The Mining and Metallurgical Journal

Vol. XV., No. 7
Los Angeles, Cal., July 1, 1896
Price, 10 Cents

The Roessler & Hasslacher Chemical Co.
73 Pine Street, New York
Cyanide of Potassium,
Ferrihydride of Potassium,
Ferrocyanide of Sodium,
Hyposulphite of Soda,
Sulphide of Iron, and Other Chemicals

The Gold & Silver Extraction Co.
Trade Mark of America, Limited
Metalliferous Processes

C. P. 98.99 PER CENT CYANIDE POTASH
Peroxide Sodium, Zinc Shavings, Borax Glass,
Also a Full Line of Assayers' Chemicals and Apparatus
F. W. Braun & Co., Los Angeles, Cal.

The Russell Process
The Improved Method of Lixiviation For Free and Rebellious Silver and Gold Ores and Tailings, Either Raw or After Roasting. Send for New Publications Just Issued

The Russell Process Co. - Park City, Utah

The Pelton Water Wheel
6000 Wheels Now Running

The Edward P. Allis Company
Manufacturers of
Mining, Milling and Smelting Machinery

The Machinery Supply Co.
105 North Broadway, Los Angeles
MINING AND ELECTRICAL MACHINERY
UP TO DATE

(See page 12)

Consolidated Kansas City Smelting & Refining Co.
Buyers of all Classes of
Bullion, Matte, Ore - Mill Products, Gold & Silver Bars

Smelting Works: Leadville, Colorado; El Paso, Texas; Argentine, Kansas
Refineries: Argentine, Kansas

Ore Purchasing Agencies: Spokane, Wash., Salt Lake, Utah; Leadville, Colorado; El Paso, Texas; Argentine, Kansas; Cripple Creek, Colorado.

The California
The Celebrated
Hammered Steel Shoes and Dies
A Home Production

Also
Best Refined Cast Tool Steel, Well Bit Steel, Heavy and Light Iron and Steel Forgings of all Descriptions.

Geo. W. Pennington & Sons
231 and 251 Polk Street, San Francisco, Calif.

Adamantine Shoes & Dies

Chrome Cast Steel
Cams, Tappets, Bosses, Roll Shells and Crusher Plates.

These castings are extensively used in all the Mining Districts of the United States and South America. Guaranteed to prove better and cheaper than any others. Orders solicited subject to present conditions. When ordering, sketch with exact dimensions. Send for Illustrated Circular.

Chrome Steel Works,
Kent Ave. & Reap St., Brooklyn, N.Y.

Lacy Manufacturing Co.
Manufacturers of
Steel Water Pipe
Sheet Iron Work
Irrigation Supplies

Works, Cor. New Main and Date Sts., Los Angeles, Cal.
Telephone No. 296

DEALERS IN CAST IRON PIPE

The Edward P. Allis Company
Manufacturers of
Machinery, Milling and Smelting Machinery

-The Machinery Supply Co.
105 North Broadway, Los Angeles
MINING AND ELECTRICAL MACHINERY
UP TO DATE

(See page 12)
PORTABLE SAW MILLS
VULCAN IRON WORKS
SAN FRANCISCO, CAL.

GOLD MINERS OF THE SOUTHWEST
Los Angeles is our Mining Center
Save time, annoyance, expenses and
Get the Finest Work.

SILVER PLATED Amalgamated Mining Plates
Made to order, of Best Soft Copper, Finest Workmen,
accuracy, Despatch, full weight of
silver guaranteed.

SAVE GOLD
Old Plates Bought and Repatched. Estimates Furnished
LOW PRICES

Pacific Cycle Company
INCORPORATED
Manufacturers of Machinery, Kin, Press, Stampings, Contractors,
Gold, Silver and Nickel Plates
Office, 618 South Broadway, Los Angeles, Cal.

Wm. H. Hoegee
Manufacturer of
Oiled Clothing, Awnings, Tents, Sails, Tarps, Flags, Banners, and
Camp Furniture, Tents and Canvas Floors for Rent.
Jockey of Cotton Duck, Etc.
136 S. Main Street, LOS ANGELES, CAL.

A Self-Evident FACT.
In the treatment of many low grade ores, the
quality of profit is sometimes so small that
more care and judgment is required in the selec-
tion of proper devices and machines and
appliances as well as in the arrangement of
the same. The manufacturers of
MINING MACHINERY
of every description in our specialty. Our new
works were specially designed for this purpose.
Gates Rock and Ore Breakers
Here acquired a reputation for excellence
world-wide in extent.
Crushing Rolls, Stamp Mills, Smelters, Concentrators,
Pans, Settlers, Hoist, conveying and
Pumping Machinery.
Complete Installations for all Methods of Treatment.
For Catalogues and further information, address
Gates Iron Works, 650 Elston Ave, Chicago, U.S.A.

Jeffrey Co
Roller, Steel and Special Chains
ELEVATING AND CONVEYING MACHINERY
FOR LIFTING MATERIAL OF ALL KINDS
POWER TRANSMISSION
MACHINERY.
Wire Cable Conveyors.
For Eaves and Railing Supports.
THE JEFFREY MFG. CO.
Columbus, Ohio.

The Mining and Metallurgical Journal
Subscription Price, $1.00 a year
OFFICE: 112 Liberty St., Los Angeles, Cal.

FULTON ENGINE WORKS
MINING, MILLING AND SMELTING MACHINERY
Best Equipped Foundry, Machine, Boiler & Blacksmith
Shops in Southern California. P.O. Box 296, Station C, Los Angeles, Cal.
A great fear is expressed that unlimited coinage will cause the silver of the world to be dumped upon us, and consequently there are many who favor confining coinage in this country to the American product. Even with this no doubt there will be so much stimulation given to mining that the American production would soon reach 75,000,000 ounces per annum. Deducing that which is employed in the arts and manufactures the sum for coinage might reach $40,000,000 annually. This would materially toward making a sufficiency of the circulating medium. It might be all that is needed for the expansion of the volume of business or redemption of specie.

To confine coinage to the American product would necessitate the imposition of very high duties on foreign silver and silver-bearing ores, duties so high as to be quite prohibitory, for in no other way could the foreign product be kept out. Indeed, it would be difficult anyway, as there would be so much value in a small quantity of silver that smuggling, and especially over the long and unguarded line between us and Mexico, would be very great. Another consideration must not be lost to sight, and it is that restriction of coinage to one country would embarrass trade with silver-producing countries, and especially Mexico, with which our commerce has become large, and is destined through natural causes to increase, and be interfered with, to be immensely increased.

The danger that silver will be dumped upon us is a burdensome extent in case unlimited coinage is resorted to, is more imaginary than real. The world must have silver in the arts and mechanics, and for subsidiary coinage. In these respects consumption will not decrease, indeed it will be an increase of subsidiary coinage. It is more probable that the demand will be increased, and, as it is a moral certainty that should we renounce silver, other nations will follow our example. A combination of silver nations will force the fullest monetary use of silver by the leading commercial countries of Europe. The idea that America is not is an experiment. It has been tried as far back as we have historical knowledge, and no one has yet been able to point out any evil that has resulted from it. It has never been demonstrated because of any harm that followed its monetary use, but simply for the reason that it interfered with the profits that the gold possessors were made upon their holdings. The adoption of the single gold standard rendered the process of slewing the masses more simple and easy.

**Congress Adjourned**

Nobody regrets the early adjournment of Congress. It has passed the usual appropriation bills, a number of pension bills, a concurrent resolution advising recognition of Cuban belligerency, and that is about all it has done. Certainly nothing has been accomplished towards relieving the country of the condition of restraints which existed for several years, and has been growing worse as time has advanced. No law has been enacted on finance, industry or commerce, nothing done that will tend to afford more employment to our idle people. The situation has been such as to forbid that anything should be done under our practices. This country has fallen into the theory that party interest is greater than that of the public. The House of Representatives is republican, the Senate is not controlled by any party, and the President is democratic. There is no concurrence of views on the part of any two of the law-making branches of government, hence it became impossible to accomplish much of value, because patriotism is subordinated to partisanship. None of the leaders on either side was willing to have that done which would redound to the credit of an antagonistic party. If patriotism were paramount in controlling public officials there would be less need of selecting partisans to carry out policies favorable to the public interest.

The Congress which came in December and has just gone has taught a lesson, and it is that the public do not want one policy, but must be through domination of all branches of government by one and the same party. We are a government by party, and not strictly by the people. It is to be hoped that in the coming election the government will fall into the hands of some party that will have nerve to do something of a positive character. No condition can be more unsatisfactory than the one now existing, for no party or set of men feel that they are responsible for what is or is not done.

**A Silly Objection**

The goldites say that free coinage will chiefly benefit the mine and bullion owners, and through this they hope to arouse a prejudice in the minds of those who have a fear of monopoly.

The fact should be borne in mind that the silver mines in the countries in the main are held by the same parties who owned them when we were not yet a nation. Silver coin would be doing them simple justice. It is true the owners of silver mines would be benefited. At the present prices of silver very few were thrown out of work without loss. To enable the owners to resume work and pay good wages and realize a profit would not be calamitous to the country. The silver mining interest is of sufficient importance to receive some consideration in the way of encouragement to the mining interest. Fifty million dollars a year is no small item for the country. Revival of the mining industry would stimulate other enterprises, especially if it will reduce the output of gold, thus enlarging the volume of money.

We have repeatedly said that the great argument in favor of free coinage of silver is to supply more money to the country. There cannot be a shortage of gold to any extent without more money, and without a larger volume industrial and commercial development will be but trivial, whatever may be the policy on other grounds. The great argument in favor of giving employment to our idle people. No country can prosper when any considerable portion of its population is idle. To supply a sufficiency of circulating medium is the first and highest duty of government. Silver coinage is a long step in that direction, and it may prove to be all that is necessary. In financial legislation the controlling consideration is not profits to bankers and money lenders.

**The St. Louis Platform**

Whatever may be its qualities in other respects, the St. Louis platform is explicit and unmistakable on the money question. It is emphatically for the gold standard. So far as the Republican party is concerned there is no straddle, and it has squarely presented the gold standard as its doctrine.

What will be done by the Democratic National Convention for the time being is conjectural. It is, however, quite certain that it will declare for silver coinage and the double standard. There may be attempts to straddle the question, and should that step be taken neither wing of the party will be satisfied, and both wings of the party will go into the campaign with doubt and lukewarmness existing on all sides. If it declares for silver the goldites will bolt, and if for gold the silverites will bolt.

There will be a new party composed of elements from all the existing political organizations, which will declare unequivocally for silver. Whatever it will take upon the tariff question is problematical. If for protection silver Democrats will hardly join it, and if against protection few Republicans will join it. There need be no mistaking the fact that among Republicans at least the tariff question is regarded as of very great importance, and silver Republicans believe that protection and silver coinage are twin measures, and that the alliance between gold and protection is unnatural, and that linking goldism with protection impairs the value of protection in a great measure. A policy that assures balances of trade in our favor is of itself a national benefit, as it prevents the outflow of gold from this country and causes an inflow from other nations.

If the Democratic free silver men are in the majority the Convention is improbable that they will form a union with other elements except upon the basis that their nominees shall be accepted as the standard bearers. Nor will there consent to an indorsement of the protective principle in tariff legislation, and on that account it can hardly be expected that Republicans in any considerable number will leave their party and sacrifice the protective policy if protection and gold were presented on one side.
and protection and the double standard on the other, it seems inevitable to us that the latter would sweep the country. Otherwise it is altogether probable that protection may be good for the small countries, and the coming of the 22nd of July with interest and anxiety.

CALIFORNIA BULLION OUTPUT.

"The bullion product of California in 1895 was $15,334,000, gold, as against $599,000 silver; yet the free silverites persist in putting California in the silver column." The above is a mild example of the ignorant or prejudiced remarks of the Los Angeles Times, but thanks to the intelligence of our citizens, which is not reflected in the obscured and darkened light of the Times Mirror, but in the adoption by both Republican and Democratic State Conventions, of a solid silver resolution in favor of free coinage of silver.

The Times was a few years ago in favor of brandlations, and for the same and the same cause adopted the single gold standard of Europe, in place of protection to an important local, and most extensive American industry, manufacturing. One who also bears his view of the amount of $599,780 of silver produced in this State during 1895, only $149,835 was produced in the northern counties, and Southern California produced by counties as follows:

<table>
<thead>
<tr>
<th>County</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inyo</td>
<td>$188,295.25</td>
</tr>
<tr>
<td>Kern</td>
<td>46,000.28</td>
</tr>
<tr>
<td>Riverside</td>
<td>2,550.00</td>
</tr>
<tr>
<td>San Berdo</td>
<td>219,410.30</td>
</tr>
<tr>
<td>San Diego</td>
<td>600.00</td>
</tr>
</tbody>
</table>

Southern California Total: $456,953.81

These counties are all tributary to Los Angeles, and from here they receive their supplies.

Silver mining is therefore a local industry, carried on in spirit of the free-trade hard, Times, and to repeat the fact, in these pages, is a chestnut to all the miners in these counties, but for the editor of the Times and a few other newspapers it is necessary that they protest against the "free trade" in silver bars to Europe, by imposing a prohibitive export duty on silver in all forms except coin, is the protection required. To accomplish this end and protect our silver mines, our Republican friends will have an opportunity to show their patriotism and diplomacy (if the present Democratic Government fails) in negotiating treaties with other North and South American countries, to prohibit the export of silver except as coin, minted by each country at a fixed ratio of, say, 16 to 1.

As these counties supply over three quarters of the world's production of silver, this action would bring silver back to its old value of $1.29, 29 an ounce, and prevent our Southern California miners being robbed of $500,000 or more a year. To the Times this is a small local matter of no patriotic importance, compared with the "golden Anglomania" of the war-horse editor of the Los Angeles Times, except when Monroe doctrine has to be talked, in the interests of some far-off South American gold-mining territory which England demands. All the miners of Southern California it means at present the million dollars, and with smelting works in Los Angeles it means several millions.

THE COMING VEHICLE.

The motor carriage thus far constructed, with a few exceptions, have been designed for passenger uses and not for mercantile purposes or heavy haulage. This is natural enough in the infancy of their development, but at the same time we cannot be borne in mind that the greatest utility will be found in other directions. The experiments that have been made show conclusively that a new era of transportation is fast approaching and one which will introduce some wonderful changes in our daily life. Again, but with greater emphasis, will the history of the bicycle repeat itself. Enormous manufacturing plants will spring up, and those who wisely venture first will mould its destinies.

The public have not yet a very clear idea as to what the Motor Vehicle will accomplish, or what will be accomplished by it. The belief is becoming general among eastern carriage builders that it will find a wide field of use at once, and that in its construction under the various patterns that it will find a widening avenue for employment of factory capacity. Tool, engine and machinery makers believe it will afford them additional work.

The question involved in the above comments is to be found in the new conditions which have grown about us during the past twenty or thirty years. Prior to a generation or so ago, there was very little distance between home and shop or office. Now there are great distances.

In this fact and condition is found the reason for the coming of the "horseless vehicle," when in primitive days the shop was down the street and the home or around the corner the question of quick or slow did not arise. Now when homes and places of employment are separated by miles of travel, when time is money, when comfort at a premium and luxury an absolute requirement of the masses, the question of getting to and from and of going when and where we wish is an important one, also as is the attendant question how we shall get our needs of life can be most expeditiously met.

SOMETHING MORE NECESSARY.

The trolley car in its way, the light carriage in its way, and the light delivery and express industry in its way, is a wonderful success. But today in the fever of business struggles, something more is needed. The locomotive and its train weighing 200 tons must be taken from its track and reduced in size to a few feet, reduced in weight to a quarter ton, and made to accommodate two or four persons instead of two or four hundred.

That is the problem before us in the "horseless vehicle." Logically it is a steamless locomotive, derailied and adapted to the street or road. Every man his own locomotive is the order of the day.

It is not that we are leaving the horse altogether but that we are re-adapting the locomotive to everyday use. This is the logic and practical experience. It is simply a case of decentralizing the energy incidentally to a degree displacing the horse.

There are an immense number of utilities and services to be rendered to society and by some one or some combination of the locomotive and its train into a little engine without a train, erroneously termed a vehicle, simply because it supplants what a horse has here before it, except the name. What is its field? Its field is to do in ten thousand small ways what has been done heretofore on rails in one large way. Its purpose is to develop a thousand small utilities and render a thousand small services where one was rendered before, in a whole way.

This will open and develop its own field of uses, and these uses have arisen to multifold dimensions only since the factory, the counting-room and store have been separated from the homes of the millions by long distances. This, as is one reason of its being, of its coming, and its use will be measured and defined by the volume of needs created by the separation of shop and home. It is not intended by the meaning that its use be confined to going from shop to home, but these terms are used in a higher sense to define scope and function. We need the locomotive for a thousand uses that it cannot serve as long as it can run only on sixty or ninety-pound rails and weigh fifty or a hundred tons. We need locomotives that will weigh a quarter or half ton, cost $250 to $1,000 a piece, cost a cent or two an hour to run, go when we are ready and stop when we say stop.

Its field, it is therefore to be seen, is commensurate with the demand. The new engine will come and penetrate into our daily life and serve thousands of uses and do our bidding with a thousand ways. Its future is as broad and great as our expanding wants, and its potentialities destined to become an important industry.

Its importance to the mining districts situated remote from railways will be appreciated when it is considered or known that the proper facilities of transportation often, it may be said in nearly every instance, make successful mining impossible, and without which mining could not be called a business which under favorable circumstances would be a great profit. It enters into the question of successfully operating more mines than any one cause, for it enters largely into them all. It is not the purpose of this article to deal with the subject in all its phases, but to point out some of the most important ones in relation to mining and to show wherein a great improvement will soon be made in the existing order of things.

Where no means of transportation are afforded except by packing loads on the backs of animals for any distance, the opportunities for improvement are obviously small. There are, however, in the mining country where separate and equally rich and extensive districts are, by reason of the difference in transportation facilities, as unlike in productivity and prosperity as can be imagined. The reader can readily call to mind such instances. The one may be equipped with competing lines of railroad, some having high rates on the ore tonnage, while the other may have no railroad at all or be entered by but a single line, whose rates are extortionate, or one may have good roads entering it, making it possible to haul large loads to the market at a comparatively low cost, while the other may have but indifferent roads with corresponding high cost of haulage.

A difference of $1 per ton for freight frequencies may be two or three times the cost of operating a mine. Many districts now struggling along, the miners in which do their annual assessment work and no more, might, under favorable conditions, be made mighty communities by proper transportation facilities. This is especially true of all this southwestern or arid portion of the United States, where the cost of animal transportation is such as to preclude generally successful mining. The character of the vast ore bodies found in the above
named region is so varied that it is impossible to treat them by any process or in any one place; hence transportation is the one matter of vital interest to all directly or indirectly engaged in extracting the precious metals from the ground.

Ore which will pay a handsome profit in one district cannot be successfully mined in another; and this is largely determined by transportation alone. This is especially the case in districts where the ore is low grade, and if half the freight charges could be saved it would yield a large surplus profit to the investment. Transportation is a matter of such importance that it means the life or death of a camp situated as most all of this southwestern country are, with only one railroad penetrating a district of several hundred miles. Fortunately these conditions will soon be changed.

(To be Continued.)

CORRESPONDENCE

ARIZONA.

ORG BLANCO ARIZONA. JUNE 10, '96.

EDITOR JOURNAL.--The present line of business in this camp seems to be the improvement of mills. The Old Glory is putting in 30 stamps, to replace the Griffin mills. The Old Cripple and Company is putting in Vanner concentrators. The Montana Company is still at work on tests of its tailings by cyanide process, with, as I understand, good success, thus far.

The Tres Amigos mill is shut down at present, for lack of water, after a very satisfactory run. The ore looks well.

The Golden Eagle mill is running. Old Oro Blanco, Sorrel Top, Gold Bug, and Grib Stake—work on each of these properties is progressing with continued favorable results.

C. W. KEMPION.

FRESNO.

FRESNO, CAL., JUNE 10, '96.

EDITOR JOURNAL.--You have not given up hearing from me again, but I trust you will pardon my long silence.

Mining and mining interests are receiving somewhat more attention in this section at present although considerable attention is being drawn to the western part of the country, known as the California district, by recent discoveries of oil and coal.

Several new companies have recently been organized for the development of these wells and mines and a great deal of capital is being invested. It is claimed by the owners of these properties that the oil produced here is much purer, therefore much more valuable, than that produced in the southern part of the state. The first shipment—one carload—was made two weeks ago.

Two mining companies have recently been formed and incorporated here. The Tuolumne Mining and Development Company was organized and incorporated January 16th of this year, with a capital stock of $48,000, divided into 2,000 shares. The plan of the company is as follows: Capital stock $48,000, divided into 2,000 shares of $24 each, payable in monthly installments of $1 per share. It is proposed to use $1,000 per month as a working capital with which to bond and develop one or more good mines are discovered and acquired by the stockholders of the company, then to work them steadily to the interests of all concerned.

The company recently leased the Zion gold mine, located near Groveland, Tuolumne county, and are actively engaged in developing the property. They have also secured the extension to the Zion and two properties located just across a gulch from the main property.

The officers of this company are: N. W. Moody, president; Thos. R. Brown, vice-president; J. L. Marble, secretary, and A. F. Shaw, treasurer, who, together with Jay Scott constitute the board of directors. I will also state that all the stock of this company is sold and is now off the market.

The Knob Hill Gold Mining, Milling and Development Company was organized and incorporated at Fresno, May 10th, with a capital stock of $50,000, of which $30,000 is subscribed and fully paid up. Its plan is practically the same as that of the Tuolumne County Company, which, by the way, has its principal place of business here. This company owns the Knob Hill property situated in Auberry Valley, Fresno county, where they have a 5-stamp mill in operation at present, and the crushing of ore is now going on with favorable results. The vein yields free milling ore, some of which produced, that goes from $20 to $75 per ton.


About eight hundred shares of this company will be placed on the market for investment.

I hope in a later communication to give you a complete description of the Minarct Iron Mines, the largest known body of iron ore in the world. The property is under bond for $7,500,000, and as soon as the sur- 

F. E. GALLOWAY.

CALIFORNIA.

SACRAMENTO, CAL., JUNE 18th, '96.

EDITOR JOURNAL.--The mining district adjacent to Butte is at present producing some very encouraging prospects. One of the largest phorpyry dykes, carrying mineralized quartz, in Southern California, traverses this section, and the indications are very favorable for the development of a number of mines.

Los Angeles parties who have been examining the sulphur mines at Cajon Peak, returned yesterday and are well pleased with the properties examined. They expect to invest heavily in a number of the prospects and will sink a number of shafts to determine the extent and value of the lodes.

Dr. Montague Yates is sinking a double compartment shaft on his claim in the Lagunas. It is down twenty-five feet, and will be followed to a depth of 100. The doctor does not believe in in shallow prospect holes, and if there is anything in that section of country he will try to find it.

Near the city, contact has been made from the Piedra mine at facilities, of which G. H. Hayes is superintendent. The five stamp mill recently erected is giving good satisfaction.

It is owned and operated by the Ventura Mining Company, of this city, are looking well and that recent developments show better prospects than for some time past.

From a gentleman who has recently returned from the Rice district it is learned that the prospects are exceptionally good in a few of the claims in that district. While there are no coined "twenties" lying around it is probable that a few good mines will be developed.

The Ramona Sentinel reports that D. W. Zornman and James Jennings, miners at work on the borders of the Imperial Valley, have filed a miner's lien against the property to recover their wages. The work was done for Messrs. Crouch and Cardell, lessees of the mine from Mr. Howard & McDowell.

The silver stamp mill of the Calmally Mining Company has been hung up until such time as new ore bodies can be developed. The recent management, instead of keeping a stamp mill always in operation, made the mistake of stopping out all the ore in sight and discontinued prospect work. Hence the present shut down.

The Portola Mining Company, who have a number of claims at Aqia Delice, have re- incorporated under the laws of Mexico. The officers are: Gay Lombard, president; B. L. Harding, vice-president; W. H. Dale of Salt Lake City, secretary and manager. They have been doing a large amount of prospecting and development work in the past year and reports from their mines are favorable.

The friends of T. N. Bailey will be pleased to learn that "Newt" has struck it rich in the Kentuck S. In cleaning out the old tunnel and about two feet in from the breast, where work had been discontinued over twenty years ago, a ledge was struck about eighteen inches wide, which will run into the hundreds of dollars per ton. The ledge, where it was cut by the crosscut tunnel, shows up as an average ore as has heretofore been struck in the camp. Mr. Bailey has never lost faith in the mine and has kept up his assessments for nearly a quarter of a century. The Kentuck S. is favorably located for economical working, and Mr. Bailey will push developments to determine the extent of the ore body encountered.

A number of prospects are being developed in the Lyons Peak district.

The Ready Relief mill made a number of small crushings for "chloridors" the past week.

Fred Grand has leased his claim to George A. Case, who will endeavor to locate an ore body and develop it.

E. D. Switzer is engaged in placing the stamp mill of the Owens Mining Company in condition to commence crushing ore. The drift on the 350-foot level exposes a very fair body of high grade ore. L. E. ACSEY, E. M.

Articles of incorporation of the Brown-Blake Gold Company were filed with the county recorder of record at Prescott, Ariz., with A. C. Duke, W. B. Palmer and Frank Evans as incorporators, June 4th. The principal place of transacting the business of the company is Denver, Colo., with an office in Denver and such other places as the company may deem proper. They will not only own, operate and lease mines but will also smelting and refining ores and minerals, railroad bridges, toll roads, toll bridges, canals for navigation, power, irrigation, mining and other properties. The authorized capital stock is one million five hundred thousand dollars, of which 400,000 shares of $25 per share may be divided into 12,000 shares of one dollar ($1) each, and is to be non-assessable; liabilities are limited to $100,000. The corporation will exist for twenty-five years from the 10th of June, 1896.
MISCELLANEOUS MINING NEWS.

ARIZONA.

Leo Goldsmith and ex-Surveyor General Manning, who have just returned to Tucson from their mines in Sonora, report a scarcity of water. Their mines, however, are looking well and as soon as sufficient water is developed work will go on steadily. Boring for water will commence at once.

C. E. Taylor, of Globe, is developing the Monarch, Native Copper and Mineral Creek claims, located in Mineral Creek, Pinal county, of which he is the fortunate owner. These claims are about one-half of a mile north of the famous Ray property, and are very promising indeed. They contain a great deal of native copper. The ore cannot be smelted to advantage, but is concentrated with profit. The three claims are bonded to Denver parties at present.

The owners are busily taking ore from the La Fortuna mine in the Cia Mountains, but the mill was closed down for repairs about the 11th ult, it is, however, running now. Hon. Robert M. Strauss is the superintendent, and is a very affable gentleman. He is in his business, but is all business, and his men understand each other and the work goes on without excitement or friction. The company is building a reservoir on the mountain side with a capacity of 100,000 gallons. It is situated some two miles on the Yuma side of Bislaadell station. A new well has just been completed, the water passing into it through a seventy mesh screen.

Jerome Mines Sold.

It is rumored that the United Verde copper mines at Jerome, owned by W. A. Clark, the Montana Mining Association have been sold to a French syndicate for $50,000,000. Mr. Clark left Jerome a few days ago for Montana and it is impossible to verify the report.

A. L. Butler and his partner had eighteen and one-half tons of ore from their Jessie R. mine, in Cherry creek district, near Prescott, worked at Sines' mill recently, obtaining forty two ounces in gold and concentrates valued at $80. They will continue work on the claim.

Frency & Rinz ore from the Cross Fraction, near Kingman, sampled over 1,500 ounces in silver per ton and five ounces in gold per ton. Their lease will be up the 1st of July, and Cal Cross will work the mine himself.

J. E. Bruce was in Kingman with a small lot of gold and silver ore from his and Geo. Eaton's mine in Gold Basin as a test. The ore averages about six ounces gold per ton and white metal, which is called the Utica mine and it has the geographical marks of rivaling its famous namesake.

The United Globe mines at Globe, probably better known as the Buffalo, are carried on under the efficient superintendence of H. H. Cook, a pleasant, unassuming young gentleman, who is a thorough miner and fully alive to the responsibilities of his position. There is at present one 360 ton furnace at work on this property, and it has been in constant operation since January 1st. On the 1st of August the capacity of the works will be increased to a 300 ton furnace. At a depth of a 150 ton stack. The company now owns about forty claims, the principal ones being embraced in the Buffalo and Hoosier groups. The Clinch or the Georgian groups are all connected by underground workings, as are also the Buffalo, Mark Twain, Cuyuhoga and Cleveland. Tramways for transporting the ore from the 300 foot tunnels and shafts are in place. One hundred and fifty men are employed in the mines and smelter. The ore worked by this company is low grade, but the reduced price of coke which will be still cheaper as soon as the railroad is completed enables it to be hauled at a handsome profit to the owners.

Recently Jas. A. Fleming and Dr. Ford, of Phoenix, banded the Black Copper group of mines near Globe for $250,000, and will at once put up machinery for working the ore. It is estimated that one of the claims is worth half a million dollars and will produce that amount by the time the shaft is sunk. This ore will be treated by the leaching process as it is better adapted to this class of minerals.

The Etta mill, on the Verde river north of Prescott, has closed down, pending the erection of a 200 ton quick drop mill, with all the latest improvements in free gold milling and concentrating—Deadwood gold mortars and 6-foot Frue Vanniers. The water of Oak creek will be mined under the Verde river to furnish power. The length of the pipe line will be one and one-half miles. This, with a Pelton wheel under a 40-foot head, will give sufficient power to run 1,000 stamps.

John S. Ross is working a claim in Copper Basin, near Prescott, owned by R. C. McNary, which is very promising.

Geo. Waddell and partner are having about two or three tons of ore from their new claim near the Sunny South mine packed into the sampling cars for Prescott for shipment. If the returns prove as good as we hope, we have every reason to believe they will, from the assays they have had taken, they will become regular shippers.

Mr. Bullock, who is interested in the Mammoth mine in the Bradshaw mountains, has decided to expend some money in the development of the property. As is pretty generally known this ledge is 150 feet wide, and samples of ore from it gave a value of over $90 per ton gold besides some copper. It is too big a proposition for a poor man to tackle with any reasonable hopes of success, but others splendid inducements to a big company which would not be afraid to spend some money in opening it up. Mr. Bullock has succeeded in getting some mining men of California interested in it, hence work will be commenced at once. If with development it show up in proportion to surface indications it will be one of the biggest properties in Arizona.—JOURNAL MINTER.

Hughy Hughes and Geo. Burton have given a bond on some mining property owned by them on Groom creek, south of Prescott, to eastern capitalists. A steam hoist has been sent out, and the property will be worked for all that it is worth.

From a new location two and one-half miles west of Thumb Butte, near Prescott, sunk a 300 foot shaft, which a 300 ton furnace, there is an ore body four feet between walls, carrying a 12-inch pay streak of gold ore which runs as high as $215 per ton. The ore body averages $40 per ton and is widening with depth.

At the Kasser Gold Mining Company's camp, Lost gulch, near Globe, the pipe line, about a mile in length, has been completed and a new shaft is now in place. The water was struck in the shaft last week at a depth of eighty feet below the fourth level. The character of the ore changes at the water level to sulphures and pyrites and shows an increased percentage of gold. Machinery for hoisting water will be put in at an early date. Development work in the mine will be pushed and the mill will be kept running.

The Phoenix Herald speaking of one of the prominent mining properties of Yavapai county says: The work on the Planet, beginning on the west end, consists of a shaft 145 feet deep. The ledge is 10 feet wide at the top and 15 feet wide at the bottom. A steam hoist is operating in this shaft. The man shaft is sunk on the dividing line of the two claims and is down 340 feet. No better timbering and facilities for handling the ores can be found. A break occurred in the main shaft at a depth of 200 feet, but at a cross cut of 100 feet the ore body was struck. On the Saturn, 300 feet east, a shaft is down 195 feet in the ledge. The ledge at this point does not vary from that of the west end of the Planet. At a depth of 175 feet a level of 300 feet was run, connecting with the main shaft. A winze was sunk in the center of this level 70 feet, and in the face of the wires there is a ledge of over five feet. The ledge is oxidized to a depth of 80 feet. The vein runs northeast and southwest and lies between granite walls. The mines are located above the gulch high enough to erect a mill. The mill will be connected to the mines. Superintendent Clark thinks he has developed a good supply of water for all purposes. One of Sturtevant's blowers furnishes air in the mine through a 13-inch pipe. Hot and cold water is in the change room adjoining the engine house at the main hoist. The company's building are built on a flat below the hoist. The house for the company consists of three rooms and an office, with a porch, and well furnished. A small adjacent received Mr. Clark's particular care, and was built as a special favor for the president of the company. The building is highly polished inside. It is not only beautiful, but useful.

SHUT DOWN AT GLOBE.

The expected has happened. As a result of the precipitated and interminable action of some of the miners of the town, on Sunday, June 18, in compelling Superintendent Parnall, by threats of personal violence, to accede to their demands, which were deemed unreasonable, an order was issued by the city police every night, June 9, from the office of the company at Boston, directing Superintendent Parnall to shut down the mine and smelter and pay off
at once. Instructions were promptly obeyed; all work in the mine was suspended at 3 o’clock a.m., and the furnace blown out at 7 o’clock a.m. Only four men are retained at the mine to keep the pump in operation. Wood contracts have been suspended, and the saw mill will, in all likelihood, be closed down within a few days. Coke hauling will probably continue until all coke now in transit has been delivered here.

Superintendent Parnall has no information of the company’s intention further than the brief instructions contained in the telegram referred to, and while expressing regret at the turn affairs have taken, declines to hazard an opinion as to the duration of the shutdown. However, there is a yellow metal and there appears to have some foundation—that the suspension will continue for sometime, probably for several months, and that when work is resumed it will be confined to development of the mine.

Public sentiment seems to have undergone a great change during the past week, and especially since the people who have a direct interest in the welfare of Globe have come to realize the possibility of a prolonged suspension and the disastrous effect which it must have upon every business interest, as well as the effort to discourage the investment of capital in other mining enterprises.—Globe Silver Belt.

Most flattering reports continue to come from the Johnson-Fitts mine on Tomlinson Hill, at Pearce. The recent strike of an ore chute holds out remarkably well in width and extent, five feet thus far shown and assays ranging from .44 ounces silver and carrying also some gold. Horn silver can plainly be seen impregnated throughout the ore and the ledge runs almost perpendicular. This claim will open another opportunity for some company to make a fortune as nearly 175 feet of wide a body ore has been developed showing that this hill also lays claims to being a bonanza.

DOS CABEZOS.

The Casey Brothers have made a discovery that sets the depth of depth to some Cabezos mines. They have struck a vein of high grade ore over twelve feet wide and apparently widening on the east drift of the 200 feet level. They had run a drift just above the ledge and then sunk a winze with the above result. There is no doubt in the minds of those who have inspected the work that a bonanza is in sight.

There are many claims along the big ledge that are being developed and showing up the merits of this section. The Wangtal mill is yielding handsome returns to its owners while many others are demonstrating the fact that Dos Cabezos is a leading gold country and will some day command attention.

The big Dos Cabezos ledge that runs along the range for miles, and can be seen 20 miles distant is famed with hundreds of small rich veins, while the big dyke itself will average about $8 or $10 per ton.

TOMBSTONE DISTRICT.

Messrs. Langpaap and Dunker who have been working the Mountain and Cavaugh in the cyanidation of the Grand Central dumps for the past two years and six months, have sold out their interest to the three latter partners.

Messrs. Langpaap and Dunker having secured a lease on the Silver Tread and North Point mines belonging to the Grand Central, are making new arrangements to work both the mines and cyanide the ore on an extensive scale. A hoisting machine is to be erected to hoist from the Silver Tread and a cyanide plant erected nearby for the treatment of the ores.

It was also learned that the Telephone mine, which has ranked as a producer and a veritable mint to its owners in earlier days, and which has lain idle for the last six years, for various reasons, has been leased and is soon to be worked. The ore of this property is high grade manganese.

There has also been negotiations quietly pending for the leasing of another prominent mine in this district, which, if terminate successfully, will be of importance as the owners have refused constantly to consider any proposition to chloride the same because of a probability of working the mine themselves.—Prospector.

The company at Duquesne is shipping a large amount of ore to Cottenden and thence to El Paso to the company’s smelter there. There is a steady stream of ore wagons on the road continually and the mill is being worked night and day. A large number of Mexicans are being employed there.

CALIFORNIA.

KERN COUNTY.

Heald Mining District.

D. R. Payne and son, of Los Angeles, are camped there, prospecting and doing assessment work on a claim which they are interested in.

Mr. Dye and a party of friends from Bakersfield have struck a rich deposit of gold on an extension of the Heald ledge. This famous ledge runs from the Sandstone at the foot of Black Mountain to Cow Wells, a distance of 25,000 feet, and is easily traced by the hanging and foot walls which are 500 feet apart.

The mill at Mosquito Spring has not been able to crush any ore as yet on account of the gasoline engine refusing to do the work.

Ed Harrington, of Tehachapi, has recorded a placer claim in Nugget gulch and is taking out good pay.

J. B. Clifton and S. Phillips have discovered and located a ledge of galena quartz half way between here and Cow Wells, which looks well and carries both gold and silver.

F. H. Heald has ten tons of ore at the Mosquito mill and has let a contract to have 100 tons mined, to be milled at Kane Springs.

John Clark, of the Mosquito mill, is in Los Angeles this week on business.

Mr. Smith and a party from Pomonas are prospecting in the vicinity this week.

A water project for Randburg is said to be on the program. With plenty of water—cheap—Randburg would turn out immense amounts of the yellow metal.

The new postofices of Garlock and Randburg are now a fact.

Considerable rich ore has been stolen from the mines at Randburg, in Kern county, and the thieves stole a wagonload of ore and it is supposed they are taking it to an arastara in the hills.

A report says that the gold miners on Pah Ute mountain are greatly excited over the discovery of an 84-foot ledge of gold-bearing quartz near or adjacent to the famous Bright Star mine.

Mr. Fitzgerald is turning out several tons of ore every day and has a good showing, and he has two eight animal teams hauling the ore to Keeler.

The Snow Canyon mill, near Keeler, will close down shortly for the summer on account of the heat and short supply of gasoline.

The mining situation at Cerro Gordo is improving and at least twenty or twenty-five men are working there at present.

Thomas Jaggers was in Mojave from Red Rock June 23d with a nugget weighing $500. The sight of the yellow metal has stumped the inhabitants and all Mojave has gone to the mines. The find has created the greatest excitement Mojave has ever known.

LOS ANGELES COUNTY.

J. M. Pearson is getting everything in shape to begin mining and milling on a large scale at Acton. Everybody is busy up there, and Mr. P. will have left for San Francisco by this time to get the balance of machinery needed.

Considerable mining machinery is being unloaded at the Acton depot now, and it is a sure sign of lots of life among the many mines thereabout.

RIVERSIDE COUNTY.

H. L. Ryan, of the Lost Horse Mining & Milling Company, was in Los Angeles the 22nd ult. Mr. Ryan showed us some bullion that came from the Lost Horse mine, about sixty-eight miles from Banning. From a twenty-one days’ run of ten hours a day, with a 2-stamp mill of 750 pound stamps, they made a clean-up of about $2,600.

J. Irving Crowell, H. E. Cunningham and George Branch have filed a location on 400 acres of water, in Cold Water canyon, near Temescal, at an elevation of 6000 feet above Glen Ivy hotel. A dam is to be constructed in the hills and the water used to generate electricity, which will be conveyed to South Riverside and used as power for a 30-stamp mill, which the locators propose putting in there for crushing ore from several mines which the gentlemen have located in the same range of hills.

More Mining Locations.

The Riverside Press says that the Courthouse people appear to be going into the mining business pretty extensively. A. J. Condee, Captain Johnson, D. G. Mitchell and E. H. Gravell on Monday morning filed location on two mines in the Angeles valley mining district, Mr. Condee on one and the other three gentlemen on the other. These are in addition to another mine filed upon a few days ago in which, with three others, Messrs. Mitchell and Gravell are interested. The prospects are good in these locations, so the locators claim, but none of the officers have as yet visited them with a view of entirely embarking in the mining business. The mining will likely be done by proxy.
San Jacinto Mines.

There is richness in the San Jacinto mountains some of the numerous prospectors are finding out to their immense satisfaction, says the ‘Austral.’

L. Hansen, who has just returned from a tour of inspection, is enthusiastic over the prospects of a lively mining camp in the Tasquiita mining district. Mr. Hansen’s best claim, the one he takes the most pride in, is the “Little Lily.” He says the ledge is a well defined one and can easily be traced for twenty miles and has a width of 100 to 300 feet. The majority of the claims already taken are on this ledge. The rock has been assayed by different assayers of Denver and Los Angeles, and each assay brings the cheering news that the rock pays to be mined. The rock will run from $425 to $2,000 per ton. The rock from one claim has repeatedly assayed from $500 to $1,000 per ton. The mines are situated about twenty eight miles east of San Jacinto.

“The Jumbo.”

The Jumbo, owned by Messrs. Rawson & Burtinam, has four men hard at work opening up the mine, sacking the rich ore and preparing a wagon road to the mine. This mine is practically just prospected, yet it shows gold, told about twelve inches of rock, ranging in value from $25 per ton away up into the thousands. It is almost incredible to see the coarse gold show up in the horn spoon from samples picked up indiscriminately from the dump. Several tons of this rich ore is now sucked awaiting the completion of a road, so it may be hauled away and milled. Some idea of the richness of this mine may be had when it is known that an experienced miner has offered to sink a shaft 300 feet deep upon it for what he can get out of the shaft, and this offer has been refused by the owners.

A twenty-stamp mill will be erected in a very short time at the Leon mine, a few miles northeast of Perris.

A rich strike is reported in the Santa Rosa.

Colonel Hasson expects to begin operations on the Little Maggie in about ten days.

Active work is going on in the Galvinal property and we expect to hear good reports soon.

R. W. Chilton has sold his half interest in the K C mine at Hemet to A. A. Caldwell and others.

The Santa Rosa is dropping ten stamps regularly these days and many familiar faces are seen throughout.

At the Alice mine in Menifee everything is running smoothly and the little entanglements are being rapidly straightened out.

Thomas Hancock is having five tons of rock from his bonanza find south of town, milled by J. B. Dennis at the Indian Queen.

The shaft at the Gold King is now down about 120 feet and the gold bearing vein is getting near the surface. The lengths from 4 to 18 inches in width. On Friday last week was encountered for the first time, but it will not in any way retard the progress of sinking.

New Era.

SAN DIEGO COUNTY.

The Picacho Gold Mines.

Never in the history of this old camp, which has turned out its $10,000,000 in gold, was the interest deeper, or the faith in the future more abiding than at the present writing.

The Oro Blanco, on the famous White Gold Vein, led off with a vein of ore 1500 feet in length and 4 feet in width, and from which 460 tests gave an average result of $7.4 per ton in free gold. This vein is cut lengthwise by a canyon from 40 to 100 feet deep, thus exposing the vein the width of the canyon, and the sides of the vein where they have not been cut down by the water.

The Aleyon follows with a vein 35 feet, of copper, gold and silver, which shows in 375 tests ore running from $5 to $1200 per ton in free gold. The vein is cut by a cross-cut and tunnel, but only one wall in sight. This alongside of the Oro Blanco mine, 13/2 miles from the Colorado river and one mile east of Picacho.

The May Queen, four miles east, and on the bank of the river, at 80 feet in depth, shows $50 ore. The vein is 20 feet wide near the surface, test made assayed $162 per ton in free gold.

In the tunnel on the opposite side of Providence canon, the surface only showed a color of gold. Ten feet further in on the vein, the ore runs $40 per ton.

The nugget mine, adjoining, shows $60 ore. The ore on the surface did not show a color.

The richest ore ever found in the group was on the mines joining the May Queen on the east. It assayed $120 per ton.

The Golden Dream, which crosses both the May Queen and Nugget veins, two claims west, shows $5 ore in the Queen vein, which is 22 feet wide, and $6 ore in the Nugget vein, which is 30 feet wide. Both have been cross-cut on the surface and a tunnel is being run on the west.

The development in the White Gold Basin is most satisfactory in its results. The work is being pushed. The large amount of work done by Senator Dorsey on his large group in the White Gold Basin has done much to establish the permanency of that section, while that done in the White Gold Basin, places it among the most promising of any along the Colorado river.

A wealthy Philadelphia company has secured the Nectar group of five mines in the White Gold Basin, which they will develop when cool weather returns.

A New Jersey syndicate has secured the Golden Dream group, upon which they will put a mill. These mines are only half a mile from the river.

An eastern syndicate has secured 16 good claims in the Picacho Basin.

Shanklands Cariso mines promise well. They carry gold, silver and copper, which assay as high as $450 per ton. They are 12 miles west of Picacho and 5 from the Colorado.

The Gatanal copper, silver and gold mines are opening up well. The ore runs from $60 to $200 per ton. They are 12 miles west of Picacho and 8 from the river.

Very rich copper, gold and silver ore has been struck in the Capella mine, which lies on the south side of the South forty west of Picacho, which shows that thus far all the veins carrying copper also carry gold and silver ores.

The white quartz in all this section is generally barren. Whenever any copper is found, the ore pays well in gold and silver.

The prospects were never as good in the old mining district as at the present time—never was the interest deeper or more confident of success. Some of the best mining men in the west are quietly picking up ground which has been open up in the hill. Everywhere any work has been done, good results have followed, not a failure thus far has been known. The district has been exceedingly free from shysters, only one or two of the ordinary kind have thus far appeared to cast a shadow over the future of this coming great camp.

X. X.

Speaking of Salton, Mr. Westernfield of Riverside states that the business of that station has so increased of late, owing to the activity in the mines adjacent, that the Southern Pacific Company has been compelled to enlarge the depot room there. Salton is the headquarters for a large section of the desert country now occupied by the busy prospector, and it is there that the supplies for the mines is forwarded from by wagon and pack train.

A rich find has been made at Oak Grove Field on a round knoll near Warner’s ranch, supposed to be the Lost Indian mine. Twenty years ago an old Indian would occasionally bring gold nuggets to Warner’s ranch, but he died without revealing the source of his wealth, so that no one ever knew. The present discovery is thought to be the same.

LOWER CALIFORNIA.

A. S. Musson, of the Virgina mine at Alamo, was in Los Angeles the 26th ult. He is very much satisfied with mines and mining in general in Mexico.

The shaft of the Viznaga is down about 250 feet and they are still sinking on it. The ore is improving with depth and averages about $30 to the ton. They are putting in a pipe line from the creek at the Soldiers camp, three miles west of the mine, and will pump water to the mine to run the ten stamp mill. There is only enough water to run the mill fifteen hours, but they will be able to run it twenty-four hours as soon as the pumping plant is in place. The boiler and engine are on the way down there now. The Viznaga is owned by Messrs. Hartzell Davis, Musson & Bliss. The latter gentleman is a New York capitalist, and the former gentlemen are residents of Los Angeles.

MEXICO.

Mr. Whitworth, representative of a Louisiana company, has charge of the work in the San Jose mine, district of Altar, Sonora, and is pushing it vigorously. Works will soon be set up for the reduction of silver.

A company has been formed to work the mine "El Forvent," recently discovered at Julinas, district of Camargo, State of Chihuahua. Assays of the ore taken from this mine give forty-six ounces of silver and seven-tenths ounces of gold per ton. The property is divided into 1,200 shares, 600 of which belong to the owners of the mine, and the other 600 have been placed on sale and are being rapidly taken up. A number of prominent men: Enrique C. Credel, Lic. Romulo Juarieta, Lic. Albino Uribe, Lic. Manuel Prieto, and others.
In the mining district of Pachuca, State of Hidalgo, much damage is being done by the invasion of water into the mines. The secretary of fomento has formulated certain plans for the remedying of this evil. La Noticia Pachuca, states that a number of mining concerns in that district, through their representatives, entered into a written agreement to carry out the suggestions of the secretary. The object of this agreement is to remain in force for one year, after which each company will resume all the rights which it held in respect to the others. Three of the companies, Real del Monte, Rafael Maravillas, bind themselves to place in operation their pumping apparatus, and each company binds itself to pay its proportionate part of the expense, as determined by the commission of engineers, for the purpose by the department of fomento.

"La Valenciana" is the name of a mine in the La Colorado mineral district, some 900 yards north of La Zaragoza, which, among the new mines that have not been worked many years, has the best outlook. It has a shaft 100 feet deep and two tunnels, one at the bottom of the shaft toward the north, and one at sixty feet from the surface to the east. Already three kinds of ore, to June be seen, have been extracted, which are pure and ready for smelting. At sixty feet from the surface there is a vein running east and west with a spur to the north. This inclination, approximately, of seventy degrees, a width of forty inches, and height of eighty inches, the ore of which runs $25 gold and $30 silver to the ton. Said vein divides into two branches, and the second is of twenty ounces of gold and eight ounces of silver per ton. In the tunnel before mentioned, at sixty feet depth, is a vein two and one-half yards high by four yards wide, which pays at the rate of $50 per ton. Experience has demonstrated that, in La Colorado as well as Las Prietas district, rich deposits are found at a depth of from 200 to 300 feet, and since La Valenciana is yielding the results above mentioned, it is clear that at a distance from the ground, it must be agreed that at the regular depth it will be very rich. The intelligent engineer Senor Ricardo Gayou is the owner of the property. "La Valenciana" is a mine of great future, and estimating it still as a simple prospect, he considers it, if not the best, as one of those which stand in the front line. He believes that the owners will become millionaires in a few years, since all the probabilities are in their favor and none against them.

GENERAL NEWS

The Colorado Iron Works Company of Denver, Colo., have just completed arrangements with Mr. C. T. Finlayson of Denver, whereby they have secured the exclusive right to manufacture and sell the Finlayson Patent Wire Rope Tramway. This tramway is of the double rope type, having a standing or still rope over which the bucket carriers run and a tail rope under which they are regulated. One feature of this system is the automatic device for attaching and detaching buckets to the tail rope. This arrangement, while very simple, has long been sought after by builders and users of the double rope tramway systems, and until now has never been brought out. Another feature is the carriage at each terminal for gradually starting the buckets which are at rest, avoiding the jar to the rope and doing away with the labor of shoveling buckets to get required momentum of rope. Another very important feature is the automatic safety brakes of the Finlayson Patent Wire Rope Tramway. The Colorado Iron Works Company will be pleased to furnish literature and any information desired.

Wm. T. Smith & Co.'s Mining Camp

This camp is located in Los Angeles, Cal., in a large hall formerly occupied by the Supreme Court. It contains desks fully equipped with writing material, etc., tables and chairs, and will at all times have on file the leading mining papers, and standard daily and weekly periodicals. There is also a bulletin board where mine owners can advertise for miners, mill men, etc., and in fact notices of all kinds can be posted thereon. It contains a long table divided into compartments where prospectors can have their ore on exhibition, leaving a typewritten or printed description of the location of their leases, etc., for sale. The hall will be open daily from 7 a.m. till 6 p.m. and all persons connected with mining interests are perfectly welcome, and there will be no charge whatever made for the use of the camp.

The object in establishing this camp is to bring the prospectors, miners and capitalists in closer and more friendly contact, and at the same time to bring the firm of Wm. T. Smith & Co., gold and silver refiners and assayers.

This firm commenced the business of refining gold and silver March 6th, 1855, in a small room at 128 North Main street, being then somewhat doubtful as to the success of their enterprise. Within three months thereafter, they were obliged to double their facilities and space. They have now leased the entire suite of chambers in the same building, including those formerly occupied and recently vacated by the Supreme Court, where the above mining camp is located. The firm's business consists in making assays for all precious and useful metals and in the preparation of gold and silver in the form, either in the shape of old and broken jewelry or silverware, or of placer gold, just as it is washed out from the earth, of retort gold and silver as it comes from the quartz mills, and, in fact, gold and silver in any form whatever. These metals are refined in Los Angeles by them, and then shipped to the Mint to be coined.

The copartnership heretofore existing between Wm. T. Smith and J. J. Lonergan was dissolved by mutual consent May 21st, 1856, Mr. James Irving having purchased the interest of J. J. Lonergan. The firm will conduct business under the same name as heretofore.

The firm consists of Mr. William T. Smith, a thorough chemist and metallurgist, and Mr. James Irving, a business man, known to the bankers and merchants of Los Angeles for the past ten years.

Recently the bank at Weiser, Idaho, sent to the Crocker-Woolworth National Bank in this city (San Francisco) for $500 worth of silver from the sub-treasury. The sub-treasurer said the silver must be obtained from the sub-treasury at Chicago. The sub-treasurer at that point returned the draft to Weiser and stated that "his office did not accept drafts or checks for any purpose whatever." The Idaho banker then instructed his New York correspondent to deposit $500 in cash with the sub-treasury in that city. This was done and the bank made it appear that the silver would be shipped from San Francisco. The banker waited for two weeks, and, as the silver did not arrive, he appealed to the sub-treasurer at Washington. This appeal finally brought matters to St. Louis. It had taken just two months of persistent demands to force the administration to release $500 worth of silver, which the officials say the people do not want.—Mining and Scientific Press.

PATENTS.

Messrs. Hazard & Townsend, solicitors of patents, room 9 Downey Block, Los Angeles, California, report the following recent patents of interest to mining men.

June 5, No. 569,709.—Amalgamating apparatus. J. W. Hackett, Charlestown, Indiana. A reciprocating pan, provided with amalgamating surfaces, has movable amalgamating rakes arranged to rake through the pulp, and the magnetic-rod board is supported upon the pan beneath the feed thereof, to catch the iron.

June 6, No. 561,629.—Ore concentrator. L. S. Goodwin, Denver, Colo. A movable concentrator belt is arranged to be independently reciprocated sidewise, by means of clutch mechanism connected with the frame moving mechanism.

June 9, No. 561,630.—Feed mechanism for ore concentrator. L. R. Tullock, Angels' Camp, California. A shaking ore feed box, having a removable slotted or perforated bottom, is provided with chutes for conveying the ore which passes through the slots to the belt, delivering it therewith at different points.

June 12, No. 562,148. J. R. Sears, Stockton, California. Assignor one-half to D. C. Marshall, same place. —A slightly inclined, horizontally arranged cylindrical cyclinder is provided with hollow trunnions, through which the ore is introduced and removed from the cylinder; the cylinder is supported near its mid-length upon a bearing wheel, and is heated by kryocarbon fuel.

Copies of these patents may be obtained for five cents each (no stamps) by addressing the Commissioner of Patents, Washington, D. C., giving the date, number of patent, name of inventor and title of invention of each patent ordered.

L. C. Moreland is having a new patent roller stamp mill constructed in this city. It has a heavy circular shoe with five inclines and drops upon which five heavy wheels travel. The wheels run up the inclines and drop over the edge of each incline to the base of the succeeding one, all five rollers dropping simultaneously. The rollers are not beveled thus giving a grinding motion to the crushing. It is ready to go again just in front of the rollers. It makes 100 revolutions per minute or 500 drops, and is calculated to crush twenty tons of ordinary quartz in twenty-four hours.
Smelter Goes to Cerrillos.

The smelter that was to have been put up in Albuquerque will not materialize there because the stock was not subscribed for, but it is to be located at Cerrillos, whose citizens have taken stock and agreed to furnish necessary land and water. Mr. Balch, who was in Albuquerque June 25th, stated that the company had been incorporated, that the necessary money had been subscribed to carry out the project, and that the work of building the smelter will be begun at Cerrillos next month.

Anaconda, Montana, is to have a plant for the manufacture of sulphuric acid from the smelter smoke. At first the capacity will only be sufficient to furnish this product for the Anaconda company, but will be increased in the near future.

The Palomas Chief, at Hermosa, will have an invoice of ore soon for transportation to the railway, which will complete their shipment.

J. P. Wheeler and his son, Frank, have a small shipment of high grade ore ready on the dump of the Argonaut Consolidated, near Hermosa, New Mexico.

The No Hay Nada, Jefferson Lost Mine and other claims in the Central district are showing up to good advantage, and considerable quantities of high grade ore are being piled upon the dumps, near Central N. M.

J. D. Weems, of Sepah, made a carload shipment of ore early in the week to the Deming Sampler.

M. C. Weaver is working his mine in the Tres Hermosan district, is taking out good ore and will begin shipping about August 1st.

A new character of ore has been struck in the drift of the Almos near Chloride in the Black Range that gave assay returns of 563 ounces silver and one ounce in gold to the ton.

C. H. Hart and McKienna shipped a carload of ore to the Deming sampler this week from the Beck mine near Mogollon, N. M.

A car of ore from the Wyman mine near Stein’s Pass was received at the Deming Sampler this week.

PERSONAL NEWS ITEMS

P. E. Van Horn, one of the discoveries of the famous Gypsy silver mine at Kingston, New Mexico, is in New York.

John Lannon, who has been at Cripple Creek, Colo., has just returned to Hillsboro, New Mexico.

K. D. Barton, who has been prospecting in the Salida district, spent the latter part of last week in Raton, New Mexico.

George Shiffer, who has been prospecting in Arizona, has just returned to Silver City, N. M.

Dodge and Giant Rock Breakers.

Improved Mills

That successfully take the place of stamps.

Amalgamators,

Dredging away with platers on all kinds of mills for saving gold.

DISTRIBUTORS

That save a vast amount of time and labor, divide the pulp and water evenly to two or more lines of concentrators.

Dodge Mining Machinery Co., M. B. Dodge, Manager, 151 First Street, San Francisco, Cal.

Jig Concentrator

For washing the sands from separating box.

SIME CONCENTRATOR

Concentrates ores where there is a lack of water.

Slime Concentrator

Concentrates ores where there is a lack of water.

Dry Jig

Continuous and charge roasting furnaces.

THE ABOVE MACHINE IS BEING SET UP AND CAN BE SEEN AT OUR STORE.

MILLS

To crush to any degree of fineness desired.

Gravel Mill

Works constant gravel without crushing the gravel.

Send for Circulars and Catalogues.
Assayers and Chemists
WADE & WADE
Best and Oldest Establishment in Southern California.

The Willamette Steam Mill Lumbering & Mfg. Co.
— Are Prepared to Furnish on Short Notice and at Manufacturer's Prices —

Minning & Milling Timbers in Oregon Fir and Cal. Redwood
DELIVERED AT ANY R. R. STATION IN CALIFORNIA, ARIZONA OR NEW MEXICO.


The Denver Fire Clay Co
Assayers' and Chemists' Supplies
MANUFACTURERS OF
Crucibles, Scoops & Muffle
And all other kinds of
Fire Clay Material.
SPECIALTIES—Stoutly c. p. Acids, Test Lead, Bone Ash, Cyanide Fuses, Argol, Borax, Borax Glass Irons Sulphides, Lignite, Soda, Mining Fuses, etc.

Selby Smelting and Lead Co.
416 Montgomery St., San Francisco
Consign Shipments to Vallejo Junction, Cal.

Ores! Ores! Ores!!
Gold, Silver and Lead Ores and Concentrates
Purchased at Reduced Rates for Treatment.

L. E. AUBURY
Assayer - and - Metallurgist
CORRESPONDENCE SOLICITED.
1428 E Street
SAN DIEGO, CAL.

MORGAN & COMPANY,
ORE-TESTING WORKS AND GENERAL ASSAY OFFICE
Tests Made by STAMP MILL and CYANIDE PROCESS
Quantities from 100 POUNDS Up can be Handled

Bullion Purchased. Mines Examined and Dealt In.
The Machinery Supply Co.
105 North Broadway, - - LOS ANGELES, CAL.
Latest Improved Mining and Milling Machinery, Wire Rope, Belting, Screens, Etc.
Electrical Motors, Dynamos and Supplies.

PACIFIC COAST AGENTS:
Snow Steam Pump Works' Mining and Sinking Pumps.

THE BI-METALLIC ASSAY OFFICE.
AND CHEMICAL LABORATORY.
Assaying in all its branches. Determinations accurately made.
R. A. PEREZ, Mgr.
Assistant Chemist Consolidated Kansas City Smelting and Refining Co., Argentia, Kansas.

GOLD MINES!
IN JULIAN DISTRICT.
SOUTH CALIFORNIA.
I have listed for selling, buying, or leasing. Strict investigation invited.
Write for Information about any mine or company answered for.

G. WHEATLEY.
GUARDIAN AND MINE MANAGER.
124 S. MAIN ST., LOS ANGELES, CAL.

UNION HARDWARE AND METAL CO.
DEALERS IN
Boiler Tubes, Iron Pipe and Fittings.
RAILROAD, MILLING, MINING AND FOUNDRY SUPPLIES.
214 and 216 N. Los Angeles Street, Los Angeles, Cal.
Am. Zinc-Lead Smelter, Canon City, Colorado.
New Mexico and Arizona Smelter.

THE WILSON
High Grade Steel Shoes and Dies
Gauranteed to Wear Longer and Prove Cheaper than any others.
Made by Jack's Steel Works. Patented Aug. 10th, 1899.

WESTERN FORGE AND ROLLING MILLS,
St. Louis, Missouri.

JOSHUA HENDY MACHINE WORKS
SOLE AGENTS.
38 to 44 Fremont Street, San Francisco, Cal.

JOHN WIGMORE & SONS CO.
Heavy Hardware.
Agrs. for J. A. ROEBLING & SON, Wire Rope.
Mineral Supplies.

WM. T. SMITH & CO.
Iron and Steel.
GOLD AND SILVER REFINERS AND ASSAYERS.
Highest cash price for old gold and silver, placer and retort gold. We will make returns in Southern California, Arizona, New Mexico from 4 to 6 days quicker than from any other point.

HARPER & REYNOLDS CO.,
MINING SUPPLIES.
Giant Powder Co., Galvanized Spiral Pipe, Steel and Iron.

FRUE ORE CONCENTRATOR
Over 3,200 in Actual Use.
Manufactured under Patent of April 27th, 1892; May 16th, 1893; and March 31st, 1894.

It can be safely stated, without going into a description of several new and novel concentrators that have lately come into the market, that where sulphides are of such value as to make close saving necessary, the Frue Concentrator is always used. It is the only endless belt concentrator in the market that can be relied on to handle all classes of ores, and give universal satisfaction. To all competition of concentrators the Frue Concentrator is a marvel of the mechanical world, and all comparisons made by it. They have been over 200 of these machines sold, about having been sold on 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 them in order to increase in capacity and durability, and particular attention has been called to the Patent for the rubber belt, which, though used by nearly all the metals and minerals, is an invaluable feature in the rubber belt, and, in our opinion, makes the life of belt more than double that of other rubber belts, yet is cheaper. The belt is a combination of a large endless belt, which is used as the gathering belt, and is in turn gathered by various attached rubber ribs, thereby distributing the strain in the solid rubber, and bringing very much strain on either side of the pipe. But the belt is also a gauge-

Prices of 4-foot wide Flat Belt Fines Vanner... $200 per ft.
Improved Belt Fines Vanner... $200 per ft.
6-foot wide Belt... $200 per ft.

For any information, pamphlets, circulars or testimonials, call or address
JAS. S. BROWNELL,
Western Agent FRUE VANNING MACHINE CO.,
125 Market Street, - San Francisco.

THE SOUTHERN CALIFORNIA LUMBER CO.
PINE AND REDWOOD LUMBER.
Delivered at any R.R. point in New Mexico, Arizona or California.
FIRST-CLASS MATERIAL.
LOW PRICES.
WHOLESALE.

PUGET SOUND.
We make a specialty of Mining Trade.

Wharves and Yards, E. San Pamo, Cal.
Address General Offices, Los Angeles, Cal., Cham. Wing, Mgr.
CONCENTRATION MACHINERY
Walburn-Swenson Company,
COMPLETE PLANTS for the CONCENTRATION of ORES
Coal Washing Plants Furnace Castings, Mining Machinery, Experimental Plant for Testing Ores by Concentration.

934 Monadnock Block.

PATENTS!
HAZARD & TOWNSEND
SOLICITORS OF PATENTS
Patents on Inventions secured in all countries. Copyrights, Trade Marks and Labels.
Office, 9, Downey Block.
Telephone 347. Los Angeles, Cal.

GOLD
AT
CRIPPLE CREEK.

The heart of the Mining District is reached by the Midland Terminal Railway, which is the direct connection of the Atlantic and Pacific Railroad Southern California Railway.

Through Ponder Sleeping Cars and Through Ticket Sleeping Cars can run every day from both San Francisco and Los Angeles to Buena Vista, Colorado, where immediate connection is made for the

GOLD DISTRICT
Through Tickets and Sleeping Car Reservations can be obtained at the Ticket Office of the Santa Fe Hour.

644 Market St. San Francisco.
ad and Spring Sts., Los Angeles.

Saws and Knives
of every description on hand and
MADE TO ORDER.

The "Best" Engine can be operated on Distillate, Crude Oil, Gasoline, City Gas and Kerosene.

Write for cost of running, for trial estimates, circulars and terms.
PUMPS
and
Irrigating Machinery.

Keystone Foundry and Machine Works,
LOS ANGELES, CAL.

MINING STOCK QUOTATIONS.

BOSTON.

<table>
<thead>
<tr>
<th>Name</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen</td>
<td>1.00</td>
</tr>
<tr>
<td>Anderson</td>
<td>1.50</td>
</tr>
<tr>
<td>Austin</td>
<td>2.00</td>
</tr>
<tr>
<td>Austin</td>
<td>2.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>3.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>3.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>4.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>4.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>5.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>5.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>6.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>6.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>7.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>7.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>8.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>8.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>9.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>9.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>10.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>10.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>11.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>11.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>12.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>12.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>13.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>13.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>14.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>14.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>15.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>15.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>16.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>16.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>17.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>17.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>18.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>18.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>19.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>19.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>20.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>20.50</td>
</tr>
<tr>
<td>Bailey</td>
<td>21.00</td>
</tr>
</tbody>
</table>

COLOMBIAN SPRINGS STOCKS.

<table>
<thead>
<tr>
<th>Name</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexander</td>
<td>5.00</td>
</tr>
<tr>
<td>Adams</td>
<td>10.00</td>
</tr>
<tr>
<td>Austin</td>
<td>15.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>20.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>25.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>30.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>35.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>40.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>45.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>50.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>55.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>60.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>65.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>70.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>75.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>80.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>85.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>90.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>95.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>100.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>105.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>110.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>115.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>120.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>125.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>130.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>135.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>140.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>145.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>150.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>155.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>160.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>165.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>170.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>175.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>180.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>185.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>190.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>195.00</td>
</tr>
<tr>
<td>Bailey</td>
<td>200.00</td>
</tr>
</tbody>
</table>

U.S. HOTEL

LOS ANGELES, CAL.

170 N. Main St.
MINERS HEADQUARTERS
Rooms from 50c up.

DENVER PUBLIC --- SAMPLING WORKS,
W. E. SMITH, PROPRIETOR.
ORES SOLD ON THE PUBLIC MARKET.
Denver, Colo.

GEN'L MEXICAN AGENCY

Special and prompt attention given to business of every kind with the various Departments of the Government, Concessions arranged.

Patents Procured, Titles Examined, Reports made on Mining, Coffee, Sugar, Tobacco and other properties, also on the financial standing of firms and individuals.

Custom House business attended to, and consignments received. First-class staff of assistants.

C. H. M. y Agramonte
P. O. Box 388
17 Cinco de Mayo
Cable address "Agra".

MEXICO

The Evans Assay Office
17 and 19 Fremont Street,
SAN FRANCISCO.

Agents for C. C. PAUL'S Files

SILVER-LEAD MINES
FOR SALE.

Have a group of three silver-lead mines for sale. One of them being worked and producing large quantities of from 60 to 75 per cent. lead, ore, 35 ounces in silver. Costs $45 per ton to get ore to railroad.

For a bargain, address
KEAN ST. CHARLES,
Kingman, Arizona.

P. C. CARBUTT
Stimson Building, Los Angeles, Calif.

GOLD QUARTZ MINES & PROSPECTS
Bought and Sold on Commission.

MEXICO

New York Quotations:

<table>
<thead>
<tr>
<th>Month</th>
<th>Silver</th>
<th>Copper</th>
<th>Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td>0.75</td>
<td>0.25</td>
<td>0.05</td>
</tr>
<tr>
<td>July</td>
<td>0.75</td>
<td>0.25</td>
<td>0.05</td>
</tr>
<tr>
<td>August</td>
<td>0.75</td>
<td>0.25</td>
<td>0.05</td>
</tr>
<tr>
<td>September</td>
<td>0.75</td>
<td>0.25</td>
<td>0.05</td>
</tr>
<tr>
<td>October</td>
<td>0.75</td>
<td>0.25</td>
<td>0.05</td>
</tr>
<tr>
<td>November</td>
<td>0.75</td>
<td>0.25</td>
<td>0.05</td>
</tr>
<tr>
<td>December</td>
<td>0.75</td>
<td>0.25</td>
<td>0.05</td>
</tr>
</tbody>
</table>

PAYMENTS IN CASH.

Note—The above Mexican prices are figured on the basis of Mexican silver.
The Peerless Gas Engine is handled by the Badlam's Machine Shop and Sheet Metal Works, Of Los Angeles.

ANGELS IRON WORKS DENVER & PULLEY, Props.

MINING MACHINERY, ANGELES, CAL.
Write for estimates on complete Milling, Mining and Reduction Plants.

THE CHEAPEST PLACE ON EARTH TO OUTFIT A MINE IS AT The J. H. Montgomery Machinery Co., 1220-22 Curie St., Denver, Colo., U. S. A.

Just Listed—Reliable Common Steel Whirl, price reduced to 50, steam boilers, $8 and up; hand holders $5; steel ore washers; all prices; pumps, pipes, stamps, mills, etc. A large fancap with new, old, and second hand equipment.

The Lighter Quartz Mill—Something Good and Cheap

Manufactured by WM. H. BIRCH & CO.

Hoff asbestos MFG CO., ELKIN, CALIFORNIA, Asbestos Steam Pipe Covering, Sectional and Cement. Also asbestos cement and asbestos cloth, delivered anywhere, stands 700°, coated with a tar, leaves no material that stands constant under all conditions. Also asbestos Fire Proof White Wash, asbestos Roof Paint, asbestos Stove Backs.

Profit by the Experience of Others! It will pay you to write to us for descriptive circulars and test results from Mines and Mills using our

P. & B. READY ROOFING WATER AND ACID-PROOF PAINTS.

PARAFFINE PAINT CO., 524 SOUTH BROADWAY, Los Angeles, Cal.

The Puget Sound Reduction Company PURCHASERS OF GOLD, SILVER, LEAD AND COPPER ORES Special facilities for handling ores from the South-West and Mexico.

THE COLORADO IRON WORKS COMPANY, DENVER, COLORADO Manufacturers of and Contracting Engineers for

Gold and Silver Mills and Smelting Plants

For the Reduction of Gold, Silver, Lead and Copper Ores.

We are now installing complete Crushing Plants for Cyanide, Chlorination and Bromine Processes, guaranteeing any capacity per day desired to any degree of fineness.

The Finlayson Patent Wire Rope Tramway

Embody all the good features of the Old Systems with the Addition of Many New Patented Ones, making the Most Perfect System of Rope Haulage extant. It is Automatic and has large capacity. Write for Special Catalogue.

A. A. BAILEY MANUFACTURER AND DEALER OF THE LEADING Packings and Engineers Supplies LUBRICATING OILS AND COMPOUNDS Exclusive Manufacturer of the UNSURPASSED BAILEY Anti-Friction Metal and all other Grades of Rabbit Metal Salesmen for Reliable Steam Pumps

300 South Los Angeles Street, Los Angeles, Cal.

NOTICE TO ORE SHIPPERS!

BY SHIPING YOUR ORES TO US YOU CAN OBTAIN THE HIGHEST PRICES PAID ON COMPETITIVE HUES IN THE PUBLIC MARKET, TOGETHER WITH A CAREFUL AND ACCURATE SAMPLE AS WITH OUR NEW AND IMPROVED MACHINERY WE ARE ABLE TO GIVE PERFECT SATISFACTION TO ALL SHIPPERS.


COLUMBIA ASBESTOS MFG CO., ELSINORE, CALIFORNIA, Asbestos Steam Pipe Covering, Sectional and Cement. Also asbestos cement and asbestos cloth, delivered anywhere, stands 700°, coated with a tar, leaves no material that stands constant under all conditions. Also asbestos Fire Proof White Wash, asbestos Roof Paint, asbestos Stove Backs.

Agents Wanted.

PROFIT BY THE EXPERIENCE OF OTHERS! It will pay you to write to us for descriptive circulars and test results from Mines and Mills using our

P. & B. READY ROOFING WATER AND ACID-PROOF PAINTS.

PARAFFINE PAINT CO., 524 SOUTH BROADWAY, Los Angeles, Cal.

The Puget Sound Reduction Company PURCHASERS OF GOLD, SILVER, LEAD AND COPPER ORES Special facilities for handling ores from the South-West and Mexico.

THE COLORADO IRON WORKS COMPANY, DENVER, COLORADO Manufacturers of and Contracting Engineers for

Gold and Silver Mills and Smelting Plants

For the Reduction of Gold, Silver, Lead and Copper Ores.

We are now installing complete Crushing Plants for Cyanide, Chlorination and Bromine Processes, guaranteeing any capacity per day desired to any degree of fineness.

The Finlayson Patent Wire Rope Tramway

Embody all the good features of the Old Systems with the Addition of Many New Patented Ones, making the Most Perfect System of Rope Haulage extant. It is Automatic and has large capacity. Write for Special Catalogue.
NOTICE TO GOLD MINERS!

Silver-Plated Amalgamated Plates

For Saving Gold

IN QUARTZ OR GRAVEL PLACER MINES. MADE OF BEST SOFT LAKE SUPERIOR COPPER

AT REDUCED PRICES

Our plates are guaranteed, and by actual experience are proved, the best in weight of silver and durability. Our Mining Plates replaced, bought, or gold separated—THOUSANDS OF ORDERS FILLED.

San Francisco Novelty and Plating Works

INCORPORATED

52. 70 and 72 First Street, San Francisco, Cal.

Send for Circulars.

W. O. ABBOTT, ASSAYER

ASSAYING IN ALL ITS BRANCHES
CHEMICAL DETERMINATIONS ACCURATELY MADE

TOMBSTONE

Personal Supervision of All Work.

W. S. LEWIS & CO.,
Steam Pipe and Boiler Covering.

Manufacturer of

Lewis's Perfection Asbestos Covering,
The Great Coal Saver

Sectional Coverings Asbestos,
Mineral Wool and Hair Felt.
Office, 305 Howard Street
Between Rhode and Fremont
Telephones Mala 1512
San Francisco, Cal.

Made in Sections to Fit any Pipe

THE ZENITH GAS AND GASOLINE ENGINE

* W. M. A. FRUHLING ARTISTIC WROUGHT IRON WORKS
216-218 S. Los Angeles Street, Los Angeles, Cal.

Most Perfect Gas Engine Made

BY THE COMPLETEST IN CONSTRUCTION, positive movement of all its working parts, new principle of governing which makes it the most economical; runs as smooth as a steam engine; starts without churning on the fly wheels; Crank and Piston are made so that it is adapted to all work where power is used. For full particulars address,

TEL. 333

HYDRAULIC * QUARTZ * MILL

The only Mill in the world for reducing hard and tough ores cheaply, either wet or dry. Guaranteed superior to Stamp, less power required, very much less wear and tear, and a much higher per cent. of gold (hence)

Other so-called Quartz Mills are positively "not in it."

In operation daily. Send us your ores. Call or address,

MERRALLS MILL CO.,
45 and 47 Fremont Street, San Francisco, Cal.
Mining Machinery For Sale!

Two 80 Horse Power Boilers.
Two 50 Horse Power Boilers.
One 10"x42" Hamilton Corliss Engine.
One 16"x42" Atlas Engine.
One 12"x30" Double Cylinder Hoisting Engine, Drum 4x6', 500 feet Wire Cable, 4 foot Shaeve Cage, 2 Buckets.
One Friction Hoister to be run by belt, capable of hoisting 1000 feet.
Two No. 8 Stillwell Water Heaters.
One Cameron Pumping Plant, Ten Foot Stroke.
One No. 9 Cameron Steam Pump.

This Machinery is nearly new, is in First-Class Condition, and will be sold cheap for cash. For further information apply to

W. E. DAME, Cerrillos, N. M.

To Gold Miners!

Silver Plated Copper AMALGAM PLATES

For Saving Gold.

GOLD. REMOVED FROM OLD PLATES AND REPLACED.

GOLD PLATED BRASS PLATES. Thousands of orders filled.

San Francisco

GOLD, SILVÉE, and NICKLE PLATING WORKS

531 and 533 Mission Street, San Francisco, Cal.

E. G. DENNISTON, Proprietor

Every description of work plated. Send for Circular.

FULTON

ENGINEERING

AND

SHIPBUILDING WORKS

MINING AND MILLING MACHINERY

Adapted to every description of Mining and Milling.

Office and Branch Works, 213 First Street, San Francisco, Cal.

Backays
Automatic Engine
Hoisting Engines
Sears' Boilers
March and
Haleelee Pumps
for oil
tube
Pipe Covering,
Bolting,
Packing,
Oil, etc.

Nothing to Worry about on the
Union Gas or
Gasoline Engine

It is built to last and will stand the work.
Especially Adapted for Mining Use.

L. BOOTH & SONS

338 N. Main St. - Los Angeles, Cal.

'VALVE-OLEINE'

675 DEGREES

FIRE TEST

Master Mechanics. Purchasing Agents, Engineers and Practical Builders of costly Steam Plants and Locomotives, etc., will be pleased to know that a lubricant is now produced of such extraordinary high fire test as to make proof against the greatest heat to which it is subjected, and is therefore a Perfect lubricator where products of lower grade and fire tests pass off at once, leaving the parts subjected to wear, or greatly increasing the consumption of oil.

'VALVE-OLEINE' is a product in the highest state of filtration, it is of the greatest viscosity, it is entirely free from all salts and absolutely non-corrosive, and without doubt the best and most thoroughly reliable. It is equally good for steam, engine, and machinery, and in every way superior to any lubricating oil heretofore produced. The name 'Valve-Oleine' is protected by a patent under which no other firm can use.

The RELIANCE OIL & GREASE CO.

Agents Wanted Everywhere. Write for full particulars, free. CLEVELAND, OHIO, U.S.A. and our new Catalogue of large line of products. Samples free. Send 25c. stamp for copy "Gems of Art."—Free on application direct from machinery users.

W. H. PERRY, President
S. B. HOTT, Vice-President
W. A. MORGAN, Secretary

W. H. PERRY LUMBER AND MILL CO.

Agents for the

St. Paul & Tacoma Lumber Co., Tacoma, Washington

Special attention paid to Mining Timbers

Correspondence Solicited

316 COMMERCIAL STREET.

HALLIDE

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.

California Wire Works

Office, 8 Pine Street, San Francisco, Cal.

WIRE TRAMWAYS

Ropeways, Incline Planes, and Railways.

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

California Wire Works

Works, 339 Bay Street, San Francisco, Cal.
HAMMOND MANUFACTURING CO.

MANUFACTURERS OF

STAMP MILLS
CONCENTRATORS

And all Classes of
MINING MACHINERY

Hammond improved cushion battery frame

Wire Rope Tramways with Automatic Loading Apparatus permitting the ore bins to be permanently open.

Specially made of the Improved, Iron Frame Self-Contained Stamp Mill, the greatest success of the day in reduction of ore to pulp. A great boon to mill builders in countries where timber is plenty and therefore a greater boon to those who have no timber from which to draw the huge pieces needed in old style mills. We claim for this mill:

1st. It is no longer a new thing, but well tried and the durability proven.
2nd. Cheaper than the Wooden Frame Mill when ready to run.
3rd. Saves a great amount of delay in erection and it can be set up in less time as a self-contained engine.
4th. Saves much space.

We call the attention of Prospects to our Self-Contained Two Stamp Mill.

We have inaugurated a system of amalgamation and Concentration which renders both much more satisfactory and cheaper the cost of concentration by a great saving in the repairs to the complicated machinery now used.

Farther interesting mining plants would do well to investigate our mills. We build any mill desired and will deliver F. O. B. Steamer or cars at San Francisco, California.

HAMMOND MANUFACTURING COMPANY

VICTOR AMALGAMATOR CO.

MANUFACTURERS OF

VICTOR AMALGAMATORS FOR MILL OR Placer USE

Read what one of the First Mill Men in the County Says of it:

To Victor Amalgamator Co.,
708 South Main St., Los Angeles, Cal., May 30, 1896

Dear Sirs,—Referring to the run made by me of fifty tons of the black sand, the Vel termite, with the Victor Amalgamator, I have to say the results were quite satisfactory, considering the crude arrangements employed in feeding the machine. During the run, in all the previous (over one hundred) I never missed finding gold before passing the machine, and after passing the machine, I found only two colors in passing all through. In other words, only two colors were found in the tailings after passing over our mill. Of the many methods that have been tried for saving the gold from the tailings, this last twenty years many have been made satisfactory results in the Victor. I have no hesitation in saying that the machine, properly handled, will save a larger percentage of gold contained in gold sands than any process in my experience of over thirty years. The machine is equally well adapted to saving the gold from mill tailings when it is too late to amalgamate on ordinary plates. In milling locality, I know of no process so well adapted for saving gold as the Victor Amalgamator. The results we have run have shown the capacity of the machine (small size) for ten twenty tons per day.

Respectfully,
Geo. G. Kilburne

WOODWARD BROS.

E. K. GREEN

Irrigation Machinery of all Kinds

Agents for Daniel Best Engine, using either Gas, Gaseous, Diesel or Crude Oil

Pumps, Tanks, etc.

WOODWARD BROS

605 South Main St., Los Angeles, Cal.

Saville, MacLymont & Co.

Mining and Consulting Engineers and Metallurgists.

Examine and report on mines, ore bodies, and related metallurgical processes connected therewith. Have Complete Stamp Mill and Concentrating Plant, Practical Mill Tests, Assays, and Analyses of Ores, and General Analytical Work, undertaken at the

California Metallurgical Works.

10 Annie Street, San Francisco

Reference is leading mining men furnished on application. (Opposite Palace Hotel)

LLEWELLYN IRON WORKS

Manufacturers and Dealers in

All Kinds of Mining, Smelting and Milling Machinery,

LOS ANGELES, CAL.
ORE TARIFF.

From Points in Mexico, New Mexico, Texas and Arizona, to

ATCHISON, TOPEKA & SANTA FE R. R.

| FROM | TO       | Car Load, in tons and cents per
|      |          | Ore & Concentrations
|      |          | Valuation on or under $2,500 |
|      |          | Valuation on or under $5,000 |
|      |          | Valuation on or under $10,000 |
|      |          | Valuation on or under $20,000 |
|      |          | Valuation on or under $50,000 |
|      |          | Valuation on or under $100,000 |

| Ore & Concentrations | By Car Load, in dollars and cents per
<table>
<thead>
<tr>
<th></th>
<th>100 Lbs. of 2,000 Lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Car Load</td>
</tr>
<tr>
<td></td>
<td>Valuation on or under $2,500</td>
</tr>
<tr>
<td></td>
<td>Valuation on or under $5,000</td>
</tr>
<tr>
<td></td>
<td>Valuation on or under $10,000</td>
</tr>
<tr>
<td></td>
<td>Valuation on or under $20,000</td>
</tr>
<tr>
<td></td>
<td>Valuation on or under $50,000</td>
</tr>
<tr>
<td></td>
<td>Valuation on or under $100,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ORE TARIFF.</th>
<th>FROM</th>
<th>TO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>El Paso</td>
<td>Pueblo</td>
</tr>
<tr>
<td>El Paso</td>
<td>7.50</td>
<td>6.75</td>
</tr>
<tr>
<td>Pueblo</td>
<td>7.00</td>
<td>6.00</td>
</tr>
</tbody>
</table>

SOUTHERN CALIFORNIA RAILWAY.

Rates on Ore in car loads, valuation not to exceed $50 per ton, minimum weight 4,000 lbs. Ore Grade, Cal., to Pueblo, Cal., $0.30 per ton.

FROM Points in New Mexico, Arizona and California, to

SOUTHERN PACIFIC R. R. COMPANY.

| FROM | TO       | Car Load, in dollars and cents per
|      |          | Ore & Concentrations
|      |          | Valuation on or under $2,500 |
|      |          | Valuation on or under $5,000 |
|      |          | Valuation on or under $10,000 |
|      |          | Valuation on or under $20,000 |
|      |          | Valuation on or under $50,000 |
|      |          | Valuation on or under $100,000 |

| Ore & Concentrations | By Car Load, in dollars and cents per
<table>
<thead>
<tr>
<th></th>
<th>100 Lbs. of 2,000 Lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Car Load</td>
</tr>
<tr>
<td></td>
<td>Valuation on or under $2,500</td>
</tr>
<tr>
<td></td>
<td>Valuation on or under $5,000</td>
</tr>
<tr>
<td></td>
<td>Valuation on or under $10,000</td>
</tr>
<tr>
<td></td>
<td>Valuation on or under $20,000</td>
</tr>
<tr>
<td></td>
<td>Valuation on or under $50,000</td>
</tr>
<tr>
<td></td>
<td>Valuation on or under $100,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ORE TARIFF.</th>
<th>FROM</th>
<th>TO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>El Paso</td>
<td>Pueblo</td>
</tr>
<tr>
<td>El Paso</td>
<td>7.50</td>
<td>6.75</td>
</tr>
<tr>
<td>Pueblo</td>
<td>7.00</td>
<td>6.00</td>
</tr>
</tbody>
</table>

Rates on Copper or Zinc Ore to Canon City.

Taking Effect July 1, 1901. - So far as rates on Copper or Zinc Ore are concerned in the City, Cal., will be considered as common with Pueblo, in other words the rates shown in Tariff on applying the Uniformity of Ore to Pueblo, will also apply on shipments of Copper or Zinc Ore to Canon City.

In the absence of positive information as to the value of Ore, Ore Concentrations, or Base Metal, Agents will bill at rates and charges. The above rates can be computed when evidence of actual value is produced.

The market price at destination, to be verified by assays made by the Railroad Company, at owner's expense, will govern the value and determine the rate.

Agents must cause shippers to understand the condition under which these rates are based, and should make their receipts read, "Rates subject to correction according to value at destination."

These rates only apply on lots of ten tons or over. On lots of less than ten tons and under ten, 25 per cent, and on lots of one ton and less than four, 45 per cent will be added to above rates. Base Metal, Copper, Molybdenite and Ore Concentrations, in lots of less than one ton, will take 5 per cent from all the above charges, except when the rate based on valuation makes it higher, that rates on small lots of high value may not fall below the rates when in lots of one ton or over.

Intermediate points not named will take rates provided for next station beyond.

These rates apply only on lots of ten tons or over. On lots of four tons and under, 25 per cent, and on lots of one ton and less than four, 45 per cent will be added to the above rates.

Valleys Junction same rate as San Francisco.
THE PUEBLO
Smelting and Refining Company,

PUEBLO, COLORADO.

BUYERS OF
Gold, Silver, Lead and Copper Ores,
Copper Matte and Bullion.

Refiners of Gold, Silver, Lead and Copper.

Manufacturers of Bar and Pig Lead, Lead Pipe, Antimonial Lead, Copper Ingots,
Granulated Test Leads and Litharge.

Pays Highest Prices for all classes of Ores.
Especially Attention to Sampling by most Approved Processes.
Quick Returns on all Consignments.

Kendall Gold and Silver Extraction Co.

The Kendall Process is the most efficient method of using cyanide for the extraction of precious metals from their ores, wherever this process has been adopted the result has been increased percentages of values recovered and saving of time; material reduction in consumption of chemical has also been demonstrated with respect to several classes of ores.

The Kendall System is covered by patents which this Company will defend.

The American Cyanide Gold & Silver Recovery Co., organized in Denver, more than a year ago to introduce and operate the Kendall Process in several States, have closed contracts with some ten mines for the use of this process after exhaustive comparative tests with the ordinary plain cyanide method.

Captain De la Mar has adopted the process at his Nevada Mines, where a 250-ton plant is being completed. He writes that he is saving 65 per cent. of his gold values, and regards the Kendall Process as the cheapest and best he is aware of for the treatment of gold ores.

All ores, without exceptions, amenable to cyanide treatment, can be treated to better advantage by the Kendall Process. This can be accepted as an axiom.

Owners of mines and reduction Works can obtain full information on application to

Kendall Gold and Silver Extraction Co.

FOR SALE.

Two Little Giant Hydratic Nodirs with

flanges for connecting with 6 or 10 inch pipe all

complete. They are in first-class condition and

will be sold at a bargain.

Address:
The JOURNAL, OFFICE,
LOS ANGELES, CAL.

NOTICE:

General merchandise, mining supplies, machinery, information about smelters wanted. Anyone desiring information relating to the purchase of general merchandise, mining supplies, machinery or seeking information about smelters can apply to THE JOURNAL and reliable information will be furnished, together with catalogues and discounts of all mining supplies and machinery.

C. W. KEMPSON
Mining Engineer
Ora Blanco, Arizona

20 years experience in exploration, mining and milling. 10 years as superintendent and manager, Phoenix, New York, and Chicago reference.

REPRESENT LEADING PROPERTIES

Surveys and examinations made and reports furnished by the most competent experts

Correspondence

Solicited

Address

J. C. O'BANNON
Durango, Mexico

Office of The JOURNAL,
Simson Block, Los Angeles

RUMSEY & SIKEMEIER CO.

Manufacturers and jobbers of

WIRE ROPE

Wrought Iron Pipe and Fittings, Belting, Hose and Packing, Shafting Pulleys and Hangers.

MINE AND MILL SUPPLIES

Mines, Boilers and Steam Pumps, Hoisting and Conveying Machinery, Ore Cars and Skips, Ore and Water Buckets.

ST. LOUIS, MISSOURI

Electric Bells for Mines

A Great Improvement over the Old Pull Wire.

Telephones for Mines

A Quick and Accurate way of Communicating Messages, Indispensable in Deep Mining.

WYBRO & LAWRENCE, POTOMAC BLOCK,
Los Angeles, Cal.

Turbine

Cascades

WATER WHEEL

Adapted to all heads from

3 Feet to 2000 Feet

Our experience of 35 YEARS
building Water Wheels has
enabled us to meet every require-
ment of Water Power7 En-
generators, Water Wheels.
Send for a Pamphlet of
either Wheel and write
for particulars.

James Leffel & Co.
SPRINGFIELD, OHIO, U.S.A.
WOOD'S DRY PLACER MINER
"It is really perfect."

Send for Catalogue.

Built solely by FRASER & CHALMERS, Chicago, Ill., U. S. A.
Manufacturers of STAMPS, SMELTERS, PUMPS, HOISTS, RIVETED PIPE AND EVERY DESCRIPTION OF MINING MACHINERY

JOSHUA HENDY MACHINE WORKS
Nos. 38 to 44 Fremont St., San Francisco
DEALERS IN AND MANUFACTURERS OF
All the Latest Improved
Mining, Sawmilling, Pumping, Smelting and
Electrical Machinery, Engines and Boilers,
and Mining Supplies of all kinds.
Manufacturers of the IMPROVED BRIGGS TWO-STAMP BATTERY.

BAKER IRON WORKS
Los Angeles, California
Manufacturers of
Mining and Milling Machinery, Atlas Engines and Boilers, Worthington Steam Pumps

Los Angeles, California

RISDON IRON WORKS
Office and Works, Cor. Beale and Howard Sts., San Francisco
MANUFACTURERS OF
Johnston Concentrators,
Improved Bryan Mills,
Risdon Ore Feeders, "Challenge" Type
Air Compressors
Mining, Milling, Pumping and
Hoisting Plants,
GOLD AND SILVER STAMP MILLS.
Catalogues and Prices on Application.

PARKE & LACY COMPANY
21 and 23 Fremont Street, San Francisco, Cal.
MINING MACHINERY AND SUPPLIES, ENGINES AND BOILERS
ROPP STRAIGHT LINE FURNACE
FOR ROASTING, CHLORINATING, AND DESULPHURIZING ORES.

Knowles Steam Pumps
Lidgerwood Hoisting Engines
Dodge Rock Breakers and Pulverizers
Ingersoll-Sergeant Rock Drills and Air Compressors

IMPROVED HYDRAULIC GIANT
The above cut illustrates the improved form of Hydraulic Giant, in which
the Center is a separate unit, which is so fitted to catch rain.
Prices and Catalogues of our specialties sent free on application.

Cable Address, "Risdon's," San Francisco