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**THE "JOURNAL" OFFICE**

DON'T WRITE TO US, AS WE ARE VERY BUSY!
VISIT OF W. J. BRYAN TO LOS ANGELES.

Independence Day in Los Angeles was celebrated with double the usual amount of enthusiasm. Lectures, recitations, reading of well-known poetry, music, and last, but not least, noise and fireworks, both on account of the day and the visit of Hon. William J. Bryan, the champion orator in the cause of equal and American rights in the interests of our silver and currency. To the Silver Republican Club of this city is due the thanks of the community and the friends of silver for obtaining the presence of this eloquent advocate of justice to the best interests of the southwest on this occasion.

Entering California on the north and from Reno Nevada, he made in distinct speeches until he arrived at Fresno, on Saturday, the 3rd inst., where he was met by a reception committee, consisting of Nathan Cole, jr., Wm. M. Johnson, for the silver Republicans, W. R. Brooke, for the Populists, and H. W. Gilman and R. L. Barns, for the silver Republicans, and escorted through the heat and dust of the San Joaquin valley to Los Angeles. As his rule is "I never talk to the public on the Sabbath day," the admiring crowd at station on route had to content themselves with an introduction and hand-shake. The train arrived here at 1:30 P.M. Sunday, and our distinguished guest, along with the other Cole, jr., left the train at River Station, and drove to the residence of the latter, much to the disgust of a large and enthusiastic crowd of admirers, who had congregated at the S. P. Arcade Depot, expecting to tender him a hearty welcome on arrival. The balance of the day was spent in rest and a quiet drive to Pasadena, where he was introduced to and enjoyed the beauty of home life in Southern California.

On Monday, the 5th inst., at 9 A.M., a public reception, lasting about two hours, in which some three thousand people were introduced to the distinguished orator, was welcomed by the reception committee, the labor organizations, and by Mayor M. P. Snyder, of this city. This lasted until 11 A.M., when a second reception of about 1000 people, at the Honeleben hotel, were introduced, under the joint auspices of the Democratic and Populist county central committee. A third was held at the Hotel Van Nuys, where the Jeffersonians held a luncheon.

At 3 P.M. the crowd was the largest ever congregated in and around Fiesta Park to hear the silver champion. Nathan Cole, jr., president and Geo. S. Pattin introduced Mr. Bryan with remarks. After the vast crowd, of from fifteen to twenty-five thousand, had exhausted their wind and cheering energies, Mr. Bryan was permitted to speak, and dealt with taxation in its powers and abuse. The following are a few of his remarks in relation to silver:

"The financial influences of a country are potent in business and politics. If you have any doubt of this, run for President upon a free-coinage ticket, and you will find how potent is the influence of the financial class. You must subscribe to drive the metals apart, and you pay them a premium for doing it, but if you give the debtor the option, you benefit society by drawing the metals nearer together with the ratio of 16 to 1, by increasing the demand for silver."

"For twenty years the financiers have made the laws for the people of the United States, and have always claimed that it was for the good of the people. It is not fair that you should get the silver, and good to you all the time without making some kind of a return, and, as they have said that the free coinage of silver would do them good, I say then the time has come when we should give them free coinage of silver in return for their having borne for twenty years without a murmur the burden of the gold standard."

"If gold melts you can have it coined as many dollars as there were before, while if your silver melts, you have to hunt some body up who wants to make spoons out of it. We have some bankers in our state who favor bimetallism, and one of them said that under the gold standard we lose more than we can gain, because of people being unable to pay their debts. The vaults of the banks are filled with bad paper—good when it was given, but bad now."

"This is the greatest nation on earth. It is the only great nation that is sufficiently independent to throw off the shackles of money changers. We are just entering the 125th year of national independence, and yet are we free? What is political independence without financial independence? I am willing to trust the destinies of this nation of 70,000,000 of people to the people themselves, but am not willing to intrust it to the people of other nations."

The speaker discussed bimetallism in all its phases from the silver side. The address was listened to throughout with closest attention. As an orator Bryan is certainly a wonder. His voice, while a trifle hoarse, reached every nook and corner of the big amphitheater. The people were apparently too much enveloped, and they had played themselves out at the start, to be very demonstrative. At the conclusion of the address there was prolonged cheering. The speech lasted an hour and forty minutes.

At 8 P.M., a banquet was held at Hazards Pavillion, under the auspices of the Los Angeles Silver Republican Club. 500 ladies and gentlemen comprised a most festive and brilliant function. The decorations and music were both highly praised. The hero of the hour spoke in response to the toast, "Bimetallism," and led his hearers into paths and ways he did not touch in the masterly effort of the morning. The undercurrent of thought of this speech was the necessity and good services of both gold and silver to the business community. After numerous speakers had finished, the double feast was brought to a close, and Mr. Bryan left by train for San Diego. The great success of this silver lecture has so stimulated the energies of local and visiting silver Republicans that it is proposed to hold a State Convention in this city in September. A full delegation will come from every county in the State, and the organization for next year's State campaign will be made.
California lost since 1884 $18,000,000
Arizona " 1884 $44,500,000
New Mexico " 1885 $16,500,000
Nevada " 1888 $29,250,000
Utah " 1891 $21,000,000

Being a total of $129,250,000 as the loss to the southwest through the decrease and falling off of silver mining, and these figures ought to convince the most unprejudiced that the interests of labor and the industries have received a serious blow, through the suspension of silver mining in the section.

**SILVER PRODUCTION AND TRADE OF THE WORLD.**

The silver produced in the world in 1895 was as follows:

- **North America.** $65,687,665
- **South America.** 19,839,067
- **Europe.** 10,283,460
- **Africa.** 1,457,450
- **Australia.** 13,918,988

**Total.** $118,748,536

Of the European amount the United Kingdom produced only the small sum of $165,821; but she exports yearly to the east the sum of from $25,000,000 to $55,000,000 a year. This shows that the Bank of England practically controls the silver trade of the world, and ‘prices’ the price to suit the necessities of the case.

A competition by treaty of North and South American countries with Japan and Australasia would ruin this trade in silver, if these countries were to prohibit the export of silver in bar or other form, except as coin, it would cease to be a commodity of trade, and again assume its place as a standard of money along with gold. The large markets of Asia and the future possibilities of Africa for absorbing a large amount of silver fully justify such action, as even with increasing production the demand is equal to the supply, if the price was not fixed by the Bank of England, so as to be a gain to that coporation and to no others.

**Recent Methods of Ore Treatment.**

**METHOD 1.**

Written for the Mining and Metallurgical Journal.

Within the past decade there has been an exceptional demand for methods of ore treatment, which should combine the highest efficiency with a minimum outlay on plant as well as operation. Hitherto the vast mineral deposits of the United States and Mexico had afforded to the miner so much 'cream' that low metal values were essentially neglected. The collapse of silver, however, and the partial or complete failure of many superficial ore deposits and, subsequently, the forced nature and means (in this last series of charges) of making them remunerative such charges might possibly be reduced to as little as 30 per cent of the original cost of materials, so as to make the process highly profitable.

It seems improbable that the time-honored styles of obtaining values by smelting or amalgamation should be abandoned altogether for many years to come. But, while it has been found that either auxiliary or independent processes may be advantageously employed for the purpose of separating the "precious" from the valueless, most prominent among these are the various forms of leaching (lixiviation) and concentration. While neither of them can be described as achievements of very recent date, yet the modifications from older methods that have been applied recently may be characterized as a new epoch in this class of work.

It is not the purpose of this paper to give any detailed description of what has been called 'cyanide treatment,' for such lines, but rather to merely point out radical changes in and improvements upon operations previously in vogue.

**LEACHING.**

Most prominent among the later processes of leaching is that known as the "Cyanide Process." Since its inception, about ten years ago, comparatively small process has been made, both as regards chemical and mechanical details until quite lately. Messrs. Chittenden and Ladd, of Washington, D. C., are now introducing a striking departure from the old mechanical methods connected with treating ores by this process. It may be well to state, right at the outset, that while, thus far, they have confined their attention to the cyanide processes, their invention is equally applicable to all classes of lixiviation.

Whoever has been fortunate or unfortunate enough to occupy himself with opera tions has, in most instances, found his patience sorely taxed by the difficulties attending the passage of the leaching solution, and, subsequently, of the wash-water through the crushing mass, thus entailing extra expense and loss of time. From these disadvantages, the exceptionally large amount of wash-water which must be used in such cases, in order to clear the pulp from the valuable solution, is a serious drawback in arid regions, and is at all times, an awkward thing to dispose of. In some instances, the slimy or clay-impregnated character of the pulp has rendered the application of leaching processes impracticable.

It does not enter into consideration here whether the method employed for any given ore may be efficacious or not, the question dealt with by the above-named gentlemen is essentially confined to the mechanical part of the operation. They have simply reversed the usual method of procedure: instead of passing the solution through the pulp in the old-fashioned, time-robbing and cumbersome manner, they pass the ore-pulp through the solution.

A very brief description of their appliances will readily give an idea of the advantages of such departure from old-time methods. A series of suitably constructed, oblong troughs, sloping downward from each end toward the centre, are placed against each other end for end. The pulp entered into the first series of charges is charged with normal solution, the remaining ones with water. As the pulp is fed into the first trough, it is slowly taken through the solution by a set of continuous rakes, and thus greatly improved through solution into the wash-water, and when thoroughly cleared of all value, it is discharged.

It is obvious that, after a time, the wash-water will become more or less charged with the soluble chemical from the first troughs. As the solution in these latter becomes weakened, by virtue of dissolving the metals in the orthodox manner, it may be withdrawn, the partly charged wash-water is in turn brought up to standard strength, and taken, at this point, as first
solvant. Evidently, there can be no loss of leaching solution, and the only questions remaining to be determined are those pertaining to the length of time which the pulp is passed through the solution, or by the number of troughs. To any one acquainted with leaching operations, the beneficial results derived from keeping the pulp in agitation must be evident. The entire operation is automatic, and every step thereof can be controlled to a nicety.

After the solution has done its work, no matter whether it be cyanide, sodium hypophosphate, Russell-solution, or any other, it is drawn off and the metals are precipitated therefrom, by whatever means the process or the ore may require.

This device has been tested on several thousands of ore before being offered to the public. At present a plant is being built on the north side of the Mohave in Arizona. Without going into details, it may be said that the time required for treating any given quantity of ore is but a fraction of that demanded by the old vat system, hence but a small percentage of the labor is required to accomplish the same amount of work. The construction is simple and cheap. No skilled labor (except one chemist) is necessary to operate the plant, and the extraction of metal from the ores by this method has proved to be very high. Ores which can hardly be leached in vats, on account of their physical character, can be treated with the utmost ease, and give excellent results.

Judging from what has been accomplished thus far, it is not too much to say that, in time, the mechanical part of leaching ores will be revolutionized by the introduction of this mode of treatment, and the extraction of values will, necessarily be far more rapid as well as more complete.

CORRESPONDENCE

CALIFORNIA.

Cottonwood Springs, July 10, '97.

EDITOR JOURNAL:—We ended our prospecting trip here, as it is getting too hot to do anything in the sun, until you have established a camp and got to work in earnest. Prospectors have no more right to try and prospect the desert during the summer than they have the higher altitudes of Colorado, Montana and other northern districts in winter. We found a great many good prospects in the vicinity of Cottonwood, also on the north side of the Eagle Mountain range, the south side of the Virginia Mine, Pinto Mountain, and the Mount Vernon Range. All the prospectors from these several districts make Cottonwood their headquarters.

The McGrath Brothers have a gasoline arrastra here which will do custom work when not running on their own ore. They had just finished 10 tons of ore, when their Moon No. 1revolved, turned down and left for the coast. The clean up netted them about $800. There was plenty more ore left on the dump in the mine. The ore from the Moon is nearly free milling, but the majority of the mines are base, and there seemed to be lots and lots of it. Ore ranging from $55 upwards, nearly free from copper and no lead, and as true fissures as any one would wish to

look at. The great drawback is the want of water. If we had a Government with a soul as big as a nose (look at what Australia has done), the government would supply all the water that would sink one well and demonstrate the fact that water was to be had, this field alone would in a short time give employment to thousands of men, if we must have a gold standard, would help the Government out a great deal.

Charley Converse has bonded one of his claims near the Iron Chief to a Mr. Kemble, who has started a shaft to see what there is. Converse & Kemble are working a working bond on a mine on the south side of the Eagles, near Bazzard's Spring, to a man named Lancaster, who is sinking a 100-foot shaft. The Iron Chief people are sinking a well near their mine, and the prospects for water are good. If they obtain water, they have a cyanide plant and crusher ready to be shipped to them. The Iron Chief is an awful good mine to own and the ore is rebellious, but as it smells $175, there is good money shipping to smelter.

Frank Baxter has bonded the Cactus mine to Riverside parties, who have sunk a shaft 60 feet deep, which is looking well. They will put a horse worm on this fall and go 200 feet more on the property.

Some of the greatest mines in Southern California are out here on the desert, and will some day be developed.

Yours very respectfully.

FAIR PLAY.

SONORA, CAL., July 7, 1897.

EDITOR JOURNAL:—The Side Hill mine lies to the east of the Clio, and from its geological and genial formation for gold, diaspore dykes and black metallic slates, is almost similar to the now celebrated Jumper mine. Gold has been discovered in the slates for 700 feet to the east of the main dyke that runs the entire length of the claim. Surface cuts and several short tunnels, one 70 feet in length, have been entered, from which several thousand dollars have been extracted. There is a shaft sunk on the west side of the dyke on the east side of the claims has, a shaft in the operation and the rock crushed in an arstara and it pays well even at that depth. As its name implies, "Side Hill," backs of considerable depth can be obtained by tunneling. The mine shows a really splendid prospect and I predict that its future is assured as a big gold producer. As to ore bodies and chutes, from present indications, will be found of great extent and richness. The owner permits the parties now working to open and develop the mine for a percentage of the gold taken out. No lease is given as they work only on the will and pleasure of the owner. The mine pays well all parties concerned.

The Harriman Gold Mining Co.'s mine is now incorporated. It is situated south of Kanaka creek; the property extends to the Toulumne river, being nearly 3000 feet in length. They are sinking on a seven foot vein, the shaft being 70 feet deep. The hanging wall is of black metallic slate and the foot wall of quartz, strongly called serpentine which is a very good contact formation. The whole vein will pay $7 and upwards per ton. Selected rock from the foot wall of quartz will average at least $50 per ton. This mine on development will undoubtedly prove a good paying proposition. The Stanley and Gladstone mines are situated north of Kanaka creek and on the east bank of the mother lode. There is an immense deposit of auriferous gold bearing conglomerate, slate, quartz with pyrite and iron stringers; the whole mass is thoroughly impregnated with gold in payable quantities. The width is variously estimated by practical miners from 50 to 100 feet, length over 1500, in depth from 50 to 300 feet which can be mined as a great quarry before any shafts need be sunk. There are millions of tons in sight which can be expected at small cost for milling. In fact, the ore being cleaned and milled for less than a dollar per ton. A 100 stamp mill should be placed on the mine which can be kept constantly employed for years. Electric power can be derived from the Toulumne river three-fourths of a mile distant, and transmitted to the mill.

No Alaska proposition or elsewhere can eclipse this immense golden deposit. It is safe to calculate that the lowest grade ore will bring with ordinary mill process yield three dollars a ton in free gold. The sulphur content runs from $10 to $25 per ton. Seven hundred tons can be crushed at one time of a mill that yielded $2.65 per ton, taken indiscriminately from the hillside, and it was well known at the time that nearly as much was existing in the formation as to be almost useless as amalgam catchers, but even the amount saved paid. This is a phenomenal formation and should receive the attention of mining capitalists.

At the Mammoth they are drifting from the 400 foot level south in gage matter; also drifting east of Boulder vein from Smart's Gulch. In the old Orcutt claim, now as part of the company's property, everything looks very favorable.

The Shawmut and Eagle struck exceedingly rich rock last week. The Jumper is now taking out the richest rock ever brought to grass. Only the very best is now crushed in their 20 stamp mill. All the medium grade rock is being put on one side till their crushing plant is enlarged to double its present capacity.

The Dutch mine is surpassing all the most sanguine expectations of the company. They have two distinct channels of ore bodies, each of which, 50 to 200 feet in grade and grade at that. They are just completing an addition of 10 more stamps, making now 20 in all, and only 300 feet deep. Over a million dollars has been refused for this property, which alone is sufficient evidence of its value by the owners.

The Rawhide continues as usual sending up their rich rock, keeping their 40 stamp mill continually crushing. The double chlorination plant is always in full blast.

The Rappahanock owners have opened up a station at the 600, and are preparing to start further sinking their workings as convenient.

The mine shows more than ever flaring out. At the Alameda mine the work of developing continues, also sinking and drifting. Very good rock is being frequently met with.

The Thrush is being systematically developed. The ore from the shaft looks as well as usual, showing free gold in abundance.

At the Golden Star rich rock was lately intersected in their cross cut, and will be taken out soon. The prospects of this new property are exceedingly good.

The Bell mine having shown up well, the company is making arrangements to erect an 18 stamp mill, which will increase the production. The prospects of this new property are exceedingly good.
opened up and developed with great energy. The rock shows well in free gold.

All around the section of Tuttletown we find great activity. Space in this issue will not permit of a more extended notice.

ARGUS

NEW MEXICO.

Chloride, Sierra Co., July 9, '97.

EDITOR JOURNAL.—The Wing mining mill continues to run on custom ores, brought in by miners from both the Apache and Black Range districts, and the weekly clean-up shows remarkable saving. New and 'update' machinery recently been added, making the plant very complete in all its details.

James Gill and Jack Spradling have taken a lease on the Long Street mine, and are getting out shipping and milling ore. They report the property as looking well.

Clark & Co., who are leasing the Rock Gold mine from Thos. Scales, at Grafton, have a large amount of $30 ore on dump, ready for treatment at Wing mill.

J. B. Taylor and Jno. Petrie, who are developing their Ashville mine, on Dry Creek, have recently put in a whim and otherwise improved their property. They are sacking the higher grade ores for shipment, but will treat low grade at the Wing mill.

Col. Thomas Scales, the owner of a number of valuable prospects, has a force of men at work near Camp Kingsbery, and reports his properties as all looking extremely well.

Editor W. O. Thompson and Lewis Kruse have 50-ton lot of ore at Wing mill ready for treatment, and, if results are favorable, will put a force of men at work on their Lombard Street property. This property shows at least 4,000 tons of ore above ground, and is what miners call 'a mine on top of the earth.'

Several sales are under way, and one very extensive deal has been closed, but facts cannot be given to the public as yet.

Jno. B. Sauzier has all things in readiness at his saw mill, in Chloride Creek, in anticipation of getting some heavy orders soon.

E. F. Holmes is doing assessment work on his Independence and Black Prince mines, near the silver monument.

Chas. Bishop is working on his Grabton prospect.

Joseph Oliver and E. Payne still continue to work on their properties at Roundville.

Hon. Frank A. Reynolds is expected in shortly, and good news for this section is confidently expected to accompany him.

THE JUDGE.

UTAH.

SALT LAKE CITY, July 2, 1897.

EDITOR JOURNAL.—There was considerable expansion in the volume of trading in the mining share market of the week. Although there is but little to be said in the way of improvement in prices. The gold stocks held steady and were in strong demand, although the supply of their products. The Western ores stocks have struck a low limit and an upward move is certainly in order. There is not a silver security on the list the earning value of which does not show higher prices.

Only limited change occurred in Ajax and business in the stock was not heavy. A great deal of development work, from which much is expected, is going on at the mines and ore shipments are not now being specially pressed. Anchor and Alliance were featureless and unchanged from quotations. There was some inquiry for Bullion-Beck at last week's figures. No change has been reported from the properties, which are not producing heavily. At Tollit, however, Buckeye is looking well, but the stock was not active and prices were a little shaded.

Offerings of Centennial-Eureka continue to be very limited, dealers at present figures there are comparatively few. The mines are looking well, as has been the case for some time past, but shipments are still being curtailed. Chloride Point was not active, although there was some little inquiry at the close. The company is making light shipments of fairly high grade ore and the management still promises a mill for the properties this season. Last week's figures governed. No particular change in figures occurred in either of the Dalys. At the Daly a very rich strike is reported on the 1,000 foot level, the ore on the 1,000 feet having been opened up. It is likely that the company will resume mill operations soon, although a further wait may occur should silver fail to advance. Dexter was practically unchanged in business, and the stock was not heavy.

From the properties very flattering reports have been received, but these reports have not occasioned any further advance in the stock, which is at slightly shaded quotations. Dalton & Lark was in somewhat better demand, and there is a possibility of considerable of the cheap stock being taken up.

Eagle did considerable business at somewhat better prices, regardless of the fact that operations at the properties have not yet been resumed. There were absolutely no buyers in for East Golden Gate. Four Aces was active in but a limited way and prices were somewhat lower. On June 30th Geyer-Marion paid its third dividend of three cents per share. The company has decided to resume operations at the Marion mill, which is estimated to mean a dividend of the company of $5000 a month additional. The properties are looking extremely well. A great deal of activity was displayed in the stock, although quotations were not changed materially. Garlena did little and quotations remained about unchanged. Horn Silver is making an immense production. The stock is not active on this market, although in the east the demand continued strong. Lucky Bill's last assessment has been very generally paid and the list of delinquents is short.

While the business done in Mercur was hardly as heavy as usual, quotations were well maintained. Offerings of the stock being extremely light. The official reports from the properties are of a highly encouraging nature, and show that the properties are in better shape than ever in their history. The mill is doing splendid work and with its increased capacity. Mammoth displayed some activity, although prices changed but little. The anticipated resumption of mill operations has not occurred, but there are indications of the 5th. On the regular date Ontario paid its usual dividend of 10 cents per share. The stock was in somewhat better demand, with only limited new quotations. A rich strike is reported to have occurred in the Ontario, and the company was on the market with a heavy shipment of over 500-ounce silver-lead ore. The price on Omaha did not change materially and no special advance is looked for until all legal difficulties surrounding the control of the property are adjusted.

After the Sunbeam's annual meeting next week operations at the properties are to be resumed and a strong advance is anticipated. The annual meeting will result in a thorough reorganization. Both of the Swanseas did considerable business at last week's figures. The Swansea will pay its usual dividend on the 5th. Utah did some fine business, but the demand was not heavy, prices remaining unchanged. Very truly yours,

JAMES A. POLLOCK.

Miscellaneous Mining News.

ARIZONA.

New Strike at Pearce.

A new strike in an extension of the famous Commonwealth mine at Pearce is one of the mining sensations of the week. The owners of the mine are so elated they are afraid to disclose the real value of the ore discovered until they have made further explorations. The ore body was struck upon reaching the foot well of the vein, and is of the same appearance and apparent quality as that found in the great bullion producer of the camp.

Every indication points to its being a continuation of the same ore body and on the same vein which gave the camp its fame and has proven such a wonderful producer.

Kingman Notes.

Conkey & Tyler made a shipment of ore from the Lady Bug mine at Mineral Park, this week.

Fred Harter, who has been leasing on the Lone Star mine, made a shipment of rich ore to the sampler a few days ago.

J. H. Sample, James Keating, John Mayfield and Al. Anderson have leased a portion of the Night Hawk mine and have already begun to work on it.

The Oneida mine is showing up quite well since the new leasors began work on it. The drift in the bottom of the shaft is being pushed ahead in good ore.

The openings recently made in the Night Hawk mine show nice bodies of the richest of ruby ore. In one place eight inches of ore that will run over eighty hundred ounces in silver is exposed.

Walter Burkhardt last week brought in a lot of ore from the Retors mineral, Mineral Park, and had it worked at the Arizona Sampling Works. Burkhardt, Jr., was also in with a shipment from the Buckeye mine.

Work on the Eureka mine is progressing favorably, and the big ore body still continues in evidence. At the Union mine, the fifty-foot contract on the main shaft is almost completed. The ore body is showing up splendidly.

M. D. Latta and George Deirance are in Kingman, from their placer mines in the Chemehuevi mountains. They brought in with their first shipment three tons of gold dust and several big nuggets. They average about five dollars each per day with one machine.

It is understood that the Cedar Valley Mining and Milling Company is soon to put in a big plant at Cedar to work the ores from several lodes. The capacity of the present mill
is too limited for the output of the mines. This company has two large ledges in the Arnold ground that are sure to become record breakers.—Mohave Miner.

Miles W. Gibbons, a mining man who is operating at Globe, Ariz., has closed a contract for about $16,000 worth of machinery with a Denver firm. He purchased a ten-stamp mill and hoisting works for one of his properties, which will be shipped to the camp as soon as possible.

"Globe will be a good camp when it has a railroad," Mr. Gibbons. "The Gila Valley and Globe Railroad reached Geronimo, about sixty-eight miles from Globe, when work was stopped on account of trouble crossing the Apache Reservation, but I understand that matters have been adjusted and the construction will be resumed soon. The line should be in Globe by the first of the year. This will give the camp a chance to grow and it will be heard from shortly after the railroad is completed.

The Copper Queen Co., one year ago, was carrying 600 men on its pay roll; it is now carrying 1200. This is a pointer as to increased copper production.

Probably the largest body of ore in Mohave county is to be seen in the Minnesota mine, where a sixteen foot breccia of ore is exposed and no walls in sight. The ore will all pay on a mill.

A ton of ore from the Chemecheus mountain mine of Raul, Marines & Ellibece, in Mohave county, was sold to the sampler, at Kingman, that gave a return of twenty ounces in gold. The boys have a big ledge of lower grade ore from which assorted shipments are made, sufficient to keep them in supplies while developing the property. They have a splendid showing.

Geo. Rohpester reports a rich strike at the bottom of the 95-foot shaft in the Swindler mine, where a vein of gold ore 14 feet wide is exposed, and which is said to carry $40 per ton gold. The ore has sampled as high as $50. The mine is in Big Bug district, near Chaparral gulch.

The Gladiator mill, running on ore from the Gila mix, is turning out $125 per hour, for eight hours a day, the present water supply not admitting of a longer run than eight hours in the twenty-four. The operators of the property are negotiating for Dickey Springs, half a mile distant from the mine, from which a permanent water supply can be obtained and piped to the mine. Superintendent Oltz is working about 26 men on the Gladiator.

Julius Morrow and partners have leased the Indian mine from Dougherty & Smith. The Indians is located west of Prescott, in the neighborhood of the Last Chance, and has a fine, large ore body exposed.

It is stated that the Lynx Creek hydraulics have temporarily shut down, pending the putting in of heavier machinery.—Prescott Courier.

Cochise Petroleum.

For several months the Prospector has spoken from time to time about the presence in the San Pedro Valley of petroleum. Later developments give more and stronger evidence of the existence of this valuable mineral in large quantities.

The first discovery was made while boring for artesian water, and upon finding unmistakable signs of oil, a sample was secured and submitted to the mineralogical professor of the territory at Tucson. The result of his analysis showed the product to be a valuable quality of petroleum.

Since that time no amount of prospecting has been done other than a few comparatively shallow wells for artesian water.

By the latest improved methods employed in boring for oil in Pennsylvania and West Virginia, the cost of boring a thousand foot well is, under ordinary circumstances, about two thousand to twenty-five hundred dollars. In view of the great benefit that it would secure to the individuals, as well as to the county at large, it is a matter of wonder that a few enterprising men have not taken hold of the idea of developing one of the many great resources of wealth in that county.

CALIFORNIA.

AMADOR COUNTY.

The crosscut from the shaft at the 400-foot level in the Focolomas mine at Drytown is proving fast. The ore has been encountered which shows a splendid class of ore, at a much shorter distance from the shaft than was anticipated.

A small blaze occurred in the Wildman mine at Sutter Creek, late last week, caused by a candle setting fire to a timber at the 1100-level. It was discovered immediately and extinguished without loss and without endangering the lives of anyone.

The Bay State Mining and Developing Co., at Plymouth is taking proceedings in insolvency. They are now under head and heels in debt after having spent $185,000 in sinking a shaft about 600 feet and putting up a ten-stamp mill.

The recent operators of the Bellwether Gold Mining Co., at Jackson, turned that property over to S. W. Bright, the original owner, on the first, they having violated their agreement to prosecute work continuously. This is a good change and let it be hoped by every county of the state that never again one of our properties will fall into the hands of such miners and mine operators as those composing the Bellwether Gold Mining Co.

Messrs. Hatch and Marshall, who for many years have held the Marklee mine near Volcano in Idaho have sold the property to a company of mining men, among whom are Senator Tom Flint of San Juan, Homer Wilson and Geo. Root. They have purchased a six-stamp Gold Hill mill, concentrators, boiler and engine and intend to establish the plant and get to work without loss of time. The deal with Hatch and Marshall was made by James R. Smith of Pine Grove. The charge of owning this mill will probably be the means of reopening this once valuable producer, and greatly benefiting the mining interests of the eastern section of our county.—Amador Ledger.

CALAVARAS COUNTY.

Calaveras Notes.

The Swenson or Orchard gravel mine, west of town, is about to be rehabilitated. Preparations are being made to commence work, and machinery will be on the ground in a few days.

John Swank is driving a new tunnel on the Alpine mine and is already in about 50 feet. This tunnel is started from the bed of a ravine about 50 feet below the old workings, and is driven in a northwesterly direction, carrying sulphures of iron, zinc and lead.

A force of men were sent out from the city of Calaveras the last of June to begin work on the new five-stamp mill to be erected on the McPherson mine at Old Gulch. The mill was recently bonded by J. Evans to G. W. Dyer and others from San Francisco.

The Western Gold Mining Company have been making rapid progress sinking on the fight mine near the Kentucky House, and the windless process will be replaced by a steam hoist as soon as the machinery, which is already upon the ground, can be placed in position.

The Esperanza (Boston) mine, located two miles from Mokelumne Hill, is the most promising development in that locality at present. A depth of 500 feet has been attained in the shaft, and the richness of the ore increases with the depth.

A deal was consummated the last week in June whereby the Greek mine, which is situated near the Banner saw mills, was bonded to W. H. and J. Smith for the sum of $7000. One thousand dollars of this sum was paid down and the remainder is to be paid in payments of $1000, the final payment to be made on December 1st, when a deed of the property now in escrow, will be delivered to the purchaser.

KERN COUNTY.

[Special Correspondence of the Mining News]

Garlock, (Cal.), July 7th.—The mills, which are running on the Fourth, are again in active operation, grading out rock. The boys celebrated at Randsburg on the 3rd and at Garlock on the 5th, and in consequence it required a couple of days to recover from the effects of their exertions at the two places. Now everything is again serene, and the music of the stamps is heard from "early morn till dewy eve."

The Hay mill did not shut down. It has been running steadily for some time on rock from different mines. At present it is working on ore from the Rand, which is turning out well.

Twelve men are working on the Minahaha, which is grading a shaft and driving a tunnel, and it will be one of the big producers of the camp.

The Visalia Mining and Milling Company has just made a contract with the Val Verde for milling a large number of tons of rock. A test run was recently made on rock from this mine which gave such satisfactory results that it was at once decided to get out a large quantity of ore.

The McKinley mill has a contract with the Webb & Harney mine to run ore from this mine for an indefinite period. The ore will average about $15 per ton, and one miner can get out more rock than two men can sack.

A new road has been built on the mountain and work is progressing on a road across the desert. When this is completed there will be no limit to the amount of rock that can be furnished.

Dr. O. O. Webb is up from Los Angeles, and is associated with Mr. Harney, of the same place, in working the mine. As the ore is easily mined, and the ledge is about twenty feet wide, it will undoubtedly prove a big bonanza to its owners.
The Garlock mill started up again this morning with a big supply of Rand ore on hand, and will run night and day until Sunday morning when the usual weekly cleaning will be made. This mill is in first class condition and has been running day and night for the past two months, mostly on Rand rock, sandwiching in an occasional run for one of the other millers.

The Kelly mill is making a run of thirty tons of ore for the Meteor, to test the rock. This mine is the property of Mrs. F. A. Carpenter, John W. Kelley and Steve Price, who have had extensive experience in this field. Wilson & Campbell to run a tunnel seventy feet. It is rock from the tunnel which will be tested. The rock shows fine, and it confidently predicted that it will go better than $30 to the ton.

The Smith & Maxon mill is undergoing repairs just now, but will be running, as soon as these are completed, on Rand ore.

The cyanide plant has been in constant operation since its erection, on tailings from the different mills, with very satisfactory results to all concerned.

The most encouraging reports continue to be received from the Radamacher, El Paso, Black Mountain, Summit and other districts, and many good prospects are in process of development.

A section of country just south of Garlock, across the valley, heretofore neglected, is now receiving much attention and bids fair to develop into a rich district.

Garlock, owing to its plentiful supply of water, will necessarily be the milling and trading center, for many years, of a large section of country, extending in every direction, in addition to which there is a reasonable probability that many good paying mines will be opened up immediately adjoining the town.

C. C. Lane, superintendent of the Rand Mining Company, reports that for the month of May the mine product of ore was 131 tons, 370 pounds, which milled gave $5,170.70. The total mine expenses was $282.22. Minimum $10,000. Net profit for June, $734.53.

The work of sinking the Wedge shaft goes merrily on, and a depth of 335 feet has been reached, with the ledge looking just as good as ever and just as rich. Considereable excitement has resulted from the discovery of good placer ground on the flat between here and Goler. Bush, Mitchell & Ward have been dry washing for some time near the Bedrock Mine from Johannesburg to Garlock. George Taylor recently joined the party, and they went down through a gravel cement some distance, when they struck a thin bed of auriferous gravel, some feet in depth in bed rock. They were making very good pay all the way down, but when they struck bed rock they found it much better, and one day last week they took out 200 pounds of coarse gold. The news of their good luck spread rapidly, and it was but a few days until the supposed channel was staked off several miles in length. As yet no other holes have reached bed rock, but in most places the ground prospect from the surface and there can be no doubt about the value of the placer fields, the extent of which are yet unknown. There is every reason to believe that a continuation of the famous Goler and others from which famous Golders have been taken in the last few years. The gravel on bed rock is identical with that of Goler and in many instances the surface indications are the same. It is right in line for a continuation of channel, and all concede it to be such. So far as explorations have demonstrated, the new district is from five to seven miles long and from one to two miles wide. But since mineral surface prospects are obtained over a much larger area, it is possible that the new placers may be more extensive than is now supposed. Many prospectors are at work sinking shafts, and it is possible that bed rock will be reached in a number of places by the time this paper reaches the reader. At discovery bed rock was reached at a little more than twenty feet, but of course this cannot be taken as an indication of what the average depth will be.

At a point about two miles west of discovery, a prospect on the surface which showed better than a dollar to the pan, and if there is much of that kind of ground it means good digging for many moons.

The opening of the Wedge field means much to Randsburg, as it will in a very short time put the money in circulation so greatly needed. Enough is already known of the richness of the ground to insure better times, for gold wages can be made with the dry washer all over the placer field, from the surface of the ground, and many holes will be sunk that will pay to bed rock where the best is to be found.—Randsburg Miners.

PLUMAS COUNTY.
Quincy Notes.

Recent developments in the Plumas Imperial hydraulic mine prove the theory upon which it's owner, Mr. Hazzard, based the development work prosecuted by him during the past two months. Developments also justify the faith in the richness of the mines entertained by Mr. Hazzard—a faith hitherto backed by his money.

Mr. Hazzard informs us that, as work progresses, the mine which was recently encountered bears evidence of opening out and filling the whole channel whose mouth was filled by the "country rock" which had broken and slid into it. There is scarcely a doubt that the Plumas Imperial is developing into one of the largest and richest hydraulic mines in Plumas county. The gold is dark and rusty in appearance—the kind which is expected to come from an ancient channel like this. This permanent channel was found to be entirely different in the character of the gravel from that previously mined, as well as in the nature of the bedrock. The gravel is well washed, contains much iron ore, and readily yields to the force of the stream from the "giant." The bed rock is of a soft, talcose nature, easily cut down with the pick and shovel.

G. P. Cornell has made arrangements whereby he can establish the Arcadian mine, owned mainly by D. McIntyre of Greenville. The property is on the side of North Canyon opposite the Standard & McGill mines. During the past years, more or less development work has been done on the property by Mr. McIntyre, resulting in developing a ledge of gold-bearing quartz of fair size and grade. It is on a line with the Green Mountain group, of which it is part. On the opposite side of North Canyon rich ore has been found in the Standard & McGill.

From D. W. McKenzie we learn that a very important development has just been made in the Phoenix mine at the head of North Canyon, near Greenville, owned by Sam Firnstone and John Richards. A six foot ledge of rich milling ore has been opened up and the prospects are very bright. The ore, it is claimed, will mill ten dollars per ton—a low estimate. These men have worked hard for many years and under adverse circumstances, having up to the present run about 1,000 feet of tunnel. They have merited the utmost success.—National Bulletin.

RIVERSIDE COUNTY.

It is reported that Hart & Sons have taken a $3,000 gold brick out of their cyanide plant from tailings of the old Virginia Dale mine, about four miles from Dale City.

SAN DIEGO COUNTY.

One of the greatest mines in California is located in the southeastern part of San Diego county. The fact that the Golden Cross mine, at Hedges, clean-uped in the first week last month, running only 50 stamps of their 140 stamp mill proved this assertion.

COLORADO.

Extracts from Mining Leverets.

EL PASO COUNTY.
Cripple Creek Notes.

Returns were received during the past week for a shipment from the Lillie claim, up Poverty gulch, and belonging to the Franklin-Roby Company. It was a 20 ton lot and the check for it showed it to have a value of $7,753.

During the past week 52 tons of medium grade smelting ore was sent out from the Moon-Anchor. It is expected that 50 tons of high grade stuff will be forwarded to the sample in a few days.

The new 40 horse power boiler for the main working shaft on the Gold Dollar was delivered on the ground recently. The work of sinking the shaft to connect with the tunnel will now be pushed.

The Birch lease on the Mary McKinney sent out a car of ore estimated at $30 per ton. This was taken from the two old shafts. The new working shaft has not yet reached the ore chute. Drifting for it is in progress from the 120-foot level, and the lessee expects to break into it in a few days.

A contract was let last week for another 800 feet of work on the Cripple Creek and Gold Hill tunnel No. 1. The work was awarded to Mr. Davis, who has already done some 1,200 feet of work on this tunnel. This contract will bring the breast of the tunnel to a point 1,000 feet from the ground.

The Gilmore lease on the Morning Glory has just come into the ore in the drift from the 150-foot level. The pay streak is six inches in width and assays from $18 to $30 per ton. The work has been done on the 100-foot level, but the vein pinched out. Greater depth has given the lessee values again.
LAKES COUNTY.

Leadville Notes.

The Virginia shaft, on Little Ellen hill, is showing to catch the ore body which dipped away from the upper workings.

The Pittsburg No. 6 shaft on Fryer hill has recently been leased to J. R. Amburn, George B. Handy, John Riley and Pete Anderson. They are shipping 25 tons of iron ore a day.

The No. 1 shaft of the Mikado Company has just been completed to a depth of 1200 feet. There are large bodies of sulphide at this depth. The successful lessee on the Mikado is A. Dwyatt.

The Yak tunnel is making about ten feet per day with three shifts. A most important strike was made in the interior shaft some days ago. The ore carries 54 ounces in silver and some gold.

CLEAR CREEK COUNTY.

Empire Notes.

Aldrich & Hall have shipped 21 tons of high grade ore from their Gold Bug tunnel this week.

The Conqueror mill at North Empire is finished. This mill will treat only ore from the Conqueror mine, as there is an unlimited quantity of good milling ore in this mine.

The Little Chief Gold Mining Company struck eight inches of ore in the Little Chief mine which runs three ounces gold per ton and 2,000 ounces silver.

The new machinery arrived here last week for the Atlantic shaft. The owners will begin sinking the shaft from its present depth (250 feet) to 500 feet. They have a fine body of rich ore in the shaft.

Greektown Notes.

The Centennial mine is producing two-ounce gold ore right along, and there is a big body of it.

The value of the ore now being taken out of the Griffith mine is two and one-half ounces in gold to the ton and 15 per cent copper, and there is a large body of this ore in sight.

B. B. Lawrence, of Denver, the general manager of the Pelican Dives group of mines, situated on Republica, a branch of Mount Hamilton, has the sale of the property under consideration to a Washington party. This property has produced from $3,000,000 to $4,000,000, and should the sale be consummated it will command a good price.

PITKIN COUNTY.

Aspen Notes.

The Lesees, who a few weeks ago made a big strike of metallic ore on the Mollie Gibson, are still working in shaft which is said to run very high—as much as 500 ounces silver to the ton. It is stated that they have taken out over $150,000 since the strike was made, with prospects of the continuation of the good ore.

Messrs. Copely, Findley and Rose, who a few days ago made a strike of high grade ore in the Alta-Argent at a depth of 1300 feet, are still working with encouraging results. The ore they found is spar and lime, and runs about 100 ounces silver to the ton. As this strike was made at a depth of 1300 feet, it encourages the belief that deep mining in Aspen district can be operated at a profit.

This strike, taken in connection with the ore in the Free Silver drift in the Smuggler ground is very significant. The ore in the Smuggler is of such a high grade as that in the Alta-Argent, but is pay ore, and it is believed that the grade will become better with development.

SAN MIGUEL COUNTY.

Telluride Notes.

Russell & Martin, blacksmiths of Telluride, have lately cut a good strike in Cornet Creek basin. Their lead carries two feet of mineral that runs $60 per ton in gold and is free milling to a large degree.

O'Donnell & Jackson, owners of the Pride of the West, located in Bridal Veil basin, near Bridal Veil falls, have recently erected a 5-stamp mill in close proximity to the property, and for two or three weeks past have been treating the mineral taken out while developing it, which has been yielding on an average of $60 per ton. The lead carries from three to four feet of quartz, similar to that being treated, and the owners believe that they possess one of the coming great mines of the camp.

SUMMIT COUNTY.

Breakenridge Notes.

McKay Brothers are taking out some fine galena ore in a stope from the Laurium tunnel, where they have a lease.

A new incline shaft will be sunk on the vein by the Laurium Mining and Milling Company, the new whin and part of the machinery being on the ground.

Good progress is being made by the contractor in building the new mill for the Hamilton Mining and Milling Company. The old mill has poured out lots of gold and has earned a rest.

The placer mining output this season promises to exceed that of last year. The abundant supply of water practically insures a good crop of nuggets and fine gold from the placers. All the large placers are working their crews, and nearly every small placer where work can be done with sluices has several men at work.

LOWER CALIFORNIA.

The eastern parties who have bought the sulphur mines at the head of the Gulf of California, in Lower California, expect to ship 5000 tons a month as soon as they get to work, which will be in the near future.

MEXICO.

John S. Thomson of Lacon, Ill., writes from the City of Mexico that he has purchased a controlling in the historical Jesus Maria mine for $50,000 in gold. The mine is located in the state of Chihuahua. It is known that it was discovered and worked hundreds of years ago by the Aztecs. They were driven off and made slaves of by the Spaniards, who worked the mine in a primitive manner till they were in turn slaughtered by the Indians. The mine was then abandoned and its existence was not thought of for a long period of time. Four years ago Milliken, a prospector out from the City of Mexico, stumbled on the ancient workings and made the discovery that they were immensely valuable. The property at this time was owned by an old Mexican, who sur

rendered the Jesus Maria to Milliken for $5000.

Thomas M. Shepherd has been making a record for himself directing the workings of the great Porferio tunnel in Batopilas for the past nine months, bringing the contents of silver in from that point this week. The value of this month's consigna, including the merchants, was about $60,000.—Chihuahua Enterprise.

Samples of green ore taken from the Devine mine, No. 1, located in the Comonabi district of Sonora, and owned by Frank Morgan, assayed 372 ounces in silver; that taken from No. 3, blue ore, will go 215 ounces, second class green ore, 153 ounces. Talc, which is in great abundance, from four different dumps, assayed 80, 43, 27 and 21 ounces respectively. Two samples of blue ore, taken from a tunnel in the south drift, assayed 38% and 71% ounces. These mines are well known throughout the country, and old miners say there is no doubt as to there being plenty of good paying ore upon which to work, and that there are no signs of its ever giving out.

It is now authoritatively stated that a deal has been consummated by which the famous copper mines of Nacozari, Sonora, have been transferred by the Guggenheims of Monterey, to a new syndicate of Americans, composed in part of the firm of Phelps, Dodge & Co., of New York, who are the owners of the Copper Queen Consolidated mining of Bisbee.

NEW MEXICO.

Hillsboro Mines and Mills.

Output of Hillsboro gold mines for the week ending Thursday, July 1st, 1897, as reported for The Advocate:

<table>
<thead>
<tr>
<th>Mine</th>
<th>Output</th>
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<tbody>
<tr>
<td>Wicks</td>
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<tr>
<td>Butler</td>
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<tr>
<td>Richmond</td>
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<td>Happy Jack</td>
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</tr>
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<td>El Dorado</td>
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</tr>
<tr>
<td>Rex (silver-lead)</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>240</td>
</tr>
</tbody>
</table>

Total output since Jan. 1, 1897, $3,350.

The Wicks mine continues to make a phenomenal output of high grade smelting ore.

J. M. Webster is pushing the crosscut tunnel work on his Trujillo Creek gold and silver property.

D. Stitzel is continuing work on the Sherman level and is getting out a carload of silver.

McPherson & Co. have several men steadily working at the Mountain King mine.

The average value of the ore shipped from the Snake property during the past six months shows a considerable increase over the preceding half year. As all the workings are now at greater depth this is a very interesting thing and one that will warrant deeper exploration.

Foreman Hirsch is maintaining the large production of milling ore from the Richmond mine. A cross cut to the east from the tun-
nel level has opened up another large body of ore and the output is likely to be very much increased in July.

A good strike of ore is reported this week from the Eight-Five shaft cross-cut. The shaft is now 200 feet deep and very little further development in drifting will make this ore available at low cost of extraction. The Milwaukee and Hillsboro Mining Co. has expended a considerable sum of money in this work and now be encouraged to further exploration of their other valuable and promising properties.

The Old Abe Company at White Oaks is now arranging to resume work on the new shaft which will be pushed to completion to the 200 foot level as rapidly as possible.

Bland Notes.

Charles Faxon will resume work on the Ellen L., the main lead of which is five feet in width the full 1,500 feet in length of the claim, and from which several high assays of gold have been obtained.

Harry F. Woods, one of the fortunate owners of the Producer in Peralta canyon, came over from there during the week. He is pushing development on the valuable property and expects to make of it one of the leading shippers in the district.

Messrs. Mauney & Allen are pushing development work on the Ironclad in Medio Día canyon, and have been joined by W. H. Byunon, of Pueblo, Colorado. They are now in 200 feet in the crosscut tunnel, and expect to cut the lead in a short time.

Henry Bletcher and Patrick Hartney have completed the assessment work on the Antiquum, the valuable Colla canyon property belonging to Phil. Barber, and they have left it in a condition where it is expected that a very little work would be required to open up one of the richest and largest leads in the district.

—Herald Weekly.

The Cerrillos Smelter.

Captain Marion Balke, general manager of the Mary Mining and Smelting Company, began work at the smelter June 29. The plant will be located just west of the Santa Fe tracks in that town, upon 12 acres of land, which will be fenced and tracked as fast as the work can be done. The land will require but little grading to place it in shape for the tracks and buildings. Water will be piped from a spring about a mile north of town, which will furnish water for all requirements of the smelter. The smelting plant will consist of two 65 ton stoves, so arranged that additions thereto may be made at any time.

The Mary Mining and Smelting Company owns the Mary mine and five other claims near Kelly, in Socorro county, and will ship the ores from these mines for fluxing purposes and from the dry ores from Golden, San Pedro and the Cochiti district.

The company has plenty of capital for the carrying out of its plans, and the day is not far off when Cerrillos will be a busy place, the hub of the mining, milling and the center of a prosperous mining district.

Captain Balke will have miners at work, locating the pipe line from the springs to the smelter grounds and surveying tracks and switches on the smelter ground on next Tuesday. A sufficient supply of ores is promised from the Cochiti district at once, and the Balke will be. of the opinion that within 30 days or by the 5th of September next, he will have the plant and smelter in active operation.

The officers of the company now are: H. C. Wisner, president; A. F. Stephens, vice-president; M. Balke, general manager; J. H. Vaughn, treasurer; Dr. D. W. Manley, secretary.

NEVADA

The Raycroft brothers have ceased operations at the Buckeye mine, owing to the failure of the water supply. They say the mines paid this season more than ever before.

A. Boles and Jack McKnight of Red Canyon have a tunnel in the turf on an extension of the Warhorne mine and hope to open up a mine on a new claim.

The Dexter mine at Tuscarora has 125 men on its payroll at $3 a day and is reported to have made a big strike in the bottom of the working shaft. The ledge was cut as expected and several hundred sacks of rich ore taken out in the excavating necessary for the shaft.

The new mill at the Austin mining company's mine at Austin was started up Monday on an experimental basis. The equipment of the plant embraces thirty stamps and a number of three Yanner's and is up to date in every respect. The works are lighted by electricity and the town of Austin will also be illuminated by the same dynamo.

T. A. Bennett while in Gold Creek made S. E. Carlson an offer of $20,000 cash for his mine in the Mardis district. Mr. Carlson held out for $50,000 and the deal was off.

Four miles east of Gold Creek by the cyclometer one reaches the divide between the waters of the Buenaventura and Owyhee rivers, probably 1,500 feet above the town. From this point one looks across the Buenaventura river sees the three Carlsons dumps on Copper mountain.

The Mardis district occupies relatively the same position to Gold Creek on the east that Tennessee gulch does in the north, each distant about a mile back to be tributary to the central stream. The Carlson property is probably the best developed claim in the Mardis district. The principal work is a tunnel in 135 feet. From this cross cut have been running up a ledge 30 feet wide and containing 40 feet of ore. The entire 30 feet of ore gave $2.40 in gold. Mr. Carlson thinks that he has 50,000 tons of free milling rock that will average five dollars, Mr. Bennett thought 10,000 tons was a conservative estimate.

The entire development work on the property is about 250 feet. All agree that it has the promise of a great mine and the only difference is as to how much that promise is worth.—News.

Articles of incorporation of the Old Virginia Mining, Milling and Power Company have been filed by C. T. Ryland, jr., Gaston Strauss, Dr. W. F. Drake, John G. Hopper, C. A. Stuhls, E. C. Harkness, with the County Recorder of Tooele county, with a capital stock of $200,000.

On the Alaska-Treadwell mines, in Douglas Island, Alaska, a shaft 80 feet will be sunk to a depth of 1000 feet. Very little is known as to the depth of the pay in these mines, and the results of this sinking will be looked for with interest.

GENERAL NEWS

Recent Mining Patents.

Messrs. Townsend Bros., Solicitors of Patents, o Downey Block, Los Angeles, California, report the following list of recent mining patents of interest to mining men.

June 29. No. 585,450. Crushing Machine. M. J. Ellenhorn, Chicago, Ill. Assignor to F. C. Austin, same place. This is a rock crusher having two sets of crushing jaws, one arranged above the other, and both operated by the same lever, but from opposite sides of the fulcrum thereof.

June 29. No. 585,187. Crushing Machine. M. J. Ellenhorn, Chicago, Ill. Assignor to F. C. Austin, same place. This is a rock crusher having two sets of crushing jaws, one arranged above the other, and both operated by the same lever, but from opposite sides of the fulcrum thereof.

June 29. No. 585,250. Chlorination Process of Obtaining Gold from Ores. J. J. Stor- er, New York, F. Martin, Townsend, Montana, and C. O. Eaton, New York. Gold ores crushed to an even degree of fineness is floated in separate independent particles on a current of air through a hot furnace to oxidize the base elements; the hot non-volatile particles are precipitated continuously without agitation into the leaching solution. Chlorine is continuously agitated; after which the liquid is conducted through suitable precipitating tanks.

June 29. No. 585,257. Blast Furnace. R. H. Tertius, Salt Lake City, Utah. The invention consists in feeding the material into the furnace over gratings which project into the furnace so that the finer material is deposited on the walls of the furnace and the coarser material at the center thereof.

June 29. No. 585,304. Lime Kiln, Cupula and Metallurgical Furnace. E. J. Bird, Big Stone Gap, Virginia. In a furnace, a plurality of safety devices disposed at different planes of elevation and communicating with the interior of the furnace, each device comprising two valves one of which is adapted to be opened before or after gas pressure within the furnace.

June 29. No. 585,268. Ore Roasting Furnace. A. Haimbach, Butte, Montana. An annular chamber is provided with feed and discharge openings and extending transversely across said chamber between said openings, one of the doors being arranged to close before the other is opened.

June 29. No. 585,552. Ore Separator. W. R. Bushby, Pueblo, Colorado. A centrifugal receptacle or bowl of inverted conical construction is provided with a plurality of conveyors of having a common mouth arranged contiguous to the wall of the receptacle and provided with a plurality of scrapers corresponding in number with the conveyors, whereby each conveyor receives a layer of ore of predetermined specific gravity.

June 29. No. 585,492. Method of and Apparatus for Separating Precious Metals from their Sulfides. J. F. Webb, St. Mark, Victoria, B. C. The platinum is passed downwardly through a body of carbon, then upwardly through a body of zinc, and again downwardly through a body of carbon; an electrical circuit completes the connection between the carbon and the zinc.

June 29. No. 585,522. Process of Making Tin Oxid. H. Jager, Kalk, Germany. Assignor to Wessmann and Jager, same place. The metallic tin is raised to approximately
The Val Verde, of Randsburg, is rather dull—offered at about $100. and bid $5.
The first offering of the Magnetta stock, of Randsburg, at 29c. per share was made last week, only a small block of 25,000 shares of treasury stock was offered at that figure, and prices soon went up.

Leon, of Riverside county, is offered at 40c.
The Anaconda, of Cripple Creek, Colo., was featured and unchanged as to quotations.

Argentina Juanita, of Aspen, Colo., which has a capital of $2,500,000, was dull, little or business being reported.
The Terra, of Cripple Creek, Colo., also incorporated for $2,500,000, is steady in the Colorado market, at an average of 29c., but is very dull here.

The Exchange is now on a good basis, and is in a fair way to become a better one.

Los Angeles is the natural center of a vast area of mineral lands, of which a considerable section has been located, and development work has been unremitted in California, there is therefore no valid reason why an exchange was not organized before in this city.

First International Gold Mining Convention

The first International Gold Mining Convention met in Broadway Theater, July 7th, with fully six hundred delegates in attendance and two hundred more expected. It was called to order by the chairman of the Executive committee, after prayer by Rev. M. A. Ellis and roll call, Acting Mayor Scooby welcomed the delegates. He was followed by Gov. Alva Adams, who delivered an address of welcome and explained the purpose of the convention.

He said in part that to increase the gold-mining industry was the purpose of this convention. While local selfishness may have inspired the call, the importance of gold production reaches beyond the interests of the miner who mines it, or the State in which it is found, and becomes a question as wide as human nature itself.

"Our desire," he said, "to increase the product of gold is inspired by patriotic and industrial sentiment and aspiration. We want not the gold that is the soul of conquest; not the gold that is the soul of the miner, but that which is the handmaid of industry; the vehicle of enlightened faith; the means of broader culture and education that will liberate the people from the stranglehold of idleness; all in all, gold that will be the agent of a higher and nobler civilization than we have yet known.

"What blood is to the human system, money is to the world's system of business and commerce. As it has been scarce or plentiful, civilization ebbed and flowed. While all other products perish, gold remains a permanent contributor to the world's wealth. In their production you compete with no one, injure no one, but promote the welfare of all. The production of gold adds to the products of the field, farm and orchard. It gives work to the laborer, mechanic and professions; patronage to the merchant and manufacturer; support to every industry."

In conclusion, Gov. Adams paid a glowing tribute to the miner and prospector, than whom, he said, few explorers had endowed the earth as dear.

At the afternoon session, Mr. Scott, of Omaha, chairman of the Credentials Committee, reported that there were no contests, and that the committee had invited all who were interested in mining to become delegates and participate in the discussions. The report was unanimously adopted.

E. D. Hunter, chairman of the Committee on Organization and Order of Business, recommended Bradford Prince, of New Mexico, for permanent president; David T. Littler of the Nevada, for treasurer; and H. E. Barara as vice-presidents at large, and that each State select a vice-president and member of the Executive Committee from its delegation.

Hon. Irwin Malon of Colorado, was named for permanent secretary, and O. W. Crawford of Illinois as assistant. It was also recommended that all discussions be confined to mines, mining and kindred subjects, and that every State, Territory or foreign nation be allowed ten votes, providing they have that many delegates present; if not, then one vote each delegate.

The Earl H. Coo, of Colorado, introduced a resolution, calling upon Congress to put cyanide of potassium on the free list; M. D. Herring, delegates from Wyoming, authorizing the president of the convention to appoint a committee of five to investigate and report upon the advisability and feasibility of memorializing Congress to create a department of Mines and Mining, and for the appointment of a head thereto, who shall be styled the Secretary of Mines and Mining, and shall be a member of the President's Cabinet.

The resolution was adopted, both resolutions were adopted. After the appointment of the usual committees, the convention adjourned until July 8th.

PERSONAL NEWS ITEMS

Morris Wommer of San Francisco, who has been out in Gold Creek, Nevada, during the summer, has returned to his home.

A. James of Los Angeles, a mining man well known throughout the state of California, Lower California, Mex., July 9th. Mr. James has been visiting the Jumal district.

T. T. Sedgwick, who has been mining in the Yaqui district of Sonora, Mexico, came in to El Paso, Texas, last week.

C. W. Kinney returned July 2nd to Winnebago, Nevada, from Washworth, where he has been looking at the O'-ling house mines.

W. M. Bretherton, son of S. E. Bretherton, manager of the Silver City Reduction Works of Silver Creek, N.M., arrived in the above city last week from New Jersey.

C. P. Kerns of this city is traveling in Arizona. He was in Phoenix, Arizona, the fore part of the month.

S. A. Spindlove, who has been on a visit to New York, has returned to Chihuahua, Mexico.

Mr. Packard, representing the Michigan company that has taken hold of the Lexington copper mine at Monitor, Nevada, is in Alpine county, and reports that the mine is ready to put men to work on the mine in a few days.

Ex-Gov. Thornton of New Mexico is now in Denver, Colorado.

Fred Battershell, who has been investigating mining in Arizona, has returned to New York City, his home.

G. C. Beckman, a prominent mining man of Parma, Idaho, is rounding up some men from Southern California.

Messrs. McNutt and Ware, well known San Francisco mining men, are making a tour of the mining districts of Lower California adjacent to Rosendal.
Hon. P. A. Reynolds of New Mexico, made a call at the Miners' Bureau in Denver, Colo., last week.

Murray Innes, superintendent of the Los Gallo Mining Company, returned to colors today, the first of the month, from a trip to Callao and Morena, Arizona.

Dr. W. S. Scott of San Antonio, Texas, returned home from Mexico, where he has been purchasing some asphalt and petroleum lands for the Mexican Texas Asphalt Co.

Hen. W. H. H. Llewellyn of Los Cruces, New Mexico, is stopping at the Albany Hotel in Denver, Colorado.

Denny, who left Colorado, some time ago, has returned to his home in New York.

W. H. Bridley of this city, has recently returned from a trip to Lower California. He has been inspecting some mining properties in San Salvador, near Toluca.

J. W. Caldwell of Pueblo, Colorado, was in Chicago, N. M., last week, investigating some mines on Monument Creek, which he is interested in.

Edward de Souza, M. E., assistant superintend of the Continental, near Phoenix, Arizona, has accepted a very flattering offer from a French company to go to the antipodes to manage a large gold mine. He expects to leave for Australia within a month.

Mr. H. F. Hartwell of Los Angeles, returned to Esmeralda, Lower California, Mexico, the fore part of this month, accompanied by Mr. J. J. Lonergan of this city. Mr. Lonergan is the chief of the mining company in the district.

The case of the California mine, in Lower California, Mexico, has recently returned to this city.

Henry Wood of the Lone Star mine, returned to Blythe, New Mexico, from a business trip to Santa Fe, N. M.

J. R. Beards, the mining manager of Los Angeles, is now in Arizona.

F. M. Frank, the old reliable Utah mining man, has returned to this city from a trip north. He will remain in a few days for Arizona, and probably go to Mexico where he is interested in some mines.

Frank Morgan of the Devine mines in the district of Sonora, Mexico, recently paid Tucson, Ariz., a visit.

S. G. Gugenheim, the noted miner, is now in the City of Mexico.

John T. Graham, general manager of the Helen Mining Co., of Graham, N. M., arrived from Denver, Colorado, the last of June.

F. S. Munson of Los Angeles, recently went to Topeka, Kansas, on important business.

H. L. Van Winkle, a well-known San Francisco manufacturer of mill machinery, who has been east, has just returned home to San Francisco.

C. H. McLaughlin, a prominent mining man of New Mexico, was one of Los Angeles' visitors last week.

W. A. Clark, the noted mining company of Butte, Montana, is said to be in Europe on mining business.

John B. Parrish, the well-known mining expert, at present in Denver, Colorado, and his son were visitors at Bland, N. M.

O. T. Sherwood and Charles H. Tenney of Connecticut, officers and stockholders of the Mt. Wilson Gold Mining Company, near Telluride, Colorado, were at the mines last week.

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**OF THE**

Average Bids and Offers, and Total Sales for the two weeks ending July 15th, 1897.

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Manufactured under Patent of April 27, 1886: Sept. 19, 1888: July 24, 1889 and March 31, 1891

It can be safely stated, without going into a description of several new and united concentrators that have lately come into the market, that where sulphur is of such value as to make close saving necessary, that Frue Vanning, as designed, is the only machine in the market that can be relied upon to handle classes of ores and give universal satisfaction. (In all cases of concentrators the Frue Vanner has taken the standard machine of the world, and all comparisons made by it. There have been over 400 of these machines sold, now having been sold in the Pacific Coast alone.) They are in use in every part of the world where mining is carried on, and in all cases they are giving perfect satisfaction. From time to time valuable and important improvements have been made in this machine to increase its capacity and durability, and particular attention is called to the Patent Lip Flanges for the rubber belt, which does away with nearly all the moisture and clogging, as the old style of Vanning, making the life of belt more than double that of other style belts in the market. The lip of Flange bends outward in going over the large rolls and thereby distributing the strain in the solid rubber, and bringing virtually no strain on either the edge or at the base of Saige, as is the case in all belts with a raised edge.

Price of 4-foot wide Flank Belt Frue Vanner $600.00 b.
Improved Belt Frue Vanner 600.00 b.
2-foot wide Flank Belt 600.00 b.
7-foot wide Flank Belt 600.00 b.
For any information, pamphlets, circulars or testimonials, call on or address
JAS. S. BROWNELL,
Western Agent FRUE VANNING MACHINE CO.
San Francisco, Cal.

ENDLICH & HOYT
Mining Engineers and Metallurgists
Miners and Process examined and reported on. Specialties: Treatment of Low-grade Ores, Concentration, Cyanide Leaching, Designing and erection of valuable plants for refractory ores. Mines bought and sold. Only properties that will stand closest investigation considered. Surveying and umpire Assays and Analyses.
Correspondence Solicited.
Office: 201 Bullard Block, Los Angeles, Cal.
### INCORPORATED MINES PAYING DIVIDENDS.

<table>
<thead>
<tr>
<th>NAME OF MINES</th>
<th>LOCATION</th>
<th>No. of Shares</th>
<th>Capital Stock</th>
<th>Par Value</th>
<th>Amount of last Dividend</th>
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**Notes:**
- **G:** Gold
- **L:** Lead
- **C:** Copper
- **Q:** Quicksilver
- **I:** Iron
- **B:** Borax

For the full list, please refer to the original document.
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TO OUTFIT A MINE IS AT
The J. H. MONTGOMERY MACHINERY CO.,
1250-22 Curtis St., Denver, Colo., U. S. A.
Just listen—Reliable American
Machinery—Lowest Prices
Suction Hose and Couplings,
WATER PUMPS,
MINERS' SINKING PUMPS,
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Regulating Pumps,
Iron Pipe and Fittings,
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Manufacturers
Repairing Promptly Attended To.
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WATER JARS,
MINERS' HORN,
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CRUCIBLES,
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Iron Retorts,
Chemical Scales,
Weights, Etc.

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Established 1879
Sampling Works
P. H. BALEY, Prop.
FOR mineral determinations.
Special attention given to examination and reports on mining properties.

ANGELS IRON WORKS
DELAWARE & FULTON, TROY,
Machinery.
PHOSPHOR, CHROMIC,
Write for estimates on complete Miller, Mining,
and Reduction Plants.

WANTED—A well-developed cop-
For placer mining, also a body
of mill buildings for treatment on Royalty by the
Cyanide Process.

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Stimson Building, Los Angeles, Cal.

STATE ORE Sampling Co.,
Gold Digger, Denver, Colorado.

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THE CYANIDE PROCESS.

PARAFFINE PAINT COMPANY, Los Angeles and San Francisco

Second-Hand Machinery
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RIVeted SHEET STEEl WATER PIPE
For placer, water-powers, irrigation, Etc.
THE WEGELE PIPE WORKS
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Finlayson Patent Wire Rope Tramway
This tramway is the best that has ever been placed on the market. It has no rival. It is strictly automatic and its capacity runs up to 1000 lbs. per bucket. We especially call attention to the automatic loading and unloading terminals and intermediate stations, and to the automatic improvements in other systems. If you are interested in a tramway and want the best that can be had write us for information.

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We design and erect CRUSHING PLANTS with guaranteed capacity to any degree fineness. Investigate late improvements in our line of machinery.
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ASSISTANT
140 E. Street
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Blue Vital and All Chemicals.

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300-302 N. MAIN STREET, LOS ANGELES

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Dixon’s Black Lead Crucibles, Denver Fire Clay Crucibles, Muffles, Scourers, etc., Quicksilver, Drill Steel, Retorts, Mortars, Gold Pans, Drilling Hammers, Drifting Picks, Horn Spoons and Shovels.

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- Rumsey Power Pumps,
- LAWRENCE CENTRIFUGAL PUMPS,
- Egan Wood-Working Machinery,
- Bates Cordless Engines, Blue Turned Steel Shafting,
- SNOW STEAM PUMPS,
- Olin Gas Engines, Bradford Mill Co. Lathers

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Jewel Leather Belting,
Globe Rubber Belting,
Gardock Packing.

Westinghouse Electric and Manufacturing Company’s
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Also Dealers and Jobbers in
Shoveling, Hoppers, Rovers, Dodge Wood Pulleys, General Mining Machinery, Mining Hoists, Whims, Ore Rockers, etc., etc., etc.

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STAMP MILLS,
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CONCENTRATORS,
ENGINES,
PUMPS, HOISTS,


Best equipped works in California outside of San Francisco.

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A. W. SWANFELDT, Proprietor.

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HALLIDIE PATENT ROPEWAY

FOR THE

Transportation of Ore, Fuel, and other material, has been erected by us all over the country and is the most economical and efficient method known. Nothing to get out of order; has always given satisfaction.

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[Licensees]

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- and Railways.

Hoisting Apparatus, Patent Grip Pulleys, Transmission of Power by Wire Ropes; 25 years experience; Send for Ropeway Pamphlet.

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

**ATHCISON, TOPEKA & SANTA FE R. R.**

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**AMERICAN PACIFIC RAILROAD.**

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**SOUTHERN CALIFORNIA RAILWAY.**

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**SOUTHERN PACIFIC R. R. COMPANY.**

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**ORE TARIFF.**
From Points in New Mexico, Arizona and California, to El Paso, San Francisco and various points in Southern California.

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Rates on Copper or Zinc Ore to Canon City.
Taking Effect July 1st, 1893. For rates on Copper or Zinc Ore as consolidated, Canon City, Colo., will be considered as common with Pueblo; in other words the rates shown in Tariff as applying on shipments of Ore to Pueblo, will also apply on shipments of Copper Ore to Canon City.

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**Rates marked **(*)** apply on Carloads ONLY, other rates apply only on loads of ten or over. On lots of ten tons or over, ten per cent less than ten tons. On lots of one ton and less than four per cent will be added to the above rates. Base Metal Copper and Zinc Concentrate, less than one ton, will take rates of the above table, reduced 10 per cent. Charges on Ore in car-lots guaranteed, and on lots less than a car load must be in all cases prepaid.**
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Smelting and Refining Company,
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Manufacturers of Bar and Pig Lead, Lead Pipe, Antimonial Lead, Copper Ingots,
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Especially Attention to Sampling by most Approved Processes.
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IRON and WOODWORKING Machinery

Of All Kinds

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Empire, Nevada, April 17th, 1890
Vulcan Iron Works—Gentlemen, The rope-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 500 tons of tailings in ten hours; one man does the whole
business, including elevating tailings from hopper in the ground, operating Vulcan self-loader, and
attending to the rope-way generally. The self-dumper requires no attention whatever.

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Relpase, guaranteed best Babbitt Made
Copper for amalgamating plates.
Batteries, sheet copper.

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Samples by Mail or Express Receive Prompt Attention

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