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(See page 20.)

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THE MINING AND METALLURGICAL JOURNAL

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THE CUBAN QUESTION.

That sentiment in the United States in favor of Cuba's independence, is nearlyuniversal among the people, has been manifest from the inception of the insurrection. It cannot have been otherwise unless the love of freedom has declined in this country and is on its way to extinction. The general feeling, too, is that the government has not acted with the proper spirit towards the Cuban patriots. Expressions of sympathy are consoling and may be encouraging to a people struggling for freedom, but substantial aid is what is wanted. Recognition of bellicosity would have afforded aid, but it will be necessary to provide against expansion or contraction that will be detrimental to the business interests of the people. Saying this does not indicate unjust sentiment. What they will do in their own interests has been too many times expressed in their actions. No business in the world is so dangerous as money changing, a fact proved by all the history there is of the human race. It is true that business of all kinds must be continued on principles unchangeable by philanthropic conditions, but because this is so there should not be that capacity and hard-heartedness which peculiarly characterize the banking and money changing business in Spain and its branches in the United States.

GUARDS NECESSARY AGAINST ABUSES.

Should the scheme to retire the greenbacks, and confer on National banks the sole power to supply the country with paper money, be adopted, it will be necessary to provide against the expansion or contraction that will be detrimental to the business interests of the people. Saying this does not indicate unjust sentiment. What they will do in their own interests has been too many times expressed in their actions. No business in the world is so dangerous as money changing, a fact proved by all the history there is of the human race. It is true that business of all kinds must be conducted on principles unchangeable by philanthropic conditions, but because this is so there should not be that capacity and hard-heartedness which peculiarly characterize the banking and money changing business in Spain and its branches in the United States.

DOES GOLDISM CIVILIZE?

Advocates of the single gold standard often say that gold is the measure of exchange in civilized countries and silver the standard money in uncivilized, half-civilized, or to be more moderate, in nations not in the front rank of advancement; and, we may draw the conclusion from what they claim that gold has a talismanic influence in promoting the progress of civilization.

If this is so what a misfortune it has been that its influence in the direction named was not effective, since that by which the world groped along in ignorance of what would have caused mankind to reach the highest possible degree of civilization, if not at hand, certainly with a far greater rapidity.

Except discoveries in electricity, chemistry, mechanics, in destructive weapons of war, and perhaps in the unions of the elements in the world, there is now no more apparent civilization than there was eighty years ago when the gold standard was first adopted by any nation. There has been no great improvement in business, nor social morality, nor regard for human happiness, nor greater literary ability than there was when Great Britain excluded...
silver as a standard of value and made gold the autocrat in all business and monetary affairs.

What nation, whether in Europe or America, has advanced so rapidly in civilization as Japan? Less than fifty years ago, the Japanese walled themselves in against all the world, and to all nations that country was terra incognita. This people were ignorant of the forms of government in all other countries, of the art of general war, of mechanics, navigation, and of military and naval organization, and of the science of modern war. In less than a half century, Japan, in all these respects, has gained upon the United States, but slightly inferior to the uppermost, and she has been and is exclusively a silver nation, and no other nation is more rapidly gaining wealth. Mexico is progressing more rapidly in civilization than any other American state, and she is a silver nation.

Has civilization in Great Britain progressed more rapidly since 1816, or in Germany since 1871, or in France since 1872, or in the United States since 1873 than before? We would be glad to have a godlike point out in what respect, for we are unable to discover how that it has progressed with accelerated velocity. If to bring about a condition, which today exists in Great Britain, where one-tenth of the population possesses one-tenth of the country, it is a high degree of civilization, we concede goldism has a great civilizing power, or, as in this country where a few are very rich and many are very poor, it has not induced a towering civilization; but we do not consider such results as progress but as retraction, and as an evidence of a downward tendency toward barbarism, instead of a tendency upward toward a higher civilization and enlightenment.

The argument in support of a tilted and unequal civilization is that the world may have the benefit of a class of idle but cultured gentlemen. What benefit an aristocracy is, whether based on titles, privileges or wealth, or of all of them may be comprehensible to those who believe in human equality and the happiness of the general mass of the people. A money measure, too small for the people, would have destroyed general enterprise and discourages industry on the part of the masses, giving control of the best-profit-yielding enterprises to the few, cannot be civilizing, for oppression in every form and unnatural inequalities are absolutely incompatible with Christian or human civilization. Knowledge is an element of civilization, but it must be under control of just principle or it will be barbaric. It is a liberal money system, one that supplies adequacy to the quantity money that is civilized, instead of a narrow and pinching one. Scarcity does not make sound money, nor does a sufficiency unmake it.

LOOS ANGELES AND SAN BERNARDINO RESERVATIIONS.

Our recent editorial in reference to these Government Forest Reservations has been and will be more or less interested in mining claims within the reserves. We have a petition signed and sent on to Washington during the past week, requesting that the reserves be thrown open to mining and prospecting operations, of which the following is a copy:

"To the Congress of the United States: We, the undersigned citizens of the counties of Los Angeles and San Bernardino, respectfully represent that, whereas, there are numerous citizens of the United States who have hitherto located placer and quartz mines in and upon the San Gabriel and San Bernardino government reservations, in the counties of Los Angeles and San Bernardino, in the State of California and did not have recorded said locations prior to the issue of the proclamation by the President of the United States declaring all reserves of public lands open for all purposes of mining; and, whereas, there is a large area of said government reserves that are rich in gold, silver and copper deposits, we, therefore, respectfully petition Congress to pass an act authorizing the President of the United States to issue a proclamation declaring that said reserves shall be open to prospectors for gold, silver and copper, and to make locations and mines as upon any other government land of the United States and under the mining laws of the United States."

On account of the short notice given to those interested, we feel that it is only right and proper that we should have the petition in Washington in time to have it acted on at this short session of Congress, it was only signed by some one hundred and fifty men to whom it was desired to sign it were disappointed at not being able to do so, on account of the short time it was in circulation. As we remarked before, mining operations are on the increase and re-forestation of these reserves do not conflict. Under wise and proper regulations in European countries, both these interests go on in perfect harmony together, and the best mineral territory of Los Angeles and San Bernardino counties is too large and important a factor in our industrial development to have these large areas closed to mining and prospecting.

CORRESPONDENCE

CALIFORNIA.

ISABELLA KERN CO., Dec. 20, '86.

EDITOR JOURNAL:—A most marked revival continues in the mining industry in this section. The Old Keys mine, which has remained closed for so many years, has now passed into the hands of the Colorado Gold Mining and Development Company, a large force of men are employed on it, preparing to re-open the great bonanza, which in the early fifties made this region noted. This Company has negotiated terms for seven other mines and it is confidently expected will be employing from fifty to one hundred men next month. The developments of this Company, both on the Old Keys and Three Chimneys are very flattering.

The Los Angeles Gold Mining Company has about completed its new mill, erected on the banks of Kern river about two miles below this place, and will soon solve the problem as to whether the vast bodies of low-grade rock in the Mammoth mine at Keysville can be made to yield a profit. This Company has constructed an expensive dam across Kern river, and is prepared at short notice to give their mill the greatest capacity possessed at present by any mill in the county. This Company has also made a very complete examination of the properties in the vicinity which carry most of their gold in the sulphurates.

The custom mill at this place is kept running night and day, and Bros. have twenty miles and four wagons employed hauling rock from their Gold Point mine, seven miles east of Garden Station on the desert. The fact that a long haul seems to have settled down to a permanent business shows that they must have good mines on the desert, yet with all the noise about desert mines, I have from unbounded authority that the mines of this immediate vicinity, which bring their rock to this mill, average a yield of more than double the amount to the ton of average yield of rock brought from the desert. It is a mistake to say that any of this rock is milled at Kernville; of the two batteries occasionally in use at that mill neither are at present run on custom ore.

Truthful, Brown & Co. of Washington district, five miles below here, have had another run of sixteen tons of rock crushed from their mine and have again realized over one hundred dollars per ton, and have gone to San Francisco to inspect the mint and celebrate holidays.

A telephone line is projected from Caliente to this place and is expected that it will be continued through the South Fork Valley and to the desert.

Most of the Keysville mines have no cropplings, but a clay seam, and on narrow veins worked for high-grade ore. For thirty years most of the gold of this district has been taken out by horse areras and are met with on every hand.

The most noted sulphurite mine in this vicinity is the Horse property, near the Washington district, about six miles below here. It has never yielded more than about sixteen dollars per ton in pure gold, but it carries a high percentage of sulphurates, a portion of which are known to be very rich, and all of which have heretofore been run into the river. Respectfully,

STEPHEN BARTON.

ARIZONA.

ORO BLANCO, Dec. 16, '86.

EDITOR JOURNAL:—I congratulate you on your article relative to Camp Floyd District, Utah, in JOURNAL of Dec. 1st. Present conditions in Oro Blanco District as follows:

Montana—Mill not running, but it is reported development will be resumed in the mine before long.

Old Glory—Running 20 stamps with good results, and will start to more as soon as the water supply is ensured. Additional concentrators are being put in, and cyanide tests for making the tailings will soon be made on a large scale.

Tres Amigos—Running at a profit, although the power is not sufficient to run the mill to more than one third capacity.

Oro—Under the new management the mill is reported to be doing excellent work.

The copper veins about 8 miles east of Oro Blanco, abandoned during the Indian troubles some years ago, are now being prospected again with good results so far.

Yours truly,

C. W. KEMPTON.

COLORADO.

BOULDER, Colo., Dec. 23, '86.

EDITOR JOURNAL:—The gold camps of the world will have increased the output over last year $65,148, which may be regarded as doing first rate under existing circumstances. There has been an enormous amount of desert mining entered in every mining district independent of mineral production for the present, but next year this work will be of wonderful advantage and the output of the precious metals must necessarily be greatly
augmented. During the three years of 1894, 1895, and 6 the output was as follows:

1894. $1,241,568.70
1895. $1,853,946.28
1896. $1,649,094.28

This is a pretty good showing for a county that has received less outside capital to develop and prosecute its mining industry than any other in the great state of Colorado.

Until a time, say about two years, our mines were operated extensively by home capital, with very few exceptions. The best paying mines, with only one exception, had been those owned by the companies who had taken pieces of ground on trust paying large royalty to the owners. Such properties are operated economically, and have no high salaried agents to pay, with expensive rigs and elegant offices. The miners can and do attend strictly to business, and are making money to provide the necessary of life for the family.

The last fortnight Bob Emmitt and partner mined over 100 pounds of first class ore from their lease in the Golden Age mine; and record over $2500 per pound. The ore is magnificently rich in gold and silver, and the miners separate by panning, by means of adding quicksilver to catch the pure gold. The concentrates from such ore run about $700 per ounce.

Hoa. W. H. Patton, County Commissioner, brought down from his lease on the Victor mine, Springdale, a small batch of ore that will give him $500 clear. Mr. Patton says mining pays him better than his commission's office, and informed your correspondent that he realized from one pocket on the same vein over $5,000, and thought it was all worked out until he discovered the present chute of mineral, which he hopes will be as lucrative, and from which he may make as much money.

A. D. Allie, superintendent and part owner in the Loveland mine on Left Hand, made a big shipment of ore to the Chamberlain sampling works last week. The first class yielded 8,24 ounces gold and 2,45 ounces silver per ton. Second class ran 8.25 ounces gold and 4.75 ounces silver a ton, which would be regarded as pretty good ore if mined in any other part of Butler county.

Capital is finding its way in the developments of our properties which have been purchased by foreign and eastern capitalists and mining enthusiasts. Possibly no sale that has been made of importance is more to the point than the Emancipation property to an English syndicate by Prof. Bert Langridge. During his stay of four months in London the statement was frequently made that "Americans keep all their best mines for themselves, and only send over their worthless properties for British investors." When he returned home the opposition of securing the old mananza Emancipation and adjoining claims, and notwithstanding that he could easily have raised the capital in this country to purchase them, he has refused to send the property to his London friends, Dr. Conner and others, to handle. The marvelous richness of the mines induced others to join him in buying the properties. The Emancipation mine is a county to be one of the richest that has ever been opened on this continent; the smelter returns for eight years showing shipment that ran as high as $200,000.

Long and costly ($50,000) litigations over mines crossed closed and flooded the mine for years. Happily all conflicts are at an end and the various interests are thoroughly harmonized.

During the past two months vigorous work has equipped the properties with new buildings and machinery which will soon remove the water, and in a short time will be in full swing and once more demonstrate its right to rank as the leader in this country. The water has been "forked" to the 250 foot level and shipments have already been made from the upper levels that give smelter returns as follows:

First class ore $30,000.82 per ton
Second class ore $27,541.33 per ton
Third class ore $12,000 per ton

And as these results are from considerable tonnage shipments, the mine is steadily proving itself to be fully as valuable as the most sanguine hopes could wish.

Mr. Langridge expects at no distant day to pay dividends right along that will satisfy his "British cousins" and induce them to invest further in our "best American mines."

The great Dew Drop property at Ward is in wonderful ore. The level is one mass of sulphide mineral that runs about $1,100 by the yard as shipped to Denver smelters.

The famous "Dew Drop" mine has been run near 1,000 feet into the mountain, exposing immense bodies of mineral for concentrating and smelting, which must return to the company large dividends invested.

The mining is done by machine drills, and there is no better equipped mine in Boulder county than the Dew Drop property. A powerful home mill has been built by the management to treat the immense pile of mineralized matter the property produces, which will be started in the spring.

WM. H. PATTERSON

ARIZONA.

Iowa and Chicago parties have recently purchased a group of mines near the Cherry Creek camp, near Jerome, Ariz. A five-stamp mill will be erected. There is a three-foot vein of ore, running from $20 to $150 a ton gold.

A Kingman exchange says the Connor and Minnesota mines are both showing well in silver and gold ore. Fourteen men are now employed, but the 10-stamp mill is not operated all the time on account of an insufficient water supply. Setting tanks are now being built, however, which will permit the same water to be used several times. When the tanks are finished the mill will be run continuously.

The middle of last month, Prof. D. P. Barnhart left Kingman for the Colorado river, where he and a party of miners expect to operate a plant which the Professor assures will save every particle of fine gold known to exist in such large values in the sands of the bars and river bed of the Colorado. A plant capable of handling 100 tons of sand a day will be put in immediately. The sand will be raised by means of huge steam shovels. If this machine will do half what Professor Barnhart claims, millions of the sand of the bed of the Colorado river, from the mouth of the Grand Canon to Yuma, are known to contain large values in fine gold. No process so far tried has been successful in saving it in paying quantities.

P. A. Lefgren of St. David, in Coconino county, informed the Prospector (Tombstone) that he had struck oil Saturday, December 19th, on his place, while drilling for artesian water. The drill encountered this oil at a depth of 290 feet. It is of a dark yellowish color, about the consistency of sorghum molasses, and burns readily when ignited, and while burning has the unmistakable odor of coal oil.

The Planet-Saturn Mining Company will have their new plant ready to run by January 1st.

During his visit east, Nick Galles bought a new mill for the Chicago Gold Mining and Milling Company's property on Cherry creek.

The new Empire smelter at Rollin, near Crittenden, will give a great impetus to mining in the southeastern portion of Pima county.

W. R. Wemple came into Phoenix from the Southern Belle Dec. 19. He has about thirty men employed in and about the mill and mine. B. N. Brafich, a first class miner, is under ground at Rollin. Journal of a miner who is superintending. The amalgamator at the mill is Holly Gove, an experienced mill man, from the Smuggler Union, at Telluride, Colo. Everything about the place is moving smoothly along, and the prospects for a big camp are excellent.

Several mining deals of considerable magnitude are being negotiated in Cochise county which, if consummated, will mean extensive operations on a large scale and tend to aid in advertising our section and bringing to the notice of other capitalists the fact that within our borders some rare mining opportunities exist and but need capital to make them dividend payers.

C. D. Lane, the millionaire mine owner, it is understood is interesting himself in the purchase of some valuable properties in the Dew Drop gold district. We are not at liberty to give any further particulars, but suffice it to say that should the transfer be made a mill of large capacity will be at once erected and extended.

It is also stated that a 20-stamp mill is to be erected at Pearce within a few months, for the Commonwealth Mining company. A mill belonging to Manager Brockman, which has been in operation at White Signal, N. M., will be torn down and shipped to Pearce.

It is also understood that when depth has been attained on the Gold Cliff, which is located near the Commonwealth, the company also intend to put up reduction works. Thus Pearce has a bright and promising future.

—Tombstone Prospector.


(Special Correspondence of the Phoenix Republican.)—Although as yet only high altitudes are covered with snow, the prospector and his patient companion, Jackus Asius, are as much in evidence as at any time during the year. The roads are in fair condition, the hillsides are covered with plenty of succulent feed, and the weather has been, up to date, pushing that of Italy for first place. Consequently, the heart of the hunter and prospector is only a day's run from Jerome, and one can be at Stand in Jerome's main street for an hour or so and be convinced of the activity among the hills.

One of the most promising of properties in
the vicinity of Jerome is that of Winningham & Hull. Their mine is located near the head of Walnut gulch, about a mile from town. They have completed about 400 feet of tunnel and are now in a body of ore which promises all the more magnifying miner could wish or hope for. The property is such that Mr. Dennis Sheedy of the Great Smelting company of Denver, Colo., has by bonding it set the seal of success on another Arizona product.

Seven claims owned by Joe Tamborino and two partners, also in Walnut gulch, six miles farther south, will all prove the right thing. They have a great many of ores, all workable, leaving a handsome profit, which is applied towards the development of the properties.

Many prospects in all the incipient stages of successful prospectors are to be found in almost any canyon and gulch about Jerome. The proof of these assertions may be found in the phenomenal amount of buildings of all descriptions which have been erected in our own city of Jerome, which, as is indeed, just cause that complacent expression of conscious pride seen in the face of every Jeromeite.

Dr. Woods, who bonded the Watson mill and who has located the Cherry Creek district, has also sufficient cause for congratulations. When the doctor at first took the property it gave no inclination of what lay concealed within, because it was pointed to a white elephant in place of a producing mine, which it now has turned out to be. The mill is dropping five stamps, with a capacity for another, additional five will soon be doubling the output.

The Cherry Creek country and the immediate boundaries of Jerome offer an exceptional field for the prospector and investor. It may be safely said that we have a real poor man's country—hills and valleys, rich in precious metals, awaiting the consistent, intelligent and ambitious worker. A stake can at all times be made at a variety of employment found at the smelter, in and about the town, a month or two at such work enabling any man to prospect to his heart's content.

DAN.

Kingman papers state that the leases on the Northhawk silver mine will probably be renewed.

Benj. Gilpatrick, of Kingman, has just opened up a rich silver mine, which he calls the W. J. Bryan.

Rahl, Marinas and Elifiee have opened up on some more $500 ore in their mines in the Chemcheus mountains.

The new host placed on the Treasurer mine at White Hills, in Mohave county, Arizona, last week will be used in sinking the shaft to a depth of 1,000 feet.

The Pay-roll mine at Chloride, Arizona, near Kingman, owned by Judge Murphy, is developing into a very rich property. The ore body is long and the value high.

Thirty men are now employed on the Eikhart mine. The shaft is down 80 feet and the ore body shows a uniform thickness of 12 feet. The Temple Bar company, operating the hydraulic outfit on the Colorado bars north of Kingman, will have held its annual meeting on the occasion of the completion of the stamp mill at the Cedar Valley Mining company in Mohave county, Arizona, is now running day and night. This seems to be a good paying proposition.

Messrs. Finnegan, Jones and St. Charles, of Kingman, have taken a lease and a bond on the Lucky Boy group of mines near there. Recent assays show a value of over 1,150 ounces silver and $40 gold per ton.

P. J. McLean has received encouraging returns on assays from ore taken from the Buena Vista mine near Yuma.

This week the placer property of the Monitor Mining company, described as the Buck Kelly property, at Gila City, was sold to Sanderson & Co., of Moberly, Missouri, the consideration, as near as can be ascertained, being $25,000. The purchasers will begin work at once on a tolerably extensive scale, which will be increased in ratio proportionate to the success of the enterprise. There is an abundance of water close at hand, and the dirt is said to contain sufficient gold to make the working of it, especially on a large scale, a paying proposition. Mr. Kelly who was the principal owner of the property, is editor and proprietor of the Moberly (Mo.) Monitor.

The Mammoth is going to resume work, at least a small force commencing doing assessment work last week and the mine will be cleared out, the working shaft repaired and placed in working condition and the mill will be moved from the river to the mine.

CALIFORNIA.

BUTTE COUNTY.

A Big Sale.

The famous Cherokee Flat Hydraulic Gold Mines, with a record so far of producing $13,000,000, which has been tied up with litigation for ten years past, between the bank of California on one hand and the bondholders on the other, sold under foreclosure sale. The entire property, consisting of 1,000 acres of water ditches and thirty miles of canals for 'debris,' was bid by a syndicate of bondholders for $275,000. Court Receiver J. B. Whitcomb conducted the sale as commissioner and Attorney T. L. Blakeman of San Francisco represented the bondholders.

The principal holders of the bonds in California are Louis Glass of San Francisco, the general manager of the Bell Telephone company,行情和有 eight of bondholders for $275,000. Court Receiver J. B. Whitcomb conducted the sale as commissioner and Attorney T. L. Blakeman of San Francisco represented the bondholders.

The principal holders of the bonds in California are Louis Glass of San Francisco, the general manager of the Bell Telephone company, and David Gage of Oakland. The balance of the bonds is held in New York.

The mine is one of the largest and richest hydraulic properties in the state, and until the commencement of the Itot ginn in 1886 was worked continuously for over thirty years, employing from 300 to 400 men. It is estimated that over half of the gold bearing channel was mined, the remainder of the property being at the two gold ores showing it to be as rich as that part already mined. The right to resume hydraulic operations was recently granted by the Debris Commissioners.

INOY COUNTY.

R. B. Taylor, of Corona, who with W. A. Hayt of this city, is interested in some fine mines, has just received word from one of the mines in the Pah homogeneous district, which has a tendency to make one wish that they were lucky enough to be partners in the business.

At the present time the company has in the neighborhood of 600 tons of ore on the dump, which will average $50 to the ton. The ore in the mine is inexhaustable, and, with a good market, they say the mine would put millions of dollars into the world's circulation.

Riverside Enterprise.

Messrs. Currier and Gurius have returned to San Bernardino from an extended trip through the desert mining country. They report as far as they have been, a fairly easy work out toward Death Valley. They inspected a location made by W. E. Van Slyke, assays on which ran as high as $38,000 per ton gold. They report that the men have been working on a five stamp mill on this property, but owing to its distance from the railroad (nearly 100 miles) they are still undecided as to the best course to pursue. There are many rich mines in the Lone Star section, but it is a five days' haul to the nearest shipping point. Until there is a change in this particular, the development of the district must be slow.

San Bernardino Weekly Independent.

Beveridge Mines Sold.

The San Francisco Chronicle, of the 9th ult., contains the following:

It is stated that H. S. Gillette and Calvin J. Brown of Chicago have purchased five gold mining locations in the Beveridge district, near Independence, Inyo county. The price paid is said to have been about $250,000. While the ore runs from $50 to $100 an ton, its working has been very expensive and some of the mining work has been used to crush the rock, which has to be packed on mule back at a cost of 50c a ton to the place where it has undergone final treatment. The new owners will erect a first-class milling plant on the property.

Another paper says the price paid was $250,000, and that an improved system of reduction will be used.

The sale of these mines to men of capital should mean a great deal to Lone Pine especially, and of course to the whole county. We hope that Beverly will boom.

Inquiry at Lone Pine reveals nothing definite in regard to the reported sale. The opinion is expressed there that the amount paid is probably $250,000 to $300,000.

KERN COUNTY.

A New Johannesburg.

Randsburg seems nearer than ever an end in the growth which was started a short time ago, and now it has taken a new direction and that is in the form of establishing town sites. A new town is growing with the rapidity of a mushroom, on a school section one mile east of Fiddler's gulch, or Butt Ave. Carrying out the idea of the South African mines, this place is called Johannesburg.

One of the residents of Randsburg has found material gain liable to accrue to his portion from the sale of lots, even though his mining interests in the celebrated Rand should prove worthless and valueless. J. S. Purdy is the man who now revels in town lots, if he wants to dispose of mining claims for what they will bring on the surface. The claim of value to which the gold is in the path of the new town, is called the King of Randsburg. John Bull & Co., of San Jose, representing English money, are also heavy holders of land.

There is some question now in the minds of the townspeople whether or not there is litigation in store, the question having arisen as to the power of the government to use mineral land for school purposes. J. S. Purdy is in Randsburg now, looking after his in-


J. Grant Lyman, a Pasadena man who, with some eastern capitalists are developing some mines on the Kern river, in the Keysville district has fifteen men employed taking out good ore. They have a large stamp mill in the course of construction and expected to be dropping stamps very shortly. Their property is located near the Mammoth mine owned by the Los Angeles Gold Mining Company in this district.

The Los Angeles Gold Mining Company of this city will have completed their ten-stamp mill on the Mammoth mine, on the Kern river, near Keysville, and will be running on good ore by the first of January. They are also completing an upraise from the tunnel connecting shafts number 2 and number 3, and are taking out $20.00 ore from the upraise or air shaft.

**Mono County.**

The work at the Dunderberg Mine is progressing, the owners are now paying very flattering for the owners, who are thus early promised a valuable property in their Dunderberg enterprise. The tramway, 1,000 feet long, and 6 feet above ground, is completed. A large ore bin has been built at the upper end, and a snow shed, 150 feet long, has been erected between the bin and mouth of the tunnel, so that bad weather will not interfere with running the ore to the bin. We may look for big returns from this mine the coming year, and do not believe we will be disappointed. Superintendent Kernicke is the best of spirits over its prospects—and he knows what the mine is.—Bridgeport Chronicle-Union.

**Riverside County.**

The wages of workmen in the Santa Rosa mine and mill, close to Perris, have been reduced from $2.50 to $2.25 a day—an exceedingly low scale for this class of work.

The secretary of the museum of the California State Mining Bureau has just received some quartz specimens, rich in free gold, from the Desert Queen Mine, Virginia Dale district, Riverside county.

E. M. Sheffield of Riverside reports the discovery of a mineral paint mine in the Temescal mountains. The principal color is Venetian red and the paint will be sent to manufacturers for testing.

"The fact that an immense ledge of extremely rich ore has been opened up in a Virginia Dale mine, at a depth of 500 feet, shows that this mine may be a large scale miner does or not," said one of our prominent mining men the other day. This remark applies with equal force to the Randsburg, Fremont Peak mines and all the others. All the intelligent and systematic work so far done shows that the mines are permanent.

**San Bernardino County.**

J. W. Hixon has sent several specimens of rich copper ore from the Bullion Mine, near Mann, San Bernardino county to the California State Mining Bureau.

A Randsburg correspondent says that 200 tons of freight is now in the railroad company's warerooms at Kramer awaiting transportation to that camp.

D. M. Pyle, one of the owners of the St. Elmo Mine, near the north line of the county, has sent several specimens of free gold rock to the State Mining Bureau.

John Denair and Frank Francis, who are putting down the well on the stage road between Kramer and Randsburg, have reached a depth of 75 feet, and think they will strike water inside of 75 feet more.

The Needles Eye reports that Frank Maguire, of Needles, secured a number of large gold nuggets from the Lookout Mine last week. There is a six-inch seam of extremely rich decomposed quartz.

Col. Allen, of Picacho, has sold to G. W. Irland, of Brittlehead, New York, the Fleischmann group of six claims, the Capella group of eight claims, and the Gold Crown group of five claims. The consideration is $75,000. These properties are all located in the old Picacho district above Yuma, in San Diego county.

Senator Dorsey and mining experts, Farrish of Denver, and Bell of Scotland, completed their examination of the Picacho mines and came down the middle of last month on the conclusion that the gold mine that will be completed for the 36 mines secured by the Senator. It is a well-known fact that the present examination more than confirms the report made by expert Farrish one year ago.

**Tuolumne County.**

Around Sonora.

The mining in the vicinity of Robinson's Ferry are being extensively worked. On the South Carolina, a tunnel has been run to a depth of 1,200 feet, and cross-cutting is being done. The property is owned exclusively by California capitalists, and is W. H. Martine, of Nevills, Ballard & Martin, owners of the famous Rawhide. The property is superintended by Bert Delaray, a gentleman of large experience in mining matters. It promises to develop into a big proposition.

The Maloney group of mines, in the same vicinity are being operated on a large scale. These are also under the efficient management of Mr. Delaray. The shafts are being securely timbered, and two large hoisting works are being erected. The property is owned by Ralston & Grayson and gives every indication of soon becoming a large producer.

Operations will be resumed on the Lady Washington shortly. Superintendent Fisher has been devoting his attention to opening up the Modoc, located near the Buchanan, with very flattering results. It is confidently expected that the Modoc will take front rank with the mines of the east vein, when properly developed—Sonora Union Democrat.

**A Rich Strike.**

December 16th, work came from Chinese Camp of a rich strike in one of the old mines of that section. It was the Andrew Johnson, on the land of the Morris Brothers, and it had not been worked since 1867. A few days ago, a well-known mining man, named Thos. N. Russell, made a proposition to the Morris boys to go to work on the old mine and see what could be secured from it. The boys thought that there was little chance, but told the man to go to work if he wanted to. On Monday, December 14th, he commenced cleaning out the old shaft and among the first pieces of rock he picked out of the bottom was one worth about $30. Others of like but not equal value came soon after, and when asked the value of the rock per ton, he placed it too high for a layman to think of safely repeating. The mine will be worked this winter and so will a good many other mines in the vicinity.

The most colossal nugget of pure native copper ever found was a single boulder of that metal which was unearthed in a Minnesota mine last year. The nugget was 45 feet long, 22 feet broad and 5 feet thick. It weighed a fraction over 420 tons.
COLORADO.

Cripple Creek Notes.

Granite Hill ore runs between nine and ten ounces as a regular thing.

A steam hoist is being erected on the Yellow Bird south of town.

Vanderburg brothers last week shipped six tons of $150 ore from the Jack Pot.

Returns were received last week from 2105 pounds of ore from the Hadger Boy, sold to a local sampler. The gross value of the lot was $87, the ore running at the rate of $27.50 per ton.

Two feet of ore has been opened up in the Mammoth Pearl in a 15-foot cross-cut at 70 feet. Some high assayers have been obtained but sufficient ore for a shipment has not been taken out yet.

Daily shipments are being made from the Hunt lease on the Hallett and Hamburg on Battle mountain, and the property is fast opening into a first-class shipper. Ore is ranging from $15 to $20 per ton.

Babbitt and Keating continue to ship almost daily from their lease on the Prince Albert, and the Hoskins lease on the Beacon is getting out five tons of ore per day, that is said to be worth from $150 to $200 per ton.

Cripple Creek Mail.

(The Mining Investor.)

Pine Creek.

Eastern parties are pushing the work on the Golden Star Mine, lying between Grizzly and Scholtz Hill.

The Boomerang on Colorado Hill is showing up an eight-inch streak of smelting ore in sinking the shaft.

Staveley & Co. have started to run a tunnel in the Little Jenny Lind group. Work will be pushed all winter.

The new building of the Elk Park concentrator is all finished, and workmen are busy upon the machinery, expecting to have everything in running shape by January 1.

The ten-ton lot of smelting ore from the Ingamore, received at the State Ore Sampling Works during the past week, netted a little over $50 to the ton, the grade being about the same as the previous shipments.

Teamsters hauled down a ten-ton lot of ore last week from the Yellow Medicine on Colorado Hill to the Black Hawk Depot for shipment to the Smith concentrator at Golden. If this ore gives good average returns, they intend to commence making regular shipments, as they have a large ore body in sight.

Silverton.

The new stationary cable for the Iowa tramway has at last reached the mill; after breaking down several silds and wagons. Twelve tons of steel is a heavy load on a steep mountain trail.

Allan & Good have leased the Coming Wonder Supply. Supplies have been sent up and work will be pushed on the mine all winter. The mine is located on Anvil Mountain. Some high grade ore was taken from it two years ago.

The Royal Tiger reduced its working force last week. Pack mules cannot reach the mine without danger to the animals. The mine has a great many tons of high grade ore now awaiting shipment, but it will probably stay where it is until the snow melts in the spring.

The Bandora, on the middle fork of Mineral Creek, which has been shipping steadily up to the time the smelter closed, will continue work all winter with a large force of men. The ore that is taken out will be stored until spring, when the smelter will resume operations.

Idaho Springs.

C. J. George is here from Pittsburg, Pa., looking after the new work in the Monte Cristo mine, it having passed into his hands quite recently.

G. L. Crawford and Edwin A. Perry have been up from Denver with surveyors, and it is reported have a big mining scheme on foot for the Ute and Chicago creeks.

Yeckel and Griffith of Denver have been in camp for the past week, completing arrangements for the passing of a good gold proposition into the hands of a Denver pool.

John Thection has commenced the erection of an amalgamating mill by the Kinkead process on Clear creek where the Virginia canon empties into it. Its daily capacity will be 20 tons.

John P. Jackson and L. F. Parker of Chicago are figuring on the erection of a new milling plant at Lost Lake of low grade ores. They are visiting various sections of the district, and at the same time are figuring on the purchase of a mine in Dumont.

Georgetown.

The work on the Diamond tunnel level of the Diex-Pelican mine, so far as company work is concerned, has been discontinued for the present; the ground however is being worked by lessees under very favorable conditions.

One of the most promising gold propositions in this upper section of Clear creek county is the Plato mine, the workings of which are situated within the corporate limits of Georgetown, and consist of a shaft 40 feet in depth, in the floor of which there is a vein of 10 feet in thickness, six inches of which is smelting ore. A recent test shows its value to be four ounces gold and 150 ounces silver to the ton. There is a scheme on foot by the parties who expect to assume control of the Centennial mine to purchase and develop this mine along with the Centennial; there is also a probability that some parties will secure the Barrell-Sybil properties, which are in close proximity, and from which tests have been made which show a value of from two to twenty-seven ounces to the ton.

LOWER CALIFORNIA.

Mr. George Box, editor of the Lower California, published at Ensenada, passed week before last in Alamo and Mexican Gulch, enjoying the genial hospitality of Mr. Frank Hartzell, one of the owners of the Viznaga mine.

There were no recent developments in this district aside from the purchase of the Centipede mine by the Viznaga company. This mine is located near the Viznaga, and is one of the most promising in that section. The vein has been laid bare for a distance of 300 feet or more, and a shaft has been sunk about midway to a depth of eighty feet; showing a ledge of some feet in width. Ore from this vein assays well, some running as high as $40 a ton having been taken from the bottom of the shaft. Work has already been resumed on the mine, and several tons of the rock will shortly be milled.

Mr. Joe Peterson is sinking a shaft on the south extension of the Viznaga, and indications are good of striking the vein. Senores Ferrero and Navas of Ensenada have located a vein near the Centipede which prospect well in places. Sr. Guaderto Cabrero has also located others near by.

At Alamo the Aurora mill was in operation, as it has been for some months past, on St. David ore. Prospecting work was under way on the J. X. L. and Rainbow claims, and sixty tons of ore from the former was being milled.

Engineer Burr recently measured the Never Give-Up, where J. M. Gonzalez had found some rich rock. Some good ore has also been taken from the Scorpion, a claim in the same section.

It is reported from Los Angeles that the Aurora mine has been sold under a year's bond, and that work will be commenced after the holidays. This is good news and will probably lead to other sales in the Alamo. P. L. Griffin, who in company with W. E. Howard, is developing the Moctezuma mine, will start the Manzanita mill shortly on that contract.

It is reported that some good finds have been made in the Encinitas district, situated west of the Agua Caliente of Melendez. Sr. Ismael Sanchez, who lately returned from making some measurements there, thinks very well of the district.

MEXICO.

Chihuahua Notes.

There is great activity now around the once famous Santa Elena mines. The Kansas City Ore Company, who owned the well known Mina Vieja, have quite a force of men at work and will soon be ready to take out ore in large quantities which will be shipped to El Paso.

Jose Maria Duran y Maceya is getting out lots of ore which he is selling to the Mexican Ore Co.

At the Santo Domingo shaft of the original Santa Elena mine, owned by the Chihuahua Mining Company, a magnificent body of ore has been opened up, the shaft of eleven hundred feet. The ore is probably better than any that has been met with since the company has had the property and is high grade both in lead and silver. We learn that the Chihuahua Mining Company have leased their smelter to the Guggenheim Co., of Aguas Calientes and Monterey and will hereafter dispose of their ores to that company, who will probably soon blow in the smelter on the low grade stuff, the high grade ores will be shipped to Monterey. The body of ore struck in the shaft as above stated seems to be on a different trend of the vein than that of the old shaft, stations are being opened as the shaft descends, and fronts both north and south are giving splendid results.

Mr. Curdy, the superintendent in charge of the Santa Elena Co.'s interests at Cusihuiriachic, was in Chihuahua December 24th. He gives very encouraging reports of the output of ore that is now being taken out, much of which he says is of the highest value as silver. The output of ore has been great, the shipment in a crude state. The great trouble is the lack of freighters to bring in the ores and concentrates, which are accumulating in great abundance. Great changes have taken place in Cusihuiriachic and everything promises a prosperous season soon. "La Barranca del Cobre" is shipping out lots of concentrates, which are being handled by the
A few men have been put at work on the Goodenough mine and the force will be immediately increased to twenty men. We are also informed that a force of twenty men will be put on the Cliff mine on Byers Run at an early day.

D. Braymer, president of the Cliff Mining & Smelting company, and his son George, have purchased the King mines situated on Byers Run, formerly owned by Messrs. Hall and Haynes. We understand the consideration to be $6,000.

San Andres.

Cooper and Roberts have struck some very fine free milling gold ore in the San Andres mountains close to Dr. Blackington’s mines. Dr. Blackington, of Socorro, has some fine copper and gold mines, and is putting up a ten ton smelter.

B. Nymerier and other parties have a good force of men at work on their properties.

Doc Hughes is down 150 feet on a fine prospect containing copper, lead and a little gold and silver.

There are thirty-five men employed at the mines mentioned.—Las Cruces Republican.

Chloride Flat.

Work here is being prosecuted with the accustomed vigor, and when many claims have passed into new hands, as is usual with the beginning of a new year, there will be lively times for a while at least.

Pascual.

Martyr, Wynantgo and McKinney are working their New Albany and other claims here with satisfactory results.

George Cox is working on a copper property, which with development, may prove a bonanza for its owner.

Silver City.

The Pacific mill has closed down temporarily, but will resume operation in the near future.

Iron ore shipments from this place have been discontinued for the time being, but will be resumed shortly.

Copper Flat.

Bustle is the order of the day in this the newest mining camp in Grant county, and another Christmas has come, it will be the liveliest section in the southwest. The machinery for the new smelting plant is being delivered on the ground and the works will be pushed to completion as fast as skilled labor can accomplish it. The works will be in successful operation within sixty days it is thought.

Carlsbad.

There is but little news to record from this well known camp. All the leading mines are being worked vigorously, while those of lesser note are keeping well to the front in anticipation of lively times with the advent of 1897.

The properties owned by the syndicate, of which Col. P. H. McDermott is the efficient manager, are booming up grandly and when the gold bricks begin to come, they will continue without intermission. A large force of miners are employed on the various properties of the company, and there are many men in camp awaiting a chance to begin work shortly after the new year is ushered into existence.

Central.

This camp is unwontedly quiet for this season of the year, but it will not be long before it resumes its usual activity. A great deal of development work is being done on the various claims in the district and some very rich ore is being extracted.

The pumps are at work continually on the Texas mine and work will be resumed in the near future, when the mine will eclipse all its previous records as a producer of rich gold and silver ores.

Finos Altos.

There is much sameness in the doings of the Tall Pine camp that a reference to it seems almost superfluous. Suffice to say that everything is progressing swimmingly, and that ore is being turned out in the usual quantities.

The Golden Giant continues to produce ore of medium grade in quantity, which is being piled up in the bins.

Work on the Mountain Key is progressing favorably, and the water in the shaft is being pumped down to the 400 level, where quantities of good ore are known to exist. The shaft will be rerubbered to the next level as soon as the water is extracted. New openings will be made for stopes as the level is pushed forward and the output of ore when the 500 level is opened up and systematically worked, it is confidently expected, will exceed anything in the history of this justly celebrated though poorly managed property.

Gold Hill.

Chicago parties who have been investigating the old Southern Belle property appear to be highly satisfied with their prospect. It is more than probable that a sale will be effected.

Doctor G. N. Wood is running his mill on ore from the Fraternity and other mines which he owns here, and the results thus far have proven highly satisfactory.

Cline and Keister are stopping ore twenty-five feet from the surface on the Nancy Lee.

The Standard Company will resume work on an extensive scale with the beginning of the new year. The mill will be run on ores from the company’s mines.

A Great Turbine Power.

The new power company at Niagara Falls have now in successful operation their new power plant, consisting of four of the Lefell celebrated Niagara Type of Turbines, each of about 2200 horse power. These Turbines drive eight generators of something over 1000 horse power each; two generators being connected directly to the shaft of each wheel, one being in Opposition to the other.

This comprises the most complete and perfect electric water power plants in the world. The same company have four other of the Lefell Niagara Turbines, using in all eight of that style of wheel.
NEVADA.

Spragg and Martin Mill.

Henry Fisher came in to Dayton from Mason Valley Wednesday night, December 23rd, to spend the holidays, but was almost thrown into the Spragg and Martin mill in the valley, and reports that the mill is now closed down until warmer weather comes. The first run was on twelve tons of ore from the Spragg and Martin mine. It was taken from the dump promiscuously, without any sorting, and it is not known exactly what the returns will be. The bullion was shipped to the Carson mint this week, and, apparently, is a nice little bar. The owners of the mill are confident that it has done good work, and that the returns will be satisfactory. Mr. Fisher says that before the mill starts again new plates will probably be put in, as the ones in use are somewhat worn.—Dayton Times.

UTAH.

(Taken from Inter-Mountain Mining Review.)

TINTIC.

The last car of machinery for the new Mammoth hoist is now on the ground, and the shaft and headframe and gallow frame are nearly completed.

Joseph Fryer, formerly of Bingham, but who is now developing the Magnet claim above the Buckeye, reports the discovery in the vein of native silver.

Secretary W. J. Beattie of the Bullion Beck has gone over his dividend totals recently and has revised them to conform to the exact amount paid. The total to date, including the $4,500 paid on the 21st ult, is $2,197,000.

The South Swansea recently shipped 187 tons in one shipment, 19 tons of which was first class, running even $90 per ton in silver and lead. The entire shipment brought $7,500, equaling the amount distributed last week as the first dividend.

The recently incorporated Rabbit's Foot company, which owns the evening Star and January lodes in Silver City, has the lumber on the ground for a new shaft-house and other mine buildings. The shaft on the Evening Star is to be pushed to greater depth.

PARK CITY.

Reliable information received this week is to the effect that the Ontario is today a bigger silver mine than ever before in its history. That it goes deeper than the present deepest workings, and gets better is amply proved by the developments being made by Foreman Kervine in the three-compartment winze being sunk below the 1,500 level. At the 1,600 level four feet of rich black ore, as good as any ever discovered in the mine, has been exposed, and the indications are that this ore body will continue to improve as depth is obtained. Black ore in the Ontario means extra rich rock, and if it exists in No. 2, is almost certain to be found in other parts of the mine, and proves that the future of the property is yet in its infancy. It means millions added to the millions that the mine has already paid to its stockholders.

BINGHAM.

Jones & Eifler, the Alano leaders, will shortly make a considerable shipment of ore that ought to net them a good sum. The

Alamo since our last report of it, has materially improved, and is a property of great promise.

Work has temporarily suspended in the 200-level of the Winnemucc, owing to bad air. An uprise for ventilation, started recently, is delayed by the fact that the men were forced to quit. Air pipes were put in since which the condition has not only not improved, but candles will not burn two feet away from the pipe. Connection will shortly be made with the raise by sinking from above. The ore bodies lately opened in the 300-level of the Winnemucc are steadily holding their own, and are of great importance.

CAMP FLOYD DISTRICT.

Work on the Omaha will be resumed at an early date.

The Snowstorm company has about twenty men at work developing the property. It promises to be one of the mines of the West Dip.

A whale has been put on the main shaft at the La Gigale, and though ore is now blocked out to supply a mill whenever the spring comes.

The Fairmounts, in which Attorney Frank Pierce of Salt Lake is interested, has the shaft down forty feet, and is in the vein which shows satisfactory values.

The cyanides of the Mercer Company are now shipped to the Deutsche Gold and Silver Anstalt at Frankfurt, Germany, for reduction, the reason being that it is more profitable to the company.

A strike has been made on the Golden Reward group, but it looks as if it had been washed considerably, and does not carry very heavy values. They are growing better as the work progresses.

The Daisy is showing up something like a mine. A shaft house, bunk house, etc., have just been completed, and a whim will be put in place after the holidays. The ore body is still increasing in size as the work progresses and keeps up its average value of ore.

GENERAL NEWS.

The following statistics in regard to the exports and imports of the precious metals will be found interesting. The gold exports for October amounted to $143,168, as compared with $1,873,897 for October, 1895. The imports amounted to $27,061,938, as against $1,070,040 for October, 1895. The exports of silver during October amounted to $4,974,390. For October, 1895, it was $4,590,417. The imports of silver during last October aggregated $888,442; for October, 1895, it was $1,397,831.

Michigan Copper Mines.

Some idea of the richness of some of the copper mines in Michigan may be gathered from the fact that they have thus far, according to published reports, paid their owners dividends amounting to $70,000,000. The Chicago Record, referring to this fact, says:

"The dividend of $2.55 a share just declared by the Calumet and Hecla Copper Mining Company for the current year is especially noteworthy because it is the greatest dividend ever paid by this remarkable property. There are 100,000 shares, so that the total sum dis-

tributed among shareholders was $2,500,000.

When it is considered that the original value of all these shares was just the last amount mentioned, the tremendous earning powers of the property will be appreciated. The selling value of the stock is about thirteen times its par value.

"The year 1896 has been the most prosperous ever known for copper mining, owing to the great foreign demand for American copper. The home demand was restricted by the depressed condition of business, but this falling off has been more than made up by the demand from abroad. During the ten months ending November 1, the foreign purchasers of copper amounted to 225,000,000 pounds, nearly double that of the same period last year. This was 60 per cent. of the entire output of this country, and was drawn principally from the Lake Superior copper mines."

Mono's Mineral Deposits.

Harold W. Fairbanks contributes to the San Francisco Mining and Scientific Press the following regarding Mono county mines in an article on the Mineral Deposits of Eastern California.

In the mountains west and southwest of Benton there are many gold-bearing quartz veins, the gold being associated with pyrites and other minerals, which makes its extraction difficult. In some mines there is a notable quantity of galena and other silver ores. The country rock is granite.

A large number of the quartz veins are scattered along the scarps of the Sierra Nevadas near Mono Lake. These are mostly in metamorphosed sedimentary rocks. The rock most noticeable is the Goltia, where there is a body of ore 50 to 70 feet wide, lying between limestone and a porphyry-like rock. Gold and silver both occur here in nearly equal proportions.

A very interesting group of mines is that on Mount Scowdan, south of Mill Creek canyon and near the summit of the Sierra Neva-

das. The mineralization rises to a height of 1,500 feet, being composed of granite except on the northwest where there are bodies of quartz porphyry and siliceous metamorphic rock. The mountain is seamed by quartz veins on three sides. The gold is free in the superjacent workings together with a little galena. In the deepest workings of the May Lundy mine the free gold disappears and its place is taken by iron pyrites. Next to Bodie this is the most important gold district east of the Sierra Nevadas.

Bodie has been the great center of gold mining in eastern California, more than $50,000,000 having been produced. The gold-bearing veins are unique in many respects. Their period of formation followed the volcanic activities of Tertiary time, and in one instance the country rock has a composition so different from the other important gold deposits of California. The inclining rock is hornblende andesite, which covers an extensive area of Mono Lake and seems to be long to the same period of eruptions as the andesites along the summit of central and northern Sierras. The most important thing about the Bodie vein is, however, the fact that the vein ceased to be productive below 700 feet. The veins are divided into two classes.
Africa's Small Yield.
(Mining and Scientific Field.)

From present indications, the output of gold in the Rand, South Africa, for 1896, will not exceed, if, indeed, it equals, that of 1895. The output for October has been an abnormally large one, and even the recent September was 202,561, and for August 215-477. The increase from the beginning of the year up to the end of August had been so steady and large that it was generally anticipated that the total yield of 1895, which was 2,277,640 ounces, would be exceeded. To make up that amount this year, the output for November and December must amount to 406,685 ounces.

There has been an increase in the milling capacity of the Rand, but the average of gold obtained per ton is less. To a large extent this is due, however, to the working of lower grade ore than would formerly be processed. Upon this subject John Hays Hammond, at the last meeting of the shareholders of the Consolidated Gold Fields, Limited, in London, said: "I hope, therefore, that you will appreciate the importance of this, because you will see that it not only enables us to work ore at a smaller cost, but adds materially to the life of the mine as well. I have pointed out to you in my last annual report, and frequently referred to the subject when I have had an opportunity of speaking upon the history and future of the Rand, that the ore occurs in broad patches, and not, as some of the gold-bearing formations, and that, therefore, we must appreciate the importance of having the development work well carried out in advance of the ore body, or there is inevitable disappointment. The battery eats up, as miners call it, a tremendous quantity of ore, and it takes time to run your drives and open up ore reserves. We attribute the disappointments of many mining propositions on the Rand to the failure to adequately provide ore reserves as against the contingency of an occurrence of poor zones."

There are now 360 miles of electric railways in Europe, an increase of 125 miles in one year, says the London Engineering. The number of electric cars has increased from 3236 to 1747 in the same time. Germany has 50 miles of electric railway and 557 motor cars. Great Britain has 65 with 168 cars, Austria-Hungary has 45 miles with 257 cars. Next comes Switzerland, Italy, Spain and Belgium in that order. Russia has 60 miles but one electric line, with six miles of track and 32 motor cars. Portugal ends the list with 176 miles. Of the 111 European lines 91 are equipped with 652 cars, 30 electric railways, 35 in Germany, 12 in Switzerland, 10 in France, 7 each in England and Italy, and 6 in Austria-Hungary, etc. Of electric railways of underground current there were but three at the beginning of this year, each in London and Hungary. Nine lines are provided with an insulated central track, through which the current is conducted, eight of these being in Great Britain and one in France. The remaining eight lines are in the United States of America. Of these four are in France, two in Austria and one each in England and the Netherlands.

The introduction into Buffalo of electric power from Niagara Falls directs attention to the economic as well as the scientific features of the enterprise. The Buffalo Express has been looking into this. It finds a large saving through the trip. Germany and Hungary is hope of much greater economy with improvements in the conservation of energy during transmission. At the outset the price charged per horsepower was 24 hours in the day is $5 a year. This is much the Express claims, than the cost of steam generation in places where it has been reduced to a minimum, and where the power is used only 10 hours in the day. It is estimated, taking into consideration everything, including fixed charges, that the steam generation of 50 horsepower 10 hours daily costs $750 a year, or $55 per horsepower.

PERSONAL-NEWS ITEMS

L. E. Aubury, the San Diego assayer, paid the Journal a pleasant visit last week. Mr. Aubury expects to be in Los Angeles and will open a branch assay office here.

John Stankard, the mining man of Phoenix, Ariz., has left Yuma on a prospecting trip through the desert.

L. H. Porter, the mining man who has been on an extended trip to the Needle Mountain part of San Bernardino county, was a caller at the Journal office the 26th ult. Mr. Porter reports everything in a prosperous condition in that section of the country. Our old friend, E. S. Richards, is chief cook and bottle washer at the camp.

Hon. O. D. M. Giddis left Kingman, Ariz., for the Needles, December 26th, on business.

James A. Pollock, the bond and stock broker of Salt Lake City, Utah, gave the Journal a very pleasant call December 24th. Mr. Pollock is very enthusiastic over the Salt Lake country.

Joseph B. Huggins, formerly a Red Rover mine at Axtion, Calif., has gone on a trip to San Francisco on business.

W. Beecher has gone to Chloride, Ariz., from Kingman, to look after his mining interests there.

W. H. Dobson, Jr., of the F. F. Collins Manufacturing Company of San Antonio, Texas, arrived in Los Angeles the last of last month and was a visitor at the Journal office.

Dr. E. W. Peters, general manager of the Planetarium Mining company at Fool's gulch, near Prescott, is in that city for a few days.

Adin Alexander, a Los Angeles mining man, has gone on a trip to Randburg, Kern county, Cal., where he expects to become interested in mining.

H. C. Truesdale has returned to Phoenix, Ariz., from the Huayayama river, adjacent to which he is interested in property.

Colonel Unke Tenovers was in Chihuahua, Mexico, December 19th, from Amsterdam, and expects to remain some time in business and mining. The Colonel is a large mine owner in California, and has also valuable mining and ranch property in Mexico, which he hopes to place on the market before returning to his home.

Julian Rent, of San Diego, Calif., who, in connection with the mining of the famous placer mines in Southern Oregon, was a caller at the Journal office.

M. R. Ritchie, the big mining machinery manufacturer of Los Angeles, was at Yuma, Ariz., last week to inspect one of the new electric tramway companies in that city. The company comprising the ten stamp mill for the Golden Dream Mining company.

E. Billing, the well-known Colorado mining man, was in Prescott, Ariz., December 24th, on mining business.
W. G. Gibson, of Pittsburgh, was in Chihuahua, Mexico, the middle of last month. Mr. Gibson is one of the owners of E. R. Socorro mines, of which J. W. G. Sample is superintendent.

D. O. McKee, the mining man of Hemet, Riverside county, Calif., went down to the Southern part of the above county last week to investigate some mining properties.

J. G. Barton, who for years held the responsible position as assayer of the United Verde copper mine, at Jerome, Ariz., is expecting to leave shortly for New Mexico on mining business.

Messrs. William M. Fee and Tom Ewing have just returned to Chihuahua, Mexico, from a trip to the Gavilana Mining District, where they went to examine some mining propositions.

M. S. Yetter, of Hemet, Riverside county, Calif., who owns some valuable mining properties in that county, has gone to the northern part of San Diego county to examine some other propositions that have been offered him for sale.

James Shields, a mining man from Montana, who has been in Arizona some time, went down to Phoenix from Wickenburg December 22nd. He had been in that section looking over the mineral field.

Jose Maria Pena, a prominent mining man, is in Chihuahua, Mexico, from Cushing, Oklahoma attending to business.


De Powers and his mother, of San Diego, Cal., must lead a very lonesome life on the Cocos Island, off the coast of Lower California. She has been on her voyage on the steamship Carlos Pacheco, touched at the island with mail and supplies. This was the first word received from the outside world for over three months.

C. H. Sherburne, one of the members of the Hemet Mining and Development company of Hemet, Riverside county, Cal., went down to the southern part of the county last week to investigate some mining properties that have been offered to that company.

E. J. Lovine, the United States Dept. Mineral Surveyor for Nevada, was a caller at the Journal office the 28th ult.

Charles McCarroll returned, December 18th, to Phoenix, Ariz., after an absence of more than a year, having during that time been operating a mine for the Senator Mining company, twenty miles up the river from Yuma.

Howard Douglass, in Escondido, Lower California, the early part of the week, a piece of ore coming from the real district. It is nearly as large as a man's head and so filled with gold that it might be called a nugget.

L. H. Emerson, the mining man of Pine Lake, San Bernardino county, Calif., was a caller at the Journal office December 29th.

C. E. Conway, ore buyer for the Silver City Reduction Co., smelted at Silver City, N. M., was in Tucson, Ariz., December 16th, in the interest of his firm.

Wm. Lacy, Jr., accompanied by H. Meade, arrived in Escondido, Lower California, from Los Angeles, last week, and were passengers to San Quintin, from whence they will go overland to the mines on the gold side. Mr. Lacy stated that they thoroughly, the prospect was on its way with his brother, R. R. Lacy, a Huntington mill and other supplies.

F. L. Weller, who has some mining interests on the desert, had returned to his home in Hemet, Riverside county, Cal., has arranged things out at the mines so that his presence is not necessary to the development of his property.

E. G. Macay, president and manager of the Monticello mine at Neihart, Montana, has gone to St. Louis to arrange with the directors for the resumption of work.

F. C. Howard, of Kansas City, Mo., was a caller at the Journal office December 31st.

Our old-time friend, Arthur Hendy, formerly of Denver, Colo., is still at Jerome, Arizona, and, as we understand, is doing very well. Good luck to him.

The many friends of E. J. Cooper, the secretary of the Los Angeles Mining and Stock Exchange, will be glad to know that he has just returned to this city after several weeks' absence.

C. Steuerbeach, of the Eagle Mountains, Riverside county, California, has just returned from his mines where he has been doing some development work.

Mr. Davis, of the Vigna mine at Alamo, Lower California, returned to Los Angeles, Cal., the last of the year on business.

H. R. O'Byran, of this city, has just returned from Randsburg, Kern county, Cali. He said the Butte mine had just made a shipment of very valuable ore.

Mr. W. S. See, of Los Angeles, who is interested in mining at the Alamo, Lower California, was in Escondido week before last.

Mr. F. B. Brooks, who has been visiting the Jacobito mining district, Lower California, left for his home in San Francisco the middle of last month.

OBITUARY.

C. C. Angel, the discoverer of the first mine in英格的Camp, Calaveras county, where the famous Utica mine is located, died a pauper in San Francisco recently, and was buried at public expense.

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STAMP MILLS
CONCENTRATORS
And all Classics of
MINING MACHINERY

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LOS ANGELES, CAL.
ORE TARIFF. From Points in Mexico, New Mexico, Texas and Arizona, to El Paso, Pueblo, Denver and Kansas City.

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| SOUTHERN CALIFORNIA RAILWAY. Rate on Ore in car loads, valuation not to exceed $50 per ton, minimum weight 2500 lbs. On Grandes Tail, to Pueblo, $0.50 per ton.

ORE TARIFF. From Points in New Mexico, Arizona and California, to El Paso, San Francisco and Vallesjo Junction.

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| SOUTHERN PACIFIC R. C. COMPANY. Rates marked * * apply to Carloads ONLY. Other rates apply only on lots of twelve tons or over. On lots of less than twelve tons a deduction of 10 per cent on everyone of ore and less than four, 20 per cent will be added to the above rates.

Intermediate points not named will take rates provided for next station beyond.
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THE KENDALL PROCESS is the most efficient method of using cyanide for the
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of time; material reduction in consumption of chemical has also been demon-
strated with respect to several classes of ores.

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all tailings samples $3.83."

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VULCAN ROPEWAY

* For Conveying
Ore,
Cordwood,
Etc.
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way furnished by your Company to convey tailings
from Morgan Mill to Mexican Mill, a distance of seven-eights of a mile, is giving entire
satisfaction. We transport 300 tons of tailings in ten hours; one man does the whole busi-
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attending to the ropeway generally. The self-loader requires no attention whatever.

Yours very truly,
J. P. Woodbury, Sept.

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Manufacturers of Mining Machinery,
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HERCULES GAS OR GASOLINE ENGINE
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FOR ROASTING, CHLORINATING, AND DESULFURIZING ORES.

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