of the same distance, cutting a hundred cross-veins, some of which are 24 feet wide. This mine covers a total superficial area of 1,300,000 square meters, guaranteeing enough galena for the uninterrupted function of the smelters for many years to come. I have these figures from Mr. August Stumpf, the manager and general man of business of the "Empress Titicaca."

### GREAT WEALTH.

The ore bearing districts wherein Mr. Christy's property is located embraces an area of 60 square miles, or more, with great surface indications of mineral wealth throughout. The heavy outcroppings of the veins are oxide and hydronate of iron. At the depth of about 10 meters permanent ores of argentiferous galena are found, with pyrites, carbonate of lime, sulphate of barite, and some quartz from the crossings of the veins. The average yield of the outcroppings has been 13 ounces per ton. More than 500 veins have been marked out to be cut by tunnel which has already been run 10,000 feet on an average depth of 1,500 feet below the outcroppings. The coal mine is only 14 miles from the lake and has an area of 10,400 square meters. The proximity of the property to the lake and the railroad greatly increase its value, because easy and comparatively cheap transportation is thus afforded. Very much of Bolivia's wealth is not available on account of lack of transportation. Since Chile has seized her sea-coast, the country has no outlet for her own by which to reach the markets of the world. At the best, transportation to the Pacific is over the passes of the Andes and across the desert; and when arrived at the port there are no facilities for landing or loading cargoes. There is a long and difficult route to the Atlantic, across mountains, woods and plains to Buenos Ayres. And another through the heart of Brazil; but both are dangerous and very expensive journeys. The same reason prevents the incoming of proper machinery for working the mines. Today, as in the old times, Bolivian ores are mostly extracted from the sulphurated zone and are not suitable for amalgamation, which has been, and still is, the only system of treating them. The people have no knowledge or conception of operating with purifying furnaces and other modern inven-

tions. These great quantities of ores, from 50 to 200 ounces of silver per ton, entirely worthless today, can be bought at a low price, for this kind of metal does not yield any profit if sent to Europe, freight to the coast being too costly. Now that American enterprise has started a home market for all this that was formerly wasted, the mining industry in Bolivia ought to receive a new impetus. The mills of Potosi in which ores are crushed, are fair samples of the primitive methods employed here in the richest mines. The best of the mills are rude affairs, beside which the most old-fashioned home-made cider mill one might find in the United States would look like a dainty piece of cabinet work. A Bolivian arrastra, as the

### CRUSHING MILL

is called, has great stone wheels attached to the ends of a horizontal bar moved by an upright shaft propelled by an ax, a mule, or a couple of barelegged Indians. Thus the stone wheels revolve in a sort of rude trough into which the broken ore has been tumbled, moving slowly around, crushing perhaps half a ton of ore in a day, while the mills of California and Nevada would crush twenty times as much in as many hours, and with little more expense. From the beginning of the work to its end the crude and slowest methods are employed, and even by those processes the laborers are few and inefficient. In early days the Indians were compelled, sorely against their will, to work in the mines for the benefit of their conquerors, and were rewarded with the most cruel treatment. When the enforced labor could no longer be controlled, the mines fell into comparative decay, and the Indians of today doubtless retain a memory through tradition of the wrongs and sufferings of their ancestors and cannot be induced to work with any degree of energy.

Powder or other blasting material is rarely used in Bolivian mines, the ore being broken out of the veins by manual labor. The tambores or ore-carriers, put it into raw-hide sacks, sling it on their backs and carry it out of the depths, climbing cautiously by perpendicular logs that have been notched to go holding-places for the hands and feet. Then it is dumped on the ground, where Indians, sitting down, pound the lumps into pieces suitable for the crushing mill, where the stone wheels finally reduce it to mud by the slow process above described. Afterwards it is treated with quick-silver, and at last a little pure silver is obtained and run into bars for transportation. By this

**Hall's Vegetable Hair Renewer.** A high-class preparation. Always restores color to gray hair; stops falling hair; and makes the hair grow.

Sold for 50 years. If your druggist cannot supply you, send \$1.00 to R. F. HALL & CO., NASHUA, N. H.

process a great part of the silver is lost, together with much of the quick-silver used in the work of amalgamation. Where the primitive process yields a profit of say ten dollars a ton, the methods of the United States miner would make it yield at least five times as much. He would hoist the ores by machinery instead of by man-power, and would use machinery for reducing it to powder, thus allowing none to be wasted and getting out a much larger quantity in a given time. After the reduction he would extract the silver from the rock in such a way that not

a grain of it would be lost, and all the quick-silver used would be carefully preserved to be employed for the same purpose over and over again.

FANNIE B. WARD.

### Domestic Troubles.

It is exceptional to find a family where there are no domestic ruptures occasionally, but these can be lessened by having Dr. King's New Life Pills around. Much trouble they save by their great work in Stomach and Liver troubles. They not only relieve you, but cure. See at Z. C. M. I. Drug Store.

# The Store WHERE THE Best Values ARE TO BE Obtained

FOR NEXT WEEK ANNOUNCES IMPORTANT SPECIALS THAT ARE BOUND TO STRIKE A RESPONSIVE CHORD, AS THEY PAVE THE WAY TO GREAT ECONOMIES. DON'T MISS READING A SINGLE ITEM.

## Monday.

Starting at 9 o'clock in the Morning.  
We'll sell one more case of the 16½c FLEECE LINED KIMONA FLAN-NELETTES, double width, in all colors and designs at (per yard)—  
**9 cts.**  
The best patterns will go first.

## Childrens Stockinet CAPS.

The popular cold weather headwear for small boys and girls, in a great variety of styles. Here's a line of them specially reduced for this week. Large variety of nobby styles, made of heavy wool and fairly seamy, best 40c styles, on sale at (each)—  
**25 cts.**

## Monday.

Starting at 9 o'clock in the Morning.  
We'll sell 50 pieces WHITE ENGLISH LONG CLOTH, 12 yards in each piece, regular price \$1.50, a bolt, for (per bolt)—  
**99 cts.**

**ESTABLISHED 1864**  
**F. Auerbach & Bro.**  
**ONE PRICE TO ALL NEVER UNDERSOLD**

## Monday.

Starting at 9 o'clock in the Morning.  
We'll sell 10 bolts Silver Bleached, all LINEN TABLE DAMASK—60 inches wide—no dressing, fine satin finish, and this season's best designs, actual value 85c, at (per yard)—  
**59 cts.**

## Our Special Lots

of **50c and 25c BELTS**  
For Ladies.  
They are worth more than double these prices, we are showing them in an endless variety of nobby styles.

## Monday.

Starting at 9 o'clock in the Morning.  
We'll sell 100 dozen Half Bleached Union Linen RES-TAURANT NAPKINS, 16 by 16 size. Dice pattern, fast selvages, German manufacture, 12 Napkins for—  
**43 cts.**  
Regular price, 85c dozen.

## Special Offerings!

This Week  
In Our Gent's Furnishings and  
Boys' Clothing Department  
Superior Values

## Exceptionally Attractive Prices!

VESTEE SUITS—neat and nobby patterns for ages 10 to 16 years. SPECIAL VALUE.....  
**\$2.00**  
SAILOR NORFOLK SUITS—New patterns and shades made with the large sailor collars—neatly trimmed shirtdoes. SPECIAL VALUE at.....  
**\$2.50**  
TWO PIECE SUITS for boys 8 to 16 years, made up in fine all wool chevrons, blue, black and mixed goods—the best value you can find. SPECIAL VALUE.....  
**\$3.00**  
KNIT PANTS SUITS—WITH VESTS for boys 10 to 16 years in fancy and striped patterns—well tailored and patterned—after men's clothing—exceptional value. SPECIAL.....  
**\$3.50**  
YOUTH'S LONG PANT SUITS—for ages 12 to 16 years—in chevrons and easiness—blue, black and fancy patterns—superior values. SPECIAL.....  
**\$4.00**  
BOYS' LONG OVERCOATS—for ages 10 to 16 years, in kerryes, oxford and brown—best values in the city. SPECIAL.....  
**\$3.50**  
BOYS' WOOL SWEATER—all colors, plain or striped. SPECIAL VALUE.....  
**\$1.00**  
MEN'S WOOL HOSE—in natural gray or black, extra value. SPECIAL PER PAIR.....  
**20c**  
MEN'S WOOL SWEATERS—Full fashioned, all colors, plain or striped. SPECIAL at.....  
**\$1.00**

## THIS WEEK'S MASTERLY CLOAK DEPARTMENT SPECIALS

**WALKING SKIRTS, \$1.50.**  
Walking Skirts in Oxford gray Kersey, have the usual seven gore flare, heavily tailor stitched Bottom, Monday and week.....  
**\$1.50**  
**CLEVER WALKING SKIRTS, \$3.50.**  
In Scotch worsteds, navy blue, gray, tan and black, 7 gore flare, three straps over hips, these skirts were bought to sell at \$5.00, Monday and week at.....  
**\$3.50**  
**Sale of \$6.50 and \$7.50 Skirts at \$5.00.**  
150 dress and walking skirts, bought from one of New York's foremost skirt makers, at a price that barely covers the cost of materials, in plain and fancy mixtures, neatly trimmed, all sizes, at.....  
**\$5.00**



## DRESS AND WALKING SKIRTS.

BETTER STYLES, BETTER ASSORTMENTS  
And Lower Prices Than Ever Before.

**Now Peau De Soie Silk Dress Skirts at \$6.95.**  
Made with 4 fluted ruffles, trimmed with two rows of taffeta Ribbon, each end headed with silk Rushing, fancy near silk drop skirt, a novelty, at.....  
**\$6.95**  
**HANDSOME NEW DRESS SKIRTS, \$10.95.**  
Two very elaborate styles, in Black Broadcloth and granite, plaited and fagoting trimmed, perfect fitting, \$15.00 values at.....  
**\$10.95**  
**FINE NOVELTY DRESS SKIRTS, \$15.00.**  
These dress skirts are exceptionally well, the materials are fine Blamine and Voiles, trimmed with 6 one-inch fibre Braid. Special at.....  
**\$15.00**

## MILLINERY! MILLINERY!

If you want a "fetching" Hat, of striking style, choice materials, handsomely trimmed—your'll find just what you want in Our Millinery Parlors. The season's choicest models in Dress Hats and Tailored Hats, trimmed with that incomparable style which is characteristic of our creations at a wide range of prices. A complete and

### COMPREHENSIVE DISPLAY, RICH IN GOOD VALUES.

**FALL AND WINTER DRESSES for MISSES AND CHILDREN.**  
Perfect tailored dresses made of the most popular well wearing materials in exquisite styles that appeal to the artistic sense. It is wasteful to miss this opportunity if in need of Children's Dresses.  
Misses' Dress in sizes 6 to 14 years, made of heavy Outing Flannel in small flared, with ruffle over shoulder and trimmed in small pearl buttons a splendid school dress at \$1.00.  
Misses' dress in sizes 6 to 14 years, made of blue or brown cardinal, navy, blue or brown, lined throughout, an excellent \$2.50 dress for this week at.....  
**1.95**  
Misses' dress in sizes 6 to 14 years, made of fancy wool suiting, elegantly trimmed in velvet, sash-tie braid and buttons, a splendid \$4.00 dress, don't miss it at our this week's special price each.....  
**3.00**



## More Great Dress Goods Values!

The Tempting Quotations for Next Week Again Illustrate our Ability to Quote Sterling Values, as Trade Tempters they are Unmatchable. The more you study them the more you will be impressed.

**BLACK DRESS GOODS.**  
\$1.00 VALUES: BLACK VOILES, 44 in. wide, dependable blacks, sheer transparent effects, shirtdoes the dirt and dust easily. Monday, Tuesday and Wednesday, per yard.....  
**75c**  
\$2.00 VALUES: BLACK ZEPHYRUS, 56 in. wide, long haired satiny effects, so much in vogue this season, perfection for tailor made gowns and skirts. Monday, Tuesday and Wednesday, per yard.....  
**1.48**  
**EXTRA SPECIAL.**  
500 yards Black Peau de Soie, soft and durable, excellent black and worth, \$1.35. Monday, Tuesday and Wednesday, AT (per yard).....  
**98c**  
**LINENS AND DRAPERIES.**  
Splendid Values in Linens and Draperies.  
The crowds found at our Linen and Drapery Departments the past week give evidence that we are giving the best values for the least money. Some special leaders for this week are quoted:  
60 pieces all linen Glass Towelings, in blue, white and red and white checks, 18 values, as a leader for this week, per yard.....  
**94c**  
60 white Figured Linen Damask Lunch Cloths and Squares, plain, hem-stitched or with drawn work, size 32x32, 35x36 and 36x45, values up to \$1.60. Sale this week at.....  
**59c**  
40 pair Fluted or Ruffled White Swiss Curtains, 2 yards wide, 18 inches wide, value \$1.50, as a leader for this week, per pair.....  
**85c**

## Our Dress Making Parlors

The most popular in Salt Lake and the only department in the city that makes a specialty of designing and fashioning the latest modes of Ladies' Gowns, Ball and Evening Costumes and Fancy Waists at POPULAR PRICES, all under the supervision of Madame Hawthorne, who is justly acknowledged one of the Premiere Modistes of the West.

### POPULAR PRICES AND ALWAYS PERFECT FIT.

**Winter Underwear.**  
Note our next week's special Price Reductions on Ladies' High Grade Winter Underwear.  
Ladies' fine Silk and Cotton mixed Union Suits in the celebrated "HARVARD MAKE" in cream only, all sizes, this is a superior \$2.50 grade on sale at, a suit.....  
**1.95**  
Ladies' heavy fine wool Jersey ribbed vests and pants in white or natural gray, the best \$1.25 quality to be found anywhere, goes this week at, each.....  
**85c**  
Ladies' fine Cashmere ribbed natural gray vests and pants, a very serviceable, warm underwear, in good 90c grade, offered this week in all sizes at, each.....  
**69c**  
Ladies' extra fine quality Silk and wool mixed non-shrinkable Union Suits in the "HARVARD MAKE," come in natural gray or cream, the best \$5.00 grade, goes this week at a suit.....  
**3.50**  
Ladies' fast black, heavy weight Tights, in open or closed, all sizes, a superior 75c grade on sale at a pair.....  
**50c**

## Our Shoe Department



## Fine Footwear At Honest Prices.

IT DOESN'T PAY TO BUY POOR FOOTWEAR, WHEN YOU CAN BUY "OUR WARRANTED TO WEAR WELL SHOES" AT PRICES OTHERS ASK FOR INFERIOR GOODS. ASK TO SEE OUR SPECIALS FOR THIS WEEK.  
Ask to see LADIES' FELT FOXED LACE SHOES, \$1.00 VALUES, for.....  
**79c**  
Ask to see LADIES' FELT FOXED SHOES, Lace or Button, \$1.35 VALUES, for.....  
**\$1.10**  
Ask to see LADIES' FELT NULLIFIERS, red or black, \$1.15 VALUES, for.....  
**89c**  
Ask to see MISSES' SLENDID QUALITY KID or CALF LACE SHOES, \$1.65 VALUE, for.....  
**\$1.35**  
Ask to see LADIES' FINE QUALITY KID EXTENSION SOLE SHOES, \$2.75 VALUES, for.....  
**\$2.15**  
Ask to see LADIES' EXTRA FINE QUALITY KID, EXTENSION SOLE SHOES, \$3.00 VALUES, for.....  
**\$2.65**  
Ask to see the best \$3.50, \$4.00 and \$4.50 shoes for Ladies ever sold in Salt Lake.  
Ask to see the best fitting, best wearing "Rubbers" made, (every pair guaranteed,) at the very LOWEST PRICES.