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Built entirely upon new mechanical lines to that of all other Heaters; 50 per cent. of fuel saved, and Steam condensed saving nearly one half of Water Bill. No compounds needed to keep boilers from scaling as all impurities are precipitated and lodged in the tank.

Feed water is superheated after it leaves the pump and goes to the boiler at boiling temperature without "back pressure" on engine or no charge for Device; the Thermometer and Back Pressure Gage registers results.

180 deg. of hot air forced out of device which can be utilized for drying or heating purposes or carried under the boiler furnaces as a force draft. The fuel air can all be drawn out of mine with same attachment. Where the air is not required leave off the Fan, it will not condense quite so fast, but other results will be the same. This Device is endorsed by Practical Mechanics and the largest Smelters and Plants in the country. This is the Only Heater Endorsed by the American Institute of Mining Engineers. Send for Descriptive Catalogue.

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THE MINING AND METALLURGICAL JOURNAL

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LIONEL A. SHELDON, Special Contributor.

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City of Mexico, Mexico—D. H. A. M., Agramonte, 15 Cinco De Mayo.

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THE SILVER PROBLEM.

In sending a Commission to the United States to European nations with the object of securing a bimetallistic conference, is the latest piece of diplomacy an American government could do to guard the material welfare of the world, a glaring acknowledgment to the world of our own government's inability to protect an article of American production which England has planned to control and deprecate during the last thirty years. Mexico is the largest producer of silver in the world, and the United States ranks next to it; on account of the diminished output in our country, Mexico last year assumed to be the first place, formerly held by this country. For Americans to be compelled to witness the imbecility and futile policy of sending a Commission to Europe to beg for terms from those who purchase our silver is a clear acknowledgment that we are not capable of managing our own affairs. If the government had asked a Conference with other, North and South American, silver producing countries, who make up nearly all the silver producers of the world (with the exception of Australia, which produced last year some $13,000,000 of silver), the silver product of the world could be controlled by the countries who produce it instead of our having the humiliation to witness our own country begging for terms from the purchasers of an American product.

This country has witnessed the success with which corporations, producers, trusts and syndicates have been formed and combined to control certain articles of commerce and trade, but our statesmen cannot see the necessity of forming a combination of the treaty of the silver producing countries of North and South America, with possibly Australia. This is the only means by which England and the Jews of Europe will be deprived of the trade and profit in American silver with the eastern countries and the Orient.

Let the silver producing countries agree by treaty to prohibit the export of silver in bars or other form except as coined minted at a fixed value agreed on by the countries making the treaty, and as a result England and the money lenders of Europe will have to buy our coin as they did prior to 1873. The trade in silver will no longer at a premium be conducted, as it should be, by the silver producers themselves and the trade resulting therefrom will fly into the United States, or if not into the United States, a higher premium is paid for the silver if we do not gain the eastern trade. So long as England and Europe can buy cheap American coin, to them the east and Asia it is impossible to convince them that there is any gain to be made by them consenting to drop the custom of buying low and selling at the highest figure. There is reason to believe that reason conferences in aid of bimetallism with Europe have failed in the past and will fail in this instance also, and the only cure for it is to force the market price up by the silver producing countries controlling their silver exports at coin value. It is an experiment; it worked well for years, when our silver dollars as soon as they were coined went to Europe and were sold at a premium. European and American international bimetallism is to attempt to force the contending interests of buyers and sellers of silver. North and South American international bimetallism is to invest in the interests of all to secure a fair trade and value from foreign purchasers of an American product. The present government is pledged to industrial development, and the protection silver requires is to prohibit the export of silver in bars or other form except as U. S. coin, and to negotiate treaties with other silver producing countries to do the same.

HARBOR IMPROVEMENT DELAYED.

During the last session of Congress an act was passed appropriating $3,920,000 for a breakwater for a deep sea harbor, to be constructed either at San Pedro or Santa Monica, both in Los Angeles County, Southern California. Contending interests made it necessary for Congress to appoint a commission of competent engineers to examine, survey and report on the most desirable site for the location of the deep sea harbor, and their decision was to be final. This was done in the most transparent manner. It is the natural harbor of San Pedro, where three lines of railway terminate, was chosen in place of the open roadstead at Santa Monica, where there is only an open unprotected pier, owned by the Southern Pacific Railway, and exposed to the whole blast of the Pacific Ocean, and can only be approached on the land side by a tunnel owned by that company. For the third time in the history of San Pedro harbor improvement, that site was again chosen, having been the unanimous choice of two boards of United States army engineers on former occasions. It cannot be contended that the long negotiate shipping interests of the south west were to receive the attention they required, and that the work of construction was to be proceeded with forthwith. The city of San Pedro, and the Los Angeles County, and the state of California, have in joint session deliberated upon the subject for over two years, and to all appearances have determined to proceed with the work. This has resulted in the site being chosen in preference to Santa Monica, and the point has been well fixed, and it has not been necessary to delay the work of construction, which is now begun.

THE STATE MINING LAW.

We have received inquiry from prospectors who are in doubt as to whether they are to class their claims for the action of the Secretary of War or the action of the Secretary of the Department of the Interior. They ask if the action of the Secretary of War requires all miners on unpatented claims to do at least $100 worth of work each year on each claim, while the new State law requires that $100 worth of work must be done within sixty days from the location of the claim. The matter in which they are all in doubt is: "which law are to operate under, or are we subject to both?"

The enactment of the new State mining law was made to prevent the pernicious practice of yearly relocating mining claims without working the annual assessment of $100, and to prevent the wholesale location of claims by one party, thereby preventing others from locating claims. Both the new State law and the old Federal law must now be complied with, and they do not in any way conflict. The new State law was made to supplement the old Federal law, and refers to location, recording and work during the first sixty days, while the old Federal law refers to annual assessment work of $100 of each year.

We published the full text of the new law in our issue of 15th ult. The new one is a wise enactment made in the interests of labor and industry, and to prevent monopoly and the do-nothing policy of holding mining claims and waiting for some one to come round and buy you out. The new state mining law is certainly going to make the mining business a busier one, and the industrious working prospector and miner will get the benefit, and be made industrious.
ly happy in consequence, for, as Sir John Lubbock said, "the secret of happiness is industry." To be at work in the congenial employment of developing ore makes the industrious miner and often wealthy. Get down on your ledges, gentlemen, for sitting on an outcrop of a vein never produced ore or make a miner rich, but development does both.

International Gold Mining Convention.

At a meeting of the members of the National Bureau of Information, held in the rooms of the organization in the city of Denver, April 4th, it was decided to take the initiative in the matter of organizing the first International Gold Mining Convention, to be held on the 15th and 16th of June, 1897. A temporary committee was then formed, consisting of the following-named gentlemen, who were empowered to name a permanent committee or to take charge of the arrangements for holding the convention: Irwin Mahon, chairman; Joseph T. Cornforth, R. F. Hunter, and H. W. Betts.

On the following Monday morning, April 5th, this committee convened in the office of Mr. J. T. Cornforth, and it was then and there that the ball got off of this movement, advancing from his own personal account the money necessary to lay the foundation work. Mr. Thomas B. Everett, president of the Miners' Bureau of Information, also rendered financial aid, as did Mr. L. H. Flanders, another officer of the Bureau of Information. To these gentlemen much credit is due for the success of this movement.

On Saturday afternoon, April 10th, at 2 o'clock, Chairman Irwin Mahon read the report of the temporary committee, which was unanimously adopted, and on motion, seconded and unanimously carried. The Hon. Alva Adams, Governor of Colorado, was made president, David H. Moffat, president of the First National Bank, treasurer, and Irwin Mahon, secretary.

As in all great movements of a public nature, at this point of the proceeding a little friction arose among certain elements outside of the promoters, which delayed matters for some weeks. Afterwards a change of dates, and on May 4th, 1897, the temporary committee having the matter in charge, Messrs. Thomas B. Everett, R. H. Buck, and Robert F. Hunter, made the report to the joint committee of twenty, representing the National Miners' Bureau of Information, the Mining Exchange, the Real Estate Exchange, and Denver Chamber of Commerce and Board of Trade, which was adopted and read as follows.

And on Thursday afternoon, May 8th, at 4 o'clock, the executive committee began business, establishing headquarters in the rooms of the Miners' National Bureau of Information, 17th and California street, Denver, Colorado. And from that moment, evidences in the way of responses to the call from all parts of the country began to present themselves to the committee, which were thus in believing that the first International Gold Mining Convention will be the greatest and most representative assembly ever convened in the interest of mining in the history of the world.

The following is the report in full of the committee of three:

DENVER, COL., May 4, '97.

TO THE JOINT COMMITTEE OF TWENTY:

Your committee of three, to consider the most favorable plan in proceeding to organize and call together the proposed International Gold Mining Convention, beg leave to report as follows:

GENTLEMEN:

Your special committee of three appointed by your honor body, April 30th, 1897, instructed to formulate a plan for opening and conducting the said International Gold Mining Convention, have discharged the duty imposed upon them and beg leave to lay before you the following plan, as the result of their deliberations, for your favorable consideration and adoption.

FIRST: That the name of this organization shall be the International Gold Mining Convention, to be held July 7th, 8th, and 9th, in the city of Denver.

SECOND: That the first meeting of the convention shall be held on the 7th day of July, 1897, at 10 o'clock, a.m., and thereafter from time to time as the convention may determine.

THIRD: That the temporary officers, for the purpose of calling the convention together and proceeding to permanent organization, shall be: The Hon. Alva Adams, Governor of Colorado, president; The Hon. J. L. Brush, 1st Vice-President, Colorado, vice-president.

FOURTH: The Board of Directors shall consist of the list attached hereto, with power to make additions from time to time, as they may deem proper. An Executive Committee of eleven, of whom six shall constitute a quorum, will be called upon to carry on the business of the convention, and carry forward to completion its organization, and the transaction of all business pertaining thereto, shall be selected by the joint committee of twenty.

FIFTH: After the temporary organization at the opening of the convention July 7th, the convention will create its own permanent organization and plan of proceeding.

SIXTH: That the Governors and Lieutenant-Governors of the several States and Territories taking part in the convention shall be Vice-Presidents, and that they shall be requested to appoint delegates to the convention.

SEVENTH: That the chairmen of all Boards of County Commissioners, Mayors of cities and towns, presidents of all Chambers of Commerce, Boards of Trade, Mining Bureau, Mining Exchanges, Real Estate Exchanges, Mining Unions, Mining Associations, and Labor Assemblies, shall be delegates and that they be requested to appoint delegates from their district organizations to attend said convention.

EIGHTH: Basis of representation.

The Governor of each State and Territory to name 30 delegates at large.

The County Commissioners of each County to name 5 delegates.

The Mayor of each city and town to name 5 delegates.

Add one additional for each 10,000 population or fraction thereof.

Each Mining Bureau........................to name 5 delegates.

Each Mining Exchange ......................to name 5 delegates.

Each Real Estate Exchange .................to name 5 delegates.

Each Chamber of Commerce ...............to name 5 delegates.

Each Board of Trade........................to name 5 delegates.

Each Miners' Union ........................to name 5 delegates.

Each Chamber of Commerce, Real Estate Exchange, and Labor Assemblies, all other Commercial Bodies........to name 5 delegates.

THOMAS B. EVERETT,
R. H. BUCK,
ROBT. F. HUNTER.

COLORADO'S MINERAL YIELD.

Record of Colorado from the day of the first panning.

The following table shows the coinage value (silver $1.29 per ounce) of the gold and silver produced in Colorado since the early days:

<table>
<thead>
<tr>
<th>YEAR</th>
<th>GOLD</th>
<th>SILVER</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1859</td>
<td>$27,000,000</td>
<td>$30,000</td>
<td>$57,000,000</td>
</tr>
<tr>
<td>1860</td>
<td>$30,000,000</td>
<td>$35,000</td>
<td>$65,000,000</td>
</tr>
<tr>
<td>1861</td>
<td>$35,000,000</td>
<td>$40,000</td>
<td>$75,000,000</td>
</tr>
<tr>
<td>1862</td>
<td>$40,000,000</td>
<td>$45,000</td>
<td>$85,000,000</td>
</tr>
<tr>
<td>1863</td>
<td>$45,000,000</td>
<td>$50,000</td>
<td>$95,000,000</td>
</tr>
<tr>
<td>1864</td>
<td>$50,000,000</td>
<td>$55,000</td>
<td>$105,000,000</td>
</tr>
<tr>
<td>1865</td>
<td>$55,000,000</td>
<td>$60,000</td>
<td>$115,000,000</td>
</tr>
<tr>
<td>1866</td>
<td>$60,000,000</td>
<td>$65,000</td>
<td>$125,000,000</td>
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<tr>
<td>1867</td>
<td>$65,000,000</td>
<td>$70,000</td>
<td>$135,000,000</td>
</tr>
<tr>
<td>1868</td>
<td>$70,000,000</td>
<td>$75,000</td>
<td>$145,000,000</td>
</tr>
<tr>
<td>1869</td>
<td>$75,000,000</td>
<td>$80,000</td>
<td>$155,000,000</td>
</tr>
</tbody>
</table>

(Signed) IRWIN MAHON,
Secretary Executive Committee,
First International Gold Mining Convention.

Net Output of Butte Mines.

For the purposes of making up the assessment rolls for Silver Bow County the law requires that each and every mining company must file with the county assessor a statement of the earnings and expenditures of the fiscal year past. The following companies and mining men have handed in their reports covering the net proceeds from mining operations in the Butte district for the year:

Anacostia...........................................$4,375,010
Boston & Montana.................................2,020,470
Montana Ore Purchasing Co.....................106,000
Butte & Boston..................................86,895
Colorado Company................................48,975
W. A. Clark's eight mines.........................38,870
Alicia Mining Company..........................40,625
P. A. Largey.......................................2,160
James A. Murray..................................2,535
Arlington Mining Company.......................1,760
Lexington...........................................1,145
Moulton Mining Company..........................355

Total............................................$6,768,900

Total for 1895.....................................3,634,595

The list is not as yet complete, as for instance the Parrott Company has not yet filed its report. In its operations for the year this company has probably made free from operating expenses about $250,000 from its Butte mines and smelter, but inasmuch as the smelter at Claypool is in course of construction, the company may not pay its annual dividends, and that the earnings will go into construction work there.

Taking everything into consideration, and the large amount expended in improvements, development work and new machinery, etc., the profits have been very satisfactory to all concerned. — Western Mining World.

The Jeffrey Robinson Coal Washing System, which is manufactured by the Jeffrey Manufacturing Company of Columbus, Ohio, is receiving much attention at this time from the coal operators in general. Its claims for superiority, efficiency and low cost of operation have been thoroughly demonstrated in the many plants now in use. Among some of the recent orders for complete 400-ton washing plants are the following: Kansas and Texas Coal company, mines at Huntington, Arkansas; Muddy Valley Mining and Manufacturing company, Holida, Colorado, Illinois; and the Chickamauga Coal and Coke company, Chickamauga, Ga., and the Tomas Creek Coal and Coke company of Pulaski, Va.
CORRESPONDENCE
COLOADO.

BOULDER, COLO., JUNE 17, ’97.

EDITOR JOURNAL.—Boulder City has now in full operation two chlorination plants, one of 50 tons daily capacity; the second, about eight and a half tons twenty-four hours. The former is owned by the Delano Mining and Milling Company, organized by capitalists from Hartford, Conn., and was built at a cost of not less than $2,000,000. Test trials have been made of almost all grades of mineralized matter, ranging from $120 to $150 per ton, with the result that last Thursday, the 10th instant, a brick of gold was cleaned up and milled, worth about $3,000.06 fine.

It is stated, however, that the company charges $10 per ton for treatment. This will not help the miner to utilize his low grade stuff, as immense quantities of our dumps will not average $10 per ton, and it is for the treatment of this grade of mineralized rock that the mill is intended. The smelters will treat concentrates at $4, and ore in bulk at $6.50, from Ward Mining District, or any other sulphide ore, and while it costs not to exceed $3 per ton for chlorination, yet the miner pays $7.

Little is known by outsiders regarding the amount of ore treated to produce the gold brick, or its value per ton. The second chlorination works is owned by the Kilton Mining and Milling Company, who run a sampling works in connection with the process. A gold brick, worth about $1,400, was placed on exhibition in the First National Bank windows a fortnight ago, being the first product of this mill.

The tellurides of this county are called refractory, because they cannot be treated economically in the ordinary stamp mill furnished by amalgamating plates and concentrators, yet the smelter has no trouble in working the high and medium grades; but the necessity of the present is a process that will save the values contained in $10 ore, at a cost of $2 to $3 per ton.

Boulder has been the dumping ground for every new concentrator invented during the past 5 years, yet the stamp mill continues to increase in number, while the process man seeks new fields and a more gainful public, if possible, who will purchase his fake invention.

The Bromine mill at Magnolia, erected at a cost of not less than $50,000, has been pronounced a failure, and is today idle, being another monument of misplaced confidence and reckless extravagance. It is doubtful if it is ever started up again using the bromine process, as over $25,000 worth of mineral has been wasted in experimenting, until the owner of the Nellie Bly mine would advance no more money for mining on ore that contained little or no value, when treated by a process the inventors claimed would save at least 50 per cent of the content and still contain in the mineral. The mine was closed down with the company heavily indebted to miners and merchants, with no desire to pay its debts.

A cyanide mill was built in Boulder cannon two years ago, at a cost of $50,000, for the purpose of treating low grade telluride ores. It scarcely started before the work was closed down, leaving 1,000 years gold at sheriff's sale for $12,000 to D. H. Moffat. Notwithstanding these monumental failures, other reckless mortals, who have no regard for other people’s money, will come and build experimental machines, at enormous expense, which have failure written on every piece of machinery.

A new inter-mountain railway 50 inch gauge, that has gained the great vein of the mining camp of Ward, for the purpose of delivering the ore from the mines to smelters at a less cost, and carrying passengers from the mining camp to the Gulf depot of this city to the several mining towns along the route. This company promises to build a plant that will treat 500 tons of low grade ore daily, at figures that will treat $10 ore at a profit, and the production of stuff from mine to mill will be less than $1 per ton, while the price of treatment will not be over $2.50. With such a process, the millions of tons on the dumps throughout the county could be utilized to a profit.

The first class telluride ores are marvelously rich in gold and silver, running from $10 to $100 per pound; but this grade is found in small quantities, while the remaining ore will average $500 first class, and so on, according to the amount of sylvanite contained in the rock.

 Leasees at the Golden Age mine, Jameson, Interocean at Sunset, R. Van Dan, and others, are taking out wonderful ore, containing pure gold in quantities.

The mining industry of this country is being pressed, and sales of properties have been numerous this year. Huge tunnel schemes have been incorporated, and men placed at work to run them, by the aid of air-drills, augers, and other machinery, mostly from the county. Development work is being carried on extensively in all our mining districts, opening out on bodies for stopping hereafter.

Wm. M. RUIZ.

CALIFORNIA.

ESCONDIDO, CAL., JUNE 5th.

EDITOR JOURNAL.—As your special correspondent for this part of the country, I give you the following news: One of the richest mines has passed into the hands of eastern capitalists. May 24th, Dr. John P. Privell, of Escondido, purchased Rock Quake vein, Gold and Silver Mining and Milling Co., of which J. R. Hedges, of Pittsburg, Pa., and William T. Spieith, of Cleveland, Ohio, are the leading spirits, for $100,000. The purchasing company is reputed to have about $4,000,000 capital, and intends to invest it in California mines. This is the second big sale that Dr. Privell has consummated within the last few months in this section of the country. The mines were allowed to lie idle for fifty-five years until Americans came into the country and prospected them, then some little work was done, but by men inexperienced and with small capital. The deepest shaft is only 25 feet to water, but the ore has been uncovered on the surface a distance of over two miles. The last run of 35 tons in a Griffin mill cleared up $500. The mine has recently received the richest gold by the Escondido Mining Company, a small corporation, which transferred its interest to the aforesaid eastern company.

The property was reported by Ben. P. Little, a mining engineer of Pittsburg, Pa., and J. Schofield, of Denver, Colorado, also a mining engineer. Mr. Schofield, after examining the mine and agreeing with Mr. Little, as to the richness of the vein, went east to meet the new purchasers personally, whereas Mr. Little remains to take charge of the work of development for the present. Fifty men were put to work on the first of June and a large payroll will be order.

Any one wishing any additional information in regard to the Escondido mine can obtain it by seeing a copy of the State Miner, pages 247, 382, and 524. Please send me some extra copies of the Journal, and obliges,

Yours, "ESCONDIDO."

Tuolumne’s Mines and Mining.

Tuolumne county has at last come to the front as the principal gold producer of California. The question of profitable deepening of some of our mines are down over 1000 feet to 1500 feet, a great number over 700, richer rock is discovered at those depths than that found above in the shallow levels, hence, it is no longer a presumption. Those who invest on the mother lode, and can find a surface prospect, in the regular metallic states, in the seams of quartz that permeate the vein matter, need have no fear that a chute or chimney will be found, a depth is attained, steadily going downwards, which will fully justify large expenditures in equipment and exploitation. This is now a new market for dynamiters and others who visit our mines are nonplussed when examining on the mother lode. They lack that practical experience on this mammoth fissure, so different from the mines they are accustomed to examine—often have disgusted—because they do not resemble the mines of Utah, Colorado, Idaho, Alaska, Africa, Australia or New Zealand. The silver lode is a rock it self, and those who fully understand its system should be relied on to pass judgment. A man must be educated by long practical experience on the lode, and know all the peculiar characteristics of its formation, with deep observation, before he will be in a position to satisfy himself, much less advise and recommend others to become purchasers, or condemn that they know not of. The want of this proper knowledge has been in too many instances the chief causes why Tuolumne’s mines have remained dormant so many years, having had to rely on outside exaggerating, gave this grand old country a black eye, has taken its place, for, by skillful treatment, this ecumenic condition has passed away. Investors rely now on practical men that know the system and are able to judge the advice is heeded. Thus, today, she is recognized as the banner gold-bearing county of the state. Why not? By close conservative computation, we find Tuolumne has produced in the precious metal, since 1849, about $250,000,000. Is that not alone sufficient to prove our great auriferous deposits existed, and do exist, for all this wealth did not come to the earth in a snowstorm, but came from below, today quality below, tomorrow quality is above in its infancy. There is now time enough for the investor to get in. Other far off fields lend enchantment to the view, as the old sage says, "at a distance a long time.”

The mining investor is not content at home; in this instance, the rush to British Columbia exemplifies the above quotation. Our gold seekers are leaving California for distant gold fields, which is a great regret when the good things have slipped from their grasp, hence, now is the time for the astute capitalist to take hold and purchase developed and unexploited mining lands, buy good prospects and make the mine, rather than buy a made mine at an extravagant figure and large amounts extracted and gone.
I will now in a few words state why the mother lode in this country possesses advantages over other districts. All that is valuable is generally contained within 600 feet in width, being concentrated, and in its continuity and contiguity, with genial eruptive dikes, intersecting and paralleling the veins. These diores and diabase dikes are the principal carriers of the gold and silver rich ores, as we find them here in Calaveras and Amador. The fissure is larger and more diffused. That rich veins are found in the counties mentioned is too well known, as, for instance, Uda, Granger, Keystone and Old Empire of Plymouth—but of larger extent and lower in grade, hence, more expensive to mine, needing more and heavier timber. I would rather have a two footed, that would pay $100 per ton, than a 40 or 60 foot vein paying $10 per ton. Our veins are not so large, but of higher grade, being concentrated. Then, here we have four payable veins within the fissure—each and all can be worked at no unusual expense. I find if a chute is found on one vein here, the line will traverse all of the veins at a certain diverging angle, each being worked is easily ascertainable.

We have our Rawhides, Jumpers, Dutch App, Golden Lute, and a number of other mines that are open, and from the look it will be second to none in the state, and I may say still further, from the Tuolumne River and several miles south east of the latter in the Stanislaus River, we have an unbroken chain of gold mines, all in more or less developed condition, that in the next few years our output of gold will be enormous. Further, we have our lead belts—veins in both the quartz and slate formation, intersected by diorite, granite and dolerite dikes. For instance, the Soulsby, Black Oak group, Draper, Eureka, Confidence, Buchanan, from which millions have been extracted, and many others of lesser magnitude—heavy gold producers, of which little is said. There are miles of auriferous lands that await the prospector and investor. This upper belt section is well watered, so the power project can be undertaken; hundreds of mines are now being developed in this belt, even as far east as twenty-five miles from Sonora, rich finds are daily being reported from this section, and we will not permit us to enumerate and give special mention of all its mines; suffice to mention, more actual money has been taken out of this last or upper belt section, than the whole of the mother lode up to date. All of the streams and rivers teamed with gold, which came from the erosion and attrition of the quartz veins—nature's quartz mill. These natural sluices have well saved the gold for man to find. If the gold had not been so found, our quartz veins would have for ever remained unworked, for, in the natural order of things, they would have been barren and had no gold to sell.

Our middle belt, the limestone, is the pocket and placer region, from which millions and millions have been unearthed. This product, now so scarce to the cornucopia of the earth, having enriched thousands, and in which the old legacy handed down by the successful miner to his heirs and friends all over the world. The arts and sciences have drawn largely from this treasure, and in its value and diversity, it has returned to mother earth and lost to circulation.

West of the limestone belt is found a distincively sulphur channel. The formation is a diabase, rich, strata, with rock, intersected by diorite dikes. The veins found in this formation are generally of large size, but contain very little free gold, except near to the surface, there being oxidized. The gold has been freed from its base embrace, but the sulphur is still found in abundance, almost entirely in arsenical sulphides. For instance, the Golden Gate mine, celebrated not only for its richness, but for an unprecedented and extraordinary longevity, is working for several years, which happily is now ended. This mine is paying regular dividends, is well equipped, with chlorination plants, and all the latest improvements, we find the old San Giuseppe, that produces the highest gold, as regards fineness, in the world—being 981.1 fine, valued at $25, 25 per ounce, mint returns. The sulphates are of very high grade and percentage, from $1000 per ton and upwards. The Garry mond, a parallel mine, southeast of Golden Gate—large veins and high grade ore—strong sulphurates also in this belt—besides many others south east.

Thus in this country we have four distinct belts: 1. The limestone belt; the upper, slate belt, 2. the diorite-schistose belt; 3. the limestone placer and pocket, and the upper belt. The above are distinct channels.

I predict in the next fifty years fully as much gold and even more lies hidden in our inexhaustable treasure hills than has yet been recovered. Mining today is a legitimate occupation, wisely and economically conducted, will produce a greater profit to the operator than any other kind of investment. Accept the opportunity that old Tuolumne offers, her hills and mountains bid you welcome. Seek and ye shall find.

AUG. 7.

SALT LAKE CITY, June 25, 1897.

EDITOR JOURNAL:—The mining share market this week gave budding evidence of an incipient rally to throw off the lethargy that has prevailed for some time past. The fact is patent to all capable of judging that stocks, especially the silverers, have reached a level far below real values, and consequently there must shortly be a decided up ward movement. Speculation and investment buying is increasing rapidly in the east, and this will soon show its effects in western securities that are equally as safe and pay much higher dividends.

The continued good showing at the Ajax has attracted considerable favorable attention, and the resulting inquiry caused the stock to strengthen materially. Some heavy development work is being done at the properties, and gives good promise. Very little change occurred in Anchor, and practically no business was done in it. Buton and Nez are still again shaded, and it is hardly likely that special interest in the stock will be renewed until dividends, which are still indeterminate, come again. The usual shipments of ore are being made, but margins are still high. At the mines no special change is reported. Buckeye is not very active, neither are figures changing materially.

All of the cheap Centennial—Eureka seems to have been taken up, and offerings, are extremely light under $50. The properties are reported to be looking well, especially in the lower levels. A particular change occurred in Chloride Point, and the business is being reported The showing at the properties is said to be quite satisfactory. The Dylas were again almost neglected, and quotations changed but little. Daly West is marketing some of its storage ore, but has almost ceased extraction. Another strike at the Dexter is reported by the management, and the stock foned up in consequence. The company will probably erect a new mill. Dalton was active at unchanged quotations. Eagle did considerable business at the week's figures. While East Golden Gate continues without life, Four Acres lost some of its new strength.

On the 30th, Geyser Marlin will pay its regular dividend of $500 per share. Demand for the stock was very active, and last week's figures again recovered. The security is considered a good buy as an investment. Galena was on the market with some fine ore, as was also Utah. These companies are to have joint hoisting works. At the annual meeting of the Utah, the old directors were re-elected. Little Pittsburgh was active, but somewhat lower.

Very little change occurred in Mercur, although a slight reaction followed the sharp advance of the week before. The mines are making a splendid showing, and all the ore extracted goes through the mill, and increase in earnings is already apparent. Mammoth was a little more active, but figures remained about as last week. On the 1600 foot level, another strike of gold was reported. Although Northern Light is looking and doing well, the stock was somewhat shaded and business was only fair.

Ontario will pay its usual dividend of the 30th inst. The stock was unchanged. While the demand continued fairly strong, Omaha was slightly lower. The fight for the control has commenced in the courts. Rover was inactive. Sunbeam made a healthy advance, the price being dug under by heavy buying by well posted people. Swansea has already declared its July dividend to be paid July 30. The stock was unchanged, while South Swansea also held its own. No special change occurred in Sacramento, and business in the stock was not heavy. Silver King did but little, and quotations were without change. Another effort is being made to get a new hoisting plant for the mines and mill. Last week's figures governed.

Very truly yours,
JAMES A. POLLOCK.

Miscellaneous Mining News.

ARIZONA.

Kingman Notes.

J. B. Lane is shipping rich gold ore from the San Francisco district in Mohave county. Mr. Lane has several good properties on which he has been at work for some time.

Charles George was in Kingman from White Hills with a shipment of ore from the Overeis mine, White Hills. He also has a sample shipment from the Free Coinage mine, a parallel vein with the Squatters.

George Klempy, W. L. Debeque, K. T. Bowser and J. H. Spowake have taken a ten month's lease on the Quivera mine from Frank Hawley and have already commenced work on it. The boys have good ore in sight and all are working with thorough understanding; the men are a fair way to take out a neat sum of money each.

J. B. Whitefield has leased the Lookout mine and will commence work on it in a few days. The Maguire boys will put up two straas and work the ores from the mine.
Thomas McMahon has taken a lease on the Nickel mine and has very rich ore in sight. Some of runs twenty-five ounces in gold and two thousand ounces in silver to the ton. Last week he had two tons of the ore worked at the sampler.

H. J. West came into Kingman from Painted Canyon the other week and returned the same day. He reports that the new White Rice mill is nearing completion and that it will be started up on his return. D. A. Beebe has the contract to haul the ore from the mine to the mill.

Superintendent G. M. Rovers and George Walker went out to the Nighthawk mine, Tuesday June 15th and let many leases on that property. The Nighthawk will soon be shipping its ore to the sampler at Kingman in railroad loads.

Hawley, Carleton and Martinez made a six ton shipment of Oatman ore to the Sampler last week that netted them big money. The mine is one of the best silver properties in the Stockton Hill country.—Mohave County Miner.

**A Wonderful Arizona Mine.**

M. H. Twomey, assistant superintendent of the Commonwealth Mining and Milling company at Pearce, who was on his way to the northern part of the territory June 18th to inspect some mining properties, says that about August 1st the mill will be completed. It is not a stamp mill, but it will have a capacity of 200 tons per 24 hour day. The ore is so far taken out of the mine is so rich that it has been profitably shipped. Seventy-two teams have been employed in hauling it to Cochise station. There is a great deal of ore of a lower grade in the mine ready to be hoisted. It has not been taken out for the reason that it would have to be twice handled. When the mill and hoisting works are completed, this ore will then be removed, and the development work will be facilitated. The great wealth and extent of ore in this wonderful mine is shown in the fact that just now four men are driving all abreast in ore which requires no sorting.

One of the improvements being added is an electric light plant from which, beside the power used in running the machinery, the miners will be lighted.

Speaking of the report that the owners of the mine had refused an offer of $80,000,000 for it, Mr. Twomey says he does not suppose they have ever been offered a cent. They have never entertained an actual offer of any kind. They do not wish to sell, and so far as he knows no man with the intention of buying the mine has ever gone into it. It is unlikely, he thinks, that an offer has been made for anything that could not be seen. It is the policy of the management to admit no one. There is nothing to be concealed and nothing to be advertised, but crowds of visitors are merely sent out for amusements and exhaustive of valuable time. Mr. Twomey says that a proposition to purchase the mine would not likely be considered. The receipts from it are so extensive and the cost of the property is more valuable in the estimation of the company than that business men who would not likely be attracted from that sort of investment by an alluring lump sum. The price paid for the Pearce was $25,000,000, which makes the value of the mine in just three months and ten days, beside paying all the expense of doing it.

Cherry Creek District.  
(Special correspondence to Phoenix Republican.)

James Shirley has charge of the Etta mine and mill, and the work he has done has thus far proven satisfactory. The ledge is about five feet, and the ore is free grade and free-milling. It averages about $10 to the ton. The ore is crushed at the New Verde mine on the Black hills, which contains the Verde at Jerome. It is in the Jerome district, south-west of Jerome camp, in Yavapai county, eight miles from this district. Eight men are employed. The ore is crushed at the old Etta ten-stamp mill, five miles from the mine, on the Rio Verde River.

The gold mine near the Etta has been leased by Bert Morton and is being worked. The ore is being milled at the old Watson five-stamp mill on the Rio Verde, a mile from the Etta mine.

Below the Etta, a short distance to the southwest is the B. B. mine. Last year, $200,000 was taken out of this mine. It is property of Bashford & Buramister, of Prescott, and of Mr. Jerome, of Jerome camp. The mine is being developed and its promises are very encouraging.

The Crookston and the Guich mine are extensions of the Etta. Both are patented properties of old ore bodies. The Watson mill was built to treat the ore from these mines.

Frank Derrick has a group of claims known as the Cornucopia group on which he is doing development work. Indications point to an extensive ore body, and Mr. Derrick is developing the properties to strike this ledge.

The Mocking Bird is owned by Richard Te Kohan and is located in the mining district of the Mocking Bird is owned by Richard Te Kohan and is located in the mining district of the Mocking Bird. It is situated in the town of Arizona and is a mine of considerable wealth. The mine has the honor of producing the richest ore of any mine in the territory. But like all good things it did not last long. The ore is still rich, however, and the four claims embodied under the wings of the Mocking Bird are valuable ones.

There is the Oriel group on one claim, of which there is a six-stamp-foothard shaft which is being sunk deeper. These are the property Editor Adams and Mr. Gilmour of Jerome camp. The ore is free milling, like the other gold veins in this district. Oriel is a mine of considerable wealth. I can think of no one more deserving of wealth than an editor, and Editor Adams has an open counterpance, just the kind Fate ought to be glad to smile upon.

J. J. Riley has the Gold Leaf properties which he is developing. A stamp mill has been ordered which will be put up on Cherry creek.

Nick Galles has leased the Bradshaw group here. The development work is extensive, and there is hope of making a good mine here under Mr. Galles’ supervision. The ore body is large and the ore of high grade.

Frank Heald, a man from the outside, is making a name for himself. For twenty-five years he has worked ore from his claims here with an ab绝对是. He is hardly any expense to his process, as he uses water power. While he sleeps the water drives his rude ore-crusher, and it does not require the attention usually claimed by these relics of the first days of mining. During all these years it has never been idle for any considerable period. His ore is high grade, and he has a large number of men at work. The mine is located in Cherry Creek district, and the adit is located on Cherry Creek.

The Rocky Branch have tunnels, winzes and shafts, making the development about 500 feet. The vein is small but very rich.

A small, one tank smelting plant is located on Cherry creek and is treating tailings from the B. B. mine with profit.

Development work is being prosecuted on some property owned by J. G. Allen. A portion of this property was sold to J. J. J. Riley for a consideration of $2,500 cash.

B. Baker and J. F. Derrick own some claims near the B. B. which they are developing. Mr. Baker has a new process for milling ore which he calls the "Prospector’s Friend."

J. F. Pyrout has some gold claims near the old Conger property. A seventy-five foot tunnel has been made into the hill, and a ledge of six inches in width was found carrying good values.

The district is old and there is more work being done here than ever before. The gold is all free and the ore carries some silver. The fact that the district adjoins Jerome gives it a prestige not enjoyed by many.

The first pay day of the Saginaw mines in Pima county occurred Monday, June 14th. The payroll of the employees amounted to $700. This did not include a number of outside workers in the rich ore that continues to hold out and the outlook for the Saginaw is altogether very encouraging.

**CALIFORNIA.**

**KERN COUNTY.**

Randsburg News

Since the first of March all the business of the town (that includes Garlock) went to the dogs and more than one-half of the people who came in business pulled up stakes and went inside," the legitimate improvement of the mines then commenced.

At the present writing there are more than four times as many men employed upon paying mines and doing legitimate development work than at any time since the start of the town. Mining property is being sold, leased and bonded more freely than at any time.

Under the able management of J. C. Quinn, the Val Verde group of mines are doing splendidly. The mill of this company is occupied night and day upon gold pay ore, and it is authoritatively reported that this company will declare a dividend for the month of July.

The Rand group of mines is employing thirty men and the well equipped mill of E. T. Garlock is continuously employed crushing ore from the same. The celebrated Kinyon mine and the Wedge mine are milling ore as rich as was reported not long since in the paper.

The impetus in mining is just being felt by the mills at Garlock and are running on very nearly full time.

F. Heald, smelting over a year ago located ground for coal about four miles north-west from Garlock and notwithstanding the fact that it has been predicted time and again that such a thing as coal could not be found in this country, yet like gold, coal is where you find it. Mr. Heald has developed this into a well defined vein of coal eighteen inches in thickness. The coal is of a good bituminous quality and is now being used by the blacksmiths and restaurants of Garlock. The sale of this mine to a syndicate for $15,000 is proof enough that it is sure to be valuable. Contracts are being made with the local people to furnish them with fuel. This will settle the question of cheap fuel for these parts.—Bakersfield Echo.
COLOrado.

Summit County.

Breckenridge Notes.

The Mountain Pride is being unwatered with a view to resuming operations and will probably be working the regular force next week.

The Golden Edge mill started to running on Tuesday, June 14th. The Willey concentrating table, which will handle the tailings as they come from the amalgamating tables, was set up and adjusted last week.

L. G. Davenport and Theo. Knorr, who are working a lease upon a portion of the Germania group, shipped a car of ore last week; the ore contained a good portion of grey copper which runs well in silver.

Recent assays from breast samples of ore from the Bondy lode in Pollock mining district show a value in gold and silver of over $50 per ton. It is reported that the pay-streak has widened to about two feet.

Two car loads of machinery were unloaded last week for the new headrock shaft, which is to be sunk on the New England placer by D. J. C. Arnold & Co. Their placer adjoins the Maggie and it is expected to strike a old channel of the Blue River.

The West Side mill has been running on ore from the dump of the Gold Dust. Wm. Robinson and Charles M. Drake have a lease on it and are having the ore concentrated before shipment. The mill is making a good grade of concentrates from the ore under the superintendency of Cal Reed.

A new strike of about fifteen inches of ore has been made on the hill above Lincoln in the Alex Lee by Joseph McKinney who has been grub-staked by Wm. Knorr for some time. The ore was struck in the tunnel, which has been driven for over three hundred feet; it is a galena which carries some silver and about one ounce in gold per ton.

The Kition ore sample company’s plant is being built rapidly; the main building is enclosed and roofed (also the office) and it is probable that it will be ready for business by July 1st. They will have a large territory to draw upon for supply, besides the Breckenridge mines, those of the Robinson, Kokomo, Dillon, Montezuma and Rock Creek districts will contribute their share.

Ouray County.

A contract has been let to former employees on the upper levels of the Yankee Boy mines to extract ore, all operations can be concluded the next sixty to ninety days, squeezing up the entangled mass of indebtedness.

Frank Prevo has lately purchased an old property lying west of and ahead of the Gem tunnel which shows a big strong vertical fissure of crystallized lime, which is the same gangue that carries the high grade silver value in the grey copper ores in the Gem tunnel.

Week before last Mose Paquin, who has been running a sixty-foot tunnel for the owners on the claim on Corbitt creek, below the falls known as the Oregonian claim, struck an eighteen-inch streak of yellow copper in a lime gangue carrying fifteen per cent. copper and three ounces of gold.

Superintendent Pelham started the Badger mill last Monday, June 14th, on Slide and Gem ores. His former success in concentrating Ouray ores is a strong guarantee of a profitable shipping product.

The lessees on the Jonathan last week came upon a quantity of good-looking ore which bids fair to assume the proportions of an important discovery in the near future.

The Gem tunnel on the west side of the river, on the line of the Echeluck dyke, is an old and favorably known property. Its workings consist of hundreds of feet and there are hundreds of tons of ore on the dump and in sight of a character and grade very similar to that in the Wedge mine. Crystalized grey copper asserts itself freely throughout the ore measures, and a 200-ounce grade of silver ore should be easily sorted, leaving a world of mill dirt for twenty to forty ounces value.

Ouray Mining and Exploration company, $50,000; office, Denver; operate in Ouray county; incorporators, W. B. Williams, S. A. Osborne, E. F. Miller.

Lake County.

Dorcas Mining and Milling company; $1,500,000; office, Cleveland, Ohio; operate in El Paso and Lake counties; incorporators, J. M. Homer, J., Henry C. Topping and James Parlet.

Leadville Notes.

The sale of the Yankee Doodle claim, on Carbonate Hill was recorded last week. This mine has a record as a producer of at least half a million dollars.

The Mariner shaft of the Small Hopes company has now been completed, having reached a depth of 1,132 feet. This is the deepest shaft in the district, the lowest depth gained at the Little Johnny being 1,250 feet. From the bottom level of the Mariner three drifts will be started to open up the lower ore chutes that have been discovered by diamond drill prospecting.

Fryer Hill reports several strikes that seem to be an echo of the old days of that section. Stanley & Co., working the McCrea shaft of the Little Chief, recently broke into a body of ore running as high as 600 ounces silver. This is a new ore chute to the south of the old workings and of great importance, as it opens up entirely new ground.

The Vivian Leasing and Mining Company, on Breece Hill, is now in practical control of the iron shipments to the Rocky Hill, just south of California gulch. It has leased from the Iron-silver Company such well known properties as the Rock, Dome, Stone and Seventy-six lodes, and also leased quite to numerous groups of lessees. One of the most important of these leases is that operated by J. S. Doddridge & Co. They have opened up an iron ore body, 40 feet wide, for a distance of 70 feet. It is a mesothermal iron ore and a force of men is engaged in sinking the shaft to catch the chute again.

Routt County.

Colorado Oynx company, $250,000; office, Steamboat Springs; Routt county; incorporators, James D. Hustad, Ahner E. Smith and James A. Miller of Kansas, James H. Crawford and James F. Hadley of Colorado; organized to mine onyx, marble and stone in Routt county.

El Paso County.

The Harrington lease on the Orphan Belle made a shipment of 30 tons last week. E. S. Johnson, the new manager, has taken charge of the property and will increase the force and make a much larger output than has been made the last month.

Moore & Wilson, of the Pike’s Peak, made shipments of 40 tons of first-class ore, 24 tons of second class ore and 60 tons of mill dirt the past week. Only a small force of men are employed and a number of sub-leases are let. The property is paying the lessees well and work on a much larger scale is contemplated.

The Skinner lease on the O. K., near the New Zealand on Bull Hill, is a new proposition that has a very favorable showing. At a depth of 12 feet a large talc is found, which runs $30 to the ton. Considerable ore is on the dump at present and regular shipments can be made.

The Portland mine is putting in an Ingersoll air compressor of 12 machine power, and two 50-horse power boilers. Work is to be resumed in the main shaft.

The strike of a new ore chute on the Dante, reported last week, has been opened out and shows a body of rich ore nearly 7 feet in width across the vein. A shipment of about 40 tons is ready, and will be sent in some time during the latter part of this week. From assays made, the ore is expected to be worth about $50 to the ton.

Gilpin County.

Mr. Nelson, of the Evergreen in Evergreen gulch, is building a road and making preparations for shipping about 50 tons ore to the Rocky Mountain concentrator at Black Hawk.

Rose & White, who are sinking their Mysy claim near Twelve Mile, last week had an assay made of a 10-pound piece of ore taken from the bottom of the shaft, which showed values of 8 ounces gold and 56 ounces silver per ton. Their shaft is only thirty feet deep and the above is a very satisfactory showing.

The 7-90 Mining Company are steadily operating their St. Anthony property, adjoining the St. Mary on Negro Hill. Preparations are being made to sink another lift of 100 feet, but at present the east and west 100-foot levels are being extended, and stoping is being carried on from the second to the first level. Shipments are being made right along with a working force of five men, there being a nice body of ore in the west level. The ore at present shipped carries values of from $50 to $60 per ton.

Sinking is progressing favorably in the Charcoal Charlie shaft, which is now down 70 feet on a contract calling for 100 feet of sinking, which when completed will make the shaft a total depth of 500 feet. Some good looking yellow copper ore is being taken out while sinking, and operators feel well pleased with the present showing.
CLEAR CREEK COUNTY.

GEORGETOWN NOTES.

Alspagh & Co., lessees on the Colorado Central mine, owned by the Alliunde Consolidated Mining Company, who are working on a block of ground between the Ocean Wave tunnel and 750-foot level, met with a surprise the other day, when the vein of ore widened out to three feet. This was not altogether unexpected, except the magnitude of the vein.

A change in the ownership of the Headlight mine, near Empire, is looked for soon. A vein of solid ore, ranging from four to six inches in thickness, has recently been disclosed in the stopes, the value of which, according to a late mill run, is four and one-half ounces gold to the ton.

William Jacobs has taken hold of the Eu- reka mine, in Ohio Gulch, under lease.

Professor Olle has been given possession of the so-called Dunderburg workings within the Frostick patent. The Dunderburg Company has failed to file a motion for an appeal with the court of appeals at St. Louis. The ground in contest is from 200 to 400 feet in length, and has six workings. A large amount of mine has been extracted from the ground, and a suit is now pending for $300,000 damages against the Dunderburg Company. Work was commenced last week by Robert S. Jardine, who drove the west level of the Sherman mountain tunnel to intersect with the D level of the Dunderburg workings, which was recently awarded to Mr. Old. The connection has been made and the D level is being cleaned out.

M. F. Peters has a contract to extend a tunnel in the Sunnyside mine to open it up from the Clear Creek side.

Chas. Bessler is getting out timbers for use in the Malvern Hill mine.

Bab Piazonzi continues work in the Swiss mine with a small force.

During the past winter, the Savercool brothers are supposed to have done fairly well at Dutch Hill.

E. E. Ross has four men employed in operating a hydraulic mine on the east side of the North Fork opposite the Cameron mine. Satisfactory results are being reaped.

Cussick & Co. will supply their river mine with a donkey engine and a pump, with which they expect to do effective work.

Messrs. Austin and Cadle, who have the Piloceno drift mine leased from Messrs. Braumo, Austin and Higbie, are taking out good payable.

BOULDER COUNTY.

The Modoc mill was started up the fore part of June with 10 stampers employed. The balance of the stamps will be set in motion within a short time.

The Montgomery shaft is now being sunk by double shifts by contractor Stente. The mill is running spasmodically on clean up lots of mill dirt, but within a few days the stamps will be put in motion for a period of steady pounding.

Tom Williams of Quigleyville has taken an option and 5 year lease on the old Cold Spring mine at Cold Hill and proposes to operate the mine on an extensive scale this summer. The production of the mine up to date is variously estimated between $200,000 and $500,000.

Prof. W. E. Mead on Monday of last week consummated the sale of the Great Western Extension lode, a promising looking property lying north of the White Pine. The purchasing parties are Philadelphia people and the consideration was $5,000 cash. The mine is opened up to a depth of 20 feet and in the bottom of the shaft is a vein 8 feet in width, most of which bears mineralized matter. It is in the intention of the new owners to immediately improve their property by sinking the shaft another 100 feet.

LA PLATA COUNTY.

A carload of ore is sacked at the Jenny Lind waiting on the packers who are so crowded with work that they are getting behind with theirs.

A big strike was made last week by R. C. Reese in the Little Jane mine. He ran a short crosscut to the vein some distance below the shaft and has an streak of auriferous tellurium ore that runs over $250 per ton without sorting.

MEXICO.

The powerful smelting firm known throughout the republics as the Guggenheim have just assumed control of another copper mine. The new mine is located but a short distance inland from the Dolores riding, about eight kilometres south of Jimenes, in the state of Chihuahua, on the Central's main line. It was formerly owned by Mr. Gomez Guardia, a commission merchant of Jimenez, who disposed of it for the sum of $750,000 cash. It is an old mine but has been profitably worked recently, the extractions showing the necessitate of some moderate repairs. The new owners will operate the property on a much larger scale in the future, inaugurating improvements that will necessitate a large outlay of capital. The ores will be shipped to Monterrey and Aguas Calientes for smelting purposes.—The Trader.

Frank S. Kirkland has just announced 25,000 acres of mineral lands in the Iturbihe district, in the state of Jalisco. The property is called El Concho, and the taxes amount to $16,000 annually. The ores carry both gold and silver.

The government has published in the Diario Oficial a statement showing the exports of minerals from Mexico, for the first half of the fiscal year 1896-97. According to this statement, the exports of the precious metals were $31,757,926, as against $31,556,414 for the same period in 1895-96, an increase of $201,512.

The mining boom in the state of Chihuahua is increasing, and large amounts of American and English capital is being invested there.

The Velardena company pays the small sum of $40,000 monthly to the Mexican International railroad for freight.

The number of mines in the Guanajuato district is more than twice as great as when the present mining law went into effect, according to the receipts from taxes.

Contrary to the common belief, the decline of the price of silver has not closed the mines at Zacatecas. The effect has been rather to increase the output. Old mines are being worked with vigor and new ones are opening.

The new Ario Copper and Exploration company has just been organized in London with a capital of $400,000. It proposes to carry on a general mining business, but particularly in the Ario and Morelia districts of Michoacan.

Mr. W. F. Nash, treasurer of the Omaha and Grant Smelting company, was in Mexico in May. This company, in addition to its smelting interests in the United States, conducts the smelter at Villalbada, under the name of the Villalbada Mining and Smelting company. It has a large number of mines and has over 1,200 men on its Mexican pay roll. The smelter at Villalbada is smelting 200 tons of ore a day.

NEVADA.

The Golden Eagle mine, in Central District, Humboldt county, has a shaft down on good ore, and has shipped a carload of first class ore the first of the week.

Sinking has been resumed on the Young America East, at Tuscarrora, under the direction of Superintendent Parsons. Work had been suspended pending the arrival of necessary timbers and lumber.

MOUNTAIN CITY MINES.

About seventy-five miles north of Tuscarrora, in the great mineral belt which is attracting the attention of miners in all parts of the globe, is situated a town, which in the palm days of Nevada was one of the greatest wealth producers of the west, but the denunciation of its rich discovered of 1873 closed the mines and the town. The town, now known as Mountain City, now ranks low on the list of prospective leading mining camps.

This district was organized in March, 1869, by A. J. Cope. During the following summer, a general merchandise store was opened by a few Irish and German, and one by Mr. Openheimer, of Elko. In the spring of '70 a ten-stamp mill, propelled by water power, was erected by a Mr. Vance for custom ore, and another of the same capacity was built by Colonel Drew. The first contract let to the mill being for 1000 tons of ore. Nearly all the work done on the camp had been on the surface not to exceed ten feet deep, and over $40,000 was taken out of the float. The experience on all the old mines was that the ore was very rich, and a gold ledge found on nearly all the properties, but on sinking they seemed to give out all at a sudden. Prospectors who have recently gone in hold to the theory that this was caused by slides, or faults, and have proven their theory correct.

Mountains, Ish, Baud and Hill, of Cripple Creek, Colorado, have taken hold of the Mammoth, a mine from which over $100,000 was taken out of the mine over a depth of ten feet, and have sunk seventy feet and drifted for a few feet on the vein. They expected to strike the chute of ore in another twenty feet, but were compelled to suspend operations on account of the great body of water which they were working against, and
cannot do anything further until pumping machinery arrives.

The most noted mine of the camp was the Argenta, which produced over a quarter of a million dollars. Other mines upon which considerable work was performed in early days were the Manganese, Congress, Gold Doctor, Mountain City, and Robert Emmett.

A concentrator, built by G. F. Talbot and John Ainsley, is still standing, and with no great amount of expenditure could be put in working order again.

Joe Tippett has eight or ten claims that carry considerable gold, and upon which operations will be vigorously prosecuted during the summer.

About ten or fifteen men from Cripple Creek are already at work in the mountains, and as many more are on the road, en route for Elko county's new El Dorado, and two or three hundred California miners are expected to arrive during the next few months.

From W. W. Chisholm it is learned that another shipment of ore has been made from the Kinsey mine, in White Pine county, Nevada. Mr. W. L. Dunvan has returned to Salt Lake City, and for the mine, which from all accounts is looking well with good ore reserves in sight.

James W. Linnell, the former superintendent of the Dexter mine, at Tuscarora, Nev., who was under arrest for the alleged theft of amalgam from the company, was in Salt Lake City last week, and it was learned from the officers of the company that all differences heretofore existing between Mr. Linnell and the company had been amicably adjusted, the difficulty being satisfactorily settled to all parties concerned.

In speaking of the loss of bullion at the mill during the past three months, the company stated that it had no evidence compromising Mr. Linnell with its disappearance.

In referring to the circumstances concurrent with his arrest, Mr. Linnell stated that, feeling at the time that he had been unjustly deprived of his rights and liberties, he became angry and caused the arrest of Messrs. Lee and Ellis, although he was then fully satisfied that they were in no way implicated in the taking of the 50 pounds of amalgam, which he most Quarterly disappeared from a box in his residence.

It was learned the other day that on the roth ult. hoist No. 4 was destroyed by fire at the Dexter mine, but this will not interfere with the operation of the mill, as there is plenty of ore on the dump to keep the plant in constant operation until the new shaft will be in running order, which will be some time in near future.

The reports from the mine are very encouraging.

Two separate parties are chloriding in the Meadow Valley shaft No. 3, and overhauling the steam hoist at Pioche, Lincoln county. Screenings for leaching purposes are being taken for the respective shafts of two companies. Excelsior, a chute of pay ore are good, for that vein was a bonanza for years under the management of the Meadow Valley Company to chloridors and tripping up the same. Shaft and tunnels in the ground show up promising leads in several places.

The Freudenthal boys have terminated their lease on the Lynden mine at Comet, in Lincoln county, after preparing a shipment of ore which will consist of several carloads, and which they expect to get off about the Ist of July. Only ore running upwards of 100 ounces of silver to the ton is shipped. Less value than this keeps too small a margin of profit, and the result is that the mine bores a dump of several thousand tons of ore which in almost any other section would be converted into bullion.

NEW MEXICO.

Output of Hillsboro gold mines for the week ending Tuesday, June 26th, 1897, as reported for The Advocate:

<table>
<thead>
<tr>
<th>Mine</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wicks</td>
<td>44</td>
</tr>
<tr>
<td>Butter</td>
<td>15</td>
</tr>
<tr>
<td>Richmond</td>
<td>45</td>
</tr>
<tr>
<td>Happy Jack</td>
<td>10</td>
</tr>
<tr>
<td>Snake Group</td>
<td>4</td>
</tr>
<tr>
<td>Opportunity</td>
<td>10</td>
</tr>
<tr>
<td>Sherman</td>
<td>15</td>
</tr>
<tr>
<td>Prosper</td>
<td>15</td>
</tr>
<tr>
<td>Eighty Five</td>
<td>10</td>
</tr>
<tr>
<td>Rex (silver-lead)</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>225</td>
</tr>
</tbody>
</table>

Total output since Jan. 1, 1897, 8,570.

UTAH.

Patsy Marley, an old time prospector, reports the discovery of a rich deposit of copper ore within two hours walk of Salt Lake.

The Gemini at Eureka began loading ore June 19th for the first time this year and is expected that from now on the mine will be a regular shipper.

Superintendent Getchell, of the Beaver Lake Copper company, writes from Beaver Lake district that the mine of the company is improving as work progresses. The new working shaft is now down a depth of 16 feet, the whole bottom being in a body of shipping ore, and the indications that the mineral zone will grow in size as depth is attained. It is the intention of the company to make a carload shipment of ore this week. The directors and stockholders are feeling highly elated over the outlook for the property.

A few days ago rich assays were received from a piece of white iron sent in from a new discovery in Iron county, supposed to be in the vicinity State Line. Another test was made June 19th by Assayer Tremayne, and the result showed values 6.2 per cent iron, 21 ounces silver and $6,080 in gold to the ton. The prospector who made the find was sent out by Professor C. P. Converse, who will investigate into the extent and value of the discovery.

W. J. Wolstenholme of the New State, who returned Friday night, June 18th, from a visit to this property, which is located at the mouth of Little Cottonwood canyon, says that the men are now sinking a mine from the: tunnel on a seven-inch pay streak, and that as depth is attained this rich body of ore is gradually increasing in size. Mr. Wolstenholme took out some ore sacks with him, which are being filed with rocks that assays $250 in gold to the ton. It is the intention of the company to resume work at an early date in the extension of the lower tunnel for the purpose of cutting the ledge at a greater depth.

It is reported that there is a very encouraging showing in the Levant mine, near the Highland Boy near Carr Fork gulch, Bingham. The tunnel in this property is in a distance of 220 feet, in the face of which there is a two-foot body of ore that carries values of 14 per cent Lead, 39 ounces silver and $1.60 in gold to the ton, while through this chute there are small seams and stringers that run very high in gold, the result of 18 average assays showing $590 in this metal and 100 ounces in silver to the ton, besides 45 per cent Lead. On another portion of the property there is a good showing of copper ore and it is the intention of the owners to do some effective development work on the claim during the present summer.

Shipments from the Tintic Mining District for the week are as follows:

<table>
<thead>
<tr>
<th>Mine</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bullion-Beck mine</td>
<td>20</td>
</tr>
<tr>
<td>Centennial-Eureka</td>
<td>3</td>
</tr>
<tr>
<td>Eureka Hill Mill, concentrates</td>
<td>12</td>
</tr>
<tr>
<td>Uncle Sam</td>
<td>6</td>
</tr>
<tr>
<td>Mammoth Mill, concentrates</td>
<td>6</td>
</tr>
<tr>
<td>Carissa</td>
<td>4</td>
</tr>
<tr>
<td>Swansea</td>
<td>4</td>
</tr>
<tr>
<td>South Swansea</td>
<td>3</td>
</tr>
<tr>
<td>North Star</td>
<td>3</td>
</tr>
<tr>
<td>Joe Bowers No. 2</td>
<td>1</td>
</tr>
<tr>
<td>Lucerne</td>
<td>1</td>
</tr>
<tr>
<td>Domingo</td>
<td>1</td>
</tr>
</tbody>
</table>

Total.

71

GENERAL NEWS.

The Los Angeles Mining and Stock Exchange.

On account of the limited amount of space we cannot give the daily call, but the following is a synopsis of the proceedings of the last two weeks:

Monday, June 16th.-Market opened up bright and active.

Cariboo was steady at 49 5/6 bid; offered at 50c, with sales of 200 or 300. This property is being thoroughly prospected and very flattering reports are received.

Tuesday, June 17th.-The surprise of the early part of the week occurred in Tuesday’s business which opened up on Tuesday morning at 90c and several hundred shares were sold at this price. The price then rapidly advanced to 91c, and from there jumped to 92c without an interruption. Before the close the price had advanced to 99c under sales of several thousand shares.

The heavy trading in Wedge detracted somewhat from the interest in Rand Mountain, and this stock, although holding its own at 15 1/2c, was not very active.

Wednesday, June 18th.-Cariboo is still steady at 49 5/6c bid; offered at 50c. Sales of 100 or 200 were made at that figure. Wedge advanced to 77 1/2c bid; offered at $1.00, with sales of 200 or 300 at $1.00. Laguna offered at 95c, Rand Mountain holding its own at 1 1/4c; offered at 1 1/4c. Sales of 2000 to 3000 were made at the above price. Pacific Consolidated went to 11c bid; offered at 13c. Beaver Dam went to 13c bid; offered at 13c. Little Butte, 13c bid; sales of 200 at 13c. Anacosta, 50c bid; offered at 33c, Argentia, 15c; Juniper, 50c bid; offered at 31c. Norrie Gibson, 34 1/2c bid; offered at 33c. Portland (Dividends on) 60 1/2c bid; offered at 65c.

Thursday, June 19th.-Rand Mt. steady at 13c bid; sales of 5000 to 10,000. Pacific Consolidated active, sales of 1000 to 10,000 at 1c. Wedge not overly active; 100 at $1.00 and 100 at $1.01. Cariboo steady at 50c.
Quite a little interest is taken in Laguna stock; 7½c sales of 1000 or 5000.

**Friday, June 15th.—** Rand Mt. advancing, 1½c bid; offered 1½c, sales 5000 or 9000 at 1½c. Pacific Consolidated steady at 1½c, with good sales. Wedge holding its own at $1.01, sales of 500 at $1.00. Cariboo 100 at 90c. Laguna 1000 at 7½c.

**Saturday, June 16th.—** Cariboo 49½c bid; offered at 50c, sales 200 at 49½c. Considerable interest taken in the Wedge; $1.01½c bid; offered at $1.00, with sales of 1000 at 1½c. Pacific Consolidated steady at 1½c; 2000 or 5000 at 1½c were made in Rand Mt. stock. No change in Pacific Consolidated at 1½c and sales of from 2000 to 4000 at 1½c. Iron Mt. offered at 1½c; 9000 at 1½c. Little Butte, 1½c bid, with sales of 100 at 90c. Portland, 60c bid. Total sales for the week, 46,000 shares.

The market throughout this week has been one of continual surprises, showing the demand for good mining stocks based on well selected properties.

**Monday, June 21st.—** Opened very quiet on the day, all the gold that is on the market, with the tightest trading and fewest orders on the floor of any day since the opening, several of the leading brokers having been in Randburg. Sales on the Pacific Consolidated were good; 5000 at 1½c, and they ranged from 1000 to 2000. Wedge rising; 200 at $1.04½c. Laguna stock declining a little; 5000 at 7½c. Cariboo holds strong; 300 at 49½c. Rand Mt. sales increasing; 1000 or 2000 at 1½c. Val Verde, 200 at 8c.

**Tuesday, June 22nd.—** Pacific Consolidated very active, 1½c bid; sales of 2000 or 5000 at 1½c were made. Llano stock at 1½c. Considerable interest was shown in the Rand Mt.; 23,000 shares were sold during the day at figures ranging from 1½c to 1½c. Cariboo 100 at 49½c. Wedge, 100 at $1.04½c.

**Wednesday, June 23rd.—** Cariboo, 49½c bid; offered at 50c; 200 at 90c sold. Wedge steady; $1.01½c bid; offered at $1.01½c, with sales 2000 or 4000 at 1½c and 1½c. Llano stock at 1½c. No change in Rand Mt.; 1½c bid; offered at 2c; sales 3000 or 5000 at 1½c. Pacific Consolidated active; 1½c bid; offered to 1½c; sales of 5000 at 1½c. Iron Mt. offered at 1½c; sales 2000 or 5000 at 1½c. Little Butte, 75c bid; offered at 75c; sold 500 at 75c. Mollie Gibson (Aspen) 30c bid; offered at 35c; and sold 100 at 35c. Portland (Creek) 50c bid; offered at 50c; sales of 150 at 50c were made.

**Thursday, June 24th.**—Cariboo slow at 49½c bid; offered at 50c, with sales of 100 at 50c. Wedge strong; sale of 4000 at $1.03½c. Laguna steady; 2000 at 7½c. Rand Mt. 24,000 at 1½c; Pacific Consolidated 1½c; 19,000 shares sold at 1½c. Unlisted stocks were for sale; for Iron Mt., 1½c bid; offered at 1½c. Little Butte, 11½c bid; offered at 2c. Portland 90c bid; sold 500 at 90c. A block of 1,850 shares of the stock of the Volcanic Copper Mining and Smelting company was offered at 35c, the balance to be held. This is an unknown stock and no bids were made.

**Friday, June 25th.**—Cariboo slow at 49½c; offered at 50c. Wedge steady at $1.05½c; offered at $1.05, sales 100 at $1.05 and 100 at $1.04. Laguna seems to stay at 7½c; offered at 7½c, with sales of 1000 each at 7½c. Rand Mt. offered at 2c, and 15,000 shares sold at 2c. Pacific Consolidated 1½c; offered 1½c, and 6000 at 1½c sold. Brown Duke, bid 10c; offered at 12c. Unlisted active; Iron Mt., 1½c bid; offered at 1½c. Portland, 50c bid; offered at 50c; sales 1000 at 50c. Little Butte slow at 80c, and offered at 90c.

**Saturday, June 26th.—** Wedge steady at 49½c bid; offered 50c; sold 100 at 49½c. Wedge very active; over 1200 shares sold at figures ranging from $1.02 to $1.03½c bid; offered at $1.03½c, with sales of 5000 at 1½c. Market steady; 1000 at 7½c. Rand Mt. active; 1½c bid; offered at 2c, with sales of 1000 at 1½c. Pacific Consolidated holding its own at 1½c; seven sales of 2000 shares each at 1½c were made. Brown Duke, 10c bid; offered at 12½c. Unlisted stock active; Iron Mt. offered at 1½c, Little Butte, bid 50c; sold 1000 at 50c. Portland, 95½c bid; offered 90c. Volcanic, 10c at 3c.

**Gold and Silver Production.**

The product of gold and silver in the several States and Territories of the United States for the calendar year 1896 is estimated by the Director of the Mint to have been as follows: Territory, Value, and their output is: Territory, Value, and their output is:

<table>
<thead>
<tr>
<th>State</th>
<th>Value, $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>5,700</td>
</tr>
<tr>
<td>Arizona</td>
<td>2,085,199</td>
</tr>
<tr>
<td>California</td>
<td>15,235,000</td>
</tr>
<tr>
<td>Colorado</td>
<td>14,917,100</td>
</tr>
<tr>
<td>Georgia</td>
<td>1,193,250</td>
</tr>
<tr>
<td>Idaho</td>
<td>2,155,390</td>
</tr>
<tr>
<td>Iowa</td>
<td>1,000</td>
</tr>
<tr>
<td>Maryland</td>
<td>300</td>
</tr>
<tr>
<td>Michigan</td>
<td>37,200</td>
</tr>
<tr>
<td>Minnesota</td>
<td>660</td>
</tr>
<tr>
<td>Montana</td>
<td>4,234,700</td>
</tr>
<tr>
<td>Nevada</td>
<td>2,468,300</td>
</tr>
<tr>
<td>New Mexico</td>
<td>475,800</td>
</tr>
<tr>
<td>New York</td>
<td>4,405,500</td>
</tr>
<tr>
<td>Oregon</td>
<td>1,461,450</td>
</tr>
<tr>
<td>South Carolina</td>
<td>53,300</td>
</tr>
<tr>
<td>South Dakota</td>
<td>4,969,800</td>
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<tr>
<td>Tennessee</td>
<td>300</td>
</tr>
<tr>
<td>Texas</td>
<td>83,305</td>
</tr>
<tr>
<td>Utah</td>
<td>1,899,800</td>
</tr>
<tr>
<td>Vermont</td>
<td>1,300</td>
</tr>
<tr>
<td>Washington</td>
<td>495,700</td>
</tr>
<tr>
<td>Wyoming</td>
<td>14,900</td>
</tr>
</tbody>
</table>

Total: $3,088,000

In this, as is the rule, the silver is estimated at 62.5 per cent. of the mixed coin, while in the commercial value, and the commercial value is only $38,000,000, instead of $76,000,236, as stated by the Mint.

**MINING OUTLOOK IN SPANISH AMERICA.**

**New Fields, New Development and More Interest Taken.**

California, although having been considerably worked the past fifty years, is yet a good mining country, and, practically speaking, hardly commenced on from the scientific and systematical standpoint; but, owing to the large amount of capital now required to thoroughly develop the mines and make them pay with expensive machinery and equipment, the ordinary gold hunter is unable to operate and work the mines as should be done. Only the capitalist can handle and put them on a paying basis.

The mining of mineral lands in Arizona as agricultural lands, and the anti-debris hydraulic law, has had the effect to cause the hardy gold placer workers to do something else for a living, or seek new fields for mining where a great amount of capital is not required, and a similar condition exist as was found in the early period of mining in California. Hence, the ever restless and ambitious miner, anxious for any new openings and new El Dorados that naturally offer inducements to correspond with his strength, experience and money, has been on the lookout for new fields and new mineral lands, the only light which looks in upon his solitary cabin is that which comes from aurora borealis.

California is blessed with a genial and bountiful climate that is suited to the brain and body, work. All countries are not so blessed, but, in some respects, otherwise may be better off. Most all countries are not overdone, overrun, and competition is not so great. California, with its metropolitan cities, modern improvements, railroads, etc., is not exactly a new country. More or less hardships have to be encountered in all new countries. Hence it is not surprising that the Spanish Americans, who have practically the only new field remaining for the hardy, poor, ambitious miner to make a beginning—all things considered. There is a broad field and broad avenues for the accumulation of wealth. The preservation of health should be uppermost in his mind, and, in order to obtain and retain that, the high altitudes bordering on the Pacific Coast are more favorably located to correspond with that in which he has been raised.

From the Mexican line between the United States on the Pacific Coast to the Republic of Ecuador is one vast metal deposit of gold, silver, copper, platinum, and other mineral lands, and that anti-debris law to bother the miner. The necessary factors to mine with—water and timber—are on the same land in abundance. The auriferous sands are easily worked, and it becomes the paradise of the hydraulic washer with handsome profits. This country is yet in a crude state, and very little, if any, developing has been done in a way to be called a satisfactory test, only by primitive methods. It is more of a silver than a gold country until you reach the center of Central America. From the point of view of Ecuador across the line into Peru, South America, the gold deposits are more abundant, silver is again king—which is destined to be the ruling money of the world. In proof of this assumption, look at the enormous silver deposits now, and more or less, existing today in Mexico on a silver standard. In these tropical mining countries, although somewhat tropical on the low lands, yet they are on a high altitude, and are equally as good a climate as found here in Los Angeles. It is no place for society people or too delicate men. It wants men of determination and staying qualities. Not long since, several young and experienced men, of good standing and means, left
Los Angeles to engage in placer mining in one of the low valleys of the Republic of Columbia, bordering on the Atlantic coast. They encountered hardships, but found some rich gold deposits that were inaccessible, also found, of course, plenty of fever. As a natural consequence, they are all back home again. Now, if they had gone down on the Pacific coast, instead of the Atlantic, they would have found a better climate and less fever and just as much gold. It makes all the difference in the world which coast you are on in tropical Spanish America. The day is not far distant when this new El Dorado will lead in the output of precious metals of the world.

G. R. PLACE.

A nugget of pure gold worth over $5000 was taken from the Ybarra mines, 250 miles south of San Diego on the Peninsula of Lower California.

The offices of the Mining and Scientific Press have been removed from 220 to 350 Market St., San Francisco, Cal., the finest business location in that city.

PERSONAL NEWS ITEMS

The general manager of the Pakw & Lacy company of San Francisco, J. C. Harron, will return home from Australia in a few days.

George Simon, the mining expert, famous all over the coast as "Diamond George," who located the Desert Queen mine near Banning, Cal., that recently sold for $2401,000 has been on a tour of inspection in Yuma county, Arizona.

D. E. Oliver, the well known mining man of Stockton, was in Sonora, Cal., the early part of last week.

W. S. Stration, the Cripple Creek mine owner and owner of the celebrated Independence mine, was in San Francisco, Cal., June 17th.

J. C. Rankin has purchased Don Thores' Standard mine at Prescott, Arizona, instead of the Goodenough as first reported. Purchase price was $65,000.

J. M. Wangaman of the Greenhorn Mountains, was in Bakersfield, Cal., June 24th, looking after the machinery for his stampmill which arrived last week.

E. E. Brown, the mining engineer of note, who has been making his headquarters in Spokane, Washington, has left for London, England.

Isaac T. Stoddard, who has been on a trip east, has returned to Prescott, Ariz.

Henry Breitner, the mining man of San Francisco, Cal., has gone to Alaska to look into the mining industry of that territory.

Leo Marix, who is interested in some good mining properties in White Rock, near Truckee, Nevada, left for Salt Lake, Utah, the middle of last month.

James A. Abbott, who has been on a trip through the east for the last six months, has returned to Yerkes, Cal.

J. A. Minton, a prominent mining man of Denver, Colo., has been in Bisbee, Arizona, and seems well pleased with that section of the country.

Jacob Schoenfeld, who has been spending the last week at the Mountain Lily mine, at Sonora, Tombstone county, left for San Francisco, June 25th.

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Hoisting Engines 2 to 200 H.P., Stationary Engines 1 to 100 H.P., Marine Engines 2 to 200 H.P.

Our newly designed and perfected DISTILLATE VAPOURIZERS insures a saving of go per cent on cost of raising. Just 1/4 your expense moved by using a HERCULES in place of any other. We make no exceptions.

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Wheels, Buckets and Nozzles designed to suit special requirements, when Head and Conditions are Given. Theoretically as well as practically perfect. Highest Efficiency Guaranteed. Contracts taken for any size plant.

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MORRIS BALL PULVERIZER

IT POSSESSES GREATER CAPACITY THAN ANY MACHINE OF EQUAL WEIGHT. IT PULVERIZES HARD OR SOFT ORE EQUALLY WELL. IT MAKES NO DUST IN DRY PULVERIZING. IT REDUCES EITHER WET OR DRY EQUALLY WELL AND PULVERIZES TO ANY DEGREE OF FINENESS.

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PINE Gold Street only for the CONSUMERS. State your requirements for Cleaning up. We give 35 per cent. Come and witness a test on dry ground. Capacity of Standard Machine is 10 tons. Weight 2 tons. Price $100.00. Machines are easily taken apart to be packed or turned anywhere. We build Machines to any size—power or hand. Orders promptly attended to. Call or Write for Circular.

F. GOTTFRIED, General Manager and Manufacturer.

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C. C. FOWLER.

W. T. SMITH

SMITH & IRVING,
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Gold Refiners and Assayers.

Bullion to any value bought and Cash paid for the same day it is received. We guarantee twice the amount on every sample left with us.

128 N. Main

LOS ANGELES, CAL.

THE MINING STOCK QUOTATIONS

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The Best Manufacturing Co.
San Leandro, Cal.

HELEN'S, MONTANA

Anconas Co. | 15 |
Brazos Co.  | 20 |
Cerro Colorado| 30 |
Chihuahua| 35 |
Guadalupe| 40 |
Hidalgo| 45 |

SALT LAKE CITY

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McGlew Ore Concentrator

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Washington
Nevada
Arizona Territory
Mexico
Central America
Australia

Patented
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Correspondence Solicited.
Office: 201 Bullard Block, Los Angeles, Calif.
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<th>Location</th>
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STAMP MILLS,
CRUSHERS,
CONCENTRATORS,
ENGINES,
PUMPS, HOISTS,

Stockton Gas Engine, Water Wheels, Wood, Iron, and
Clutch Pulleys, and general repairing of all kinds
of Wood and Iron. All work done in our
own Shop. Estimates furnished
for Plants Complete.

Best equipped works in California, outside of
San Francisco.

CORRESPONDENCE SOLICITED

Matteson Manufacturing Co.

STOCKTON, CALIFORNIA.

Los Angeles Tent and Awning Company
Manufacturers of
Tents, Wagon Covers, Ore Sacks, and Camp Furniture
250 SOUTH MAIN STREET,
LOS ANGELES, CAL.

HALLIDIE
PATENT ROPEWAY
FOR THE

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

California Wire Works
Office, 8 Pine Street,
San Francisco, Calif.

WIRE TRAMWAYS

Ropeways,
* Incline Planes, and Railways.

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

California Wire Works
332 Bay Street,
San Francisco, Calif.
### ORE TARIFF.

**From Points in New Mexico, Arizona and California, to**

**El Paso, Pueblo, Denver and Kansas City.**

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#### SOUTHERN CALIFORNIA RAILWAY.

Rate on Ore in car loads, valuation not to exceed $5.00 per ton, minimum weight 2,000 lbs. Ore, Grandes, Cal., to Pueblo, Cal., $5.00 per ton.

Same, Victor, Cal., to Pueblo, $5.00 per ton.

On ore car loads, when coming in from the Republic of Mexico, valuation not to exceed $5.00 per ton. San Diego or National City to Denver, Cal., and Pueblo, Colo., $5.00 per ton.

On ore, valuation not to exceed $5.00 per ton. San Diego, Cal., on ore car loads, minimum weight 2,000 lbs. Denver and Pueblo, Colo., from all points on the Southern California Railway.

#### SOUTHERN PACIFIC R. R. COMPANY.

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#### ORE TARIFF.

**From Points in New Mexico, Arizona and California, to**

**El Paso, San Francisco and Vallejo Junction.**

**SOUTHERN PACIFIC R. R. COMPANY.**
THE PUEBLO
Smelting and Refining Company,
PUEBLO, COLORADO.

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

Refriners 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.

CHAS. B. BOOTHE & CO.
— Dealers in —

Engines, Boilers, Pumps, Shafting Hangers, Pulleys, Belting, Lubricating Oils,
Engineering Supplies Mining Hoists Irrigating Well,
IRON and WOODWORKING Machinery
Of All Kinds Electrical Machinery and Apparatus.

We invite an inspection of our goods at the New Store,

126-128 S. Los Angeles Street,

Los Angeles, Cal.

VULCAN ROPEWAY
* For Conveying Ore, Cordwood, Etc.

* EMERY, NEVADA, April 17th, 1895
Vulcan Iron Works—Gentlemen: The rope-way furnished by your Company to convey tailings from Morgan Mill to Mexican Mill, a distance of seven-eighths of a mile, is giving entire satisfaction. We transport 200 tons of tailings in ten hours; one man does the whole business, including elevating tailings from hopper to the ground, operating Vulcan self-loader, and attending to the rope-way generally. The self-loader requires no attention whatever. The Vulcan loader makes the best feature in the whole rope-way, making it possible for one man to load 200 tons in ten hours.

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

VULCAN IRON WORKS,
Manufacturers of Mining Machinery,
SAN FRANCISCO, CAL.

Babbit Metal
Eclipse, guaranteed best Babbit Made
Copper for AMALGAMATING PLATES,
Brass and Sheet Copper,
BATTERY ZINC, ROOFING TINNE PLATE
Pacific Metal Works,
1321-1331 First St., SAN FRANCISCO, CAL.

CLARENCE HERSEY,
Assayer and Chemist,
LEADVILLE, COLORADO

Samples by Mail or Express Receive Prompt Attention

SPECIMEN ASSAY PRICES:
Over $10.00 an ounce, $25.00; any two of the above, $10.00; any one of above, $5.00; Copper analysis, $3.00; platinum, nickel or tin, $1.00.

Write for full price list and mailing envelopes.
Fraser & Chalmers
CHICAGO, ILL.

Have Brought Out a New Line of
STEAM HOISTING ENGINES

These are designed with great care by engineers familiar with the best previous practice, and knowing just what is wanted to render satisfactory service on a mine. Do you want such service? Then buy one of these improved machines.

OUR SPECIAL LINES
OF MANUFACTURE

On which we would be glad to quote are:

- STAMP MILLS, SMELTING FURNACES
- CYANIDE PLANTS, ORE CRUSHERS
- TRUE VANNEK CONCENTRATORS
- REIFEL Air Compressors and Pumps
- OTTO AERIAL TRAMWAYS
- SHOES, DIES, CAMS
- ROLLS AND JIGS

Qualified by a Quarter Century of Experience to render you the best of service on every inquiry and patronage.

Fraser & Chalmers,
CITY OF MEXICO
DENVER, COLO.
SALT LAKE CITY, UTAH
CHICAGO, ILL.

JOSHUA HENDY MACHINE WORKS,
Nos. 38 to 44 Fremont St.
SAN FRANCISCO, CAL.

Manufacturers of and Dealers in
All the Latest Improved
Quartz Milling, Pumping, Smelting and Electrical
Machinery, Boilers & Engines OF ALL POWERS,
Mine and Mill Supplies.

BUILDERS of "HENDY" IMPROVED "TRIPLE-DISCHARGE" TWO-STAMP MILLS
PLANS, SPECIFICATIONS and ESTIMATES OF COST FURNISHED and CONTRACTS MADE
FOR FURNISHING and ERECTING MINING and MILLING PLANTS for all conditions of Use.

BAKER IRON WORKS
LOS ANGELES, CALIFORNIA

Manufacturers of
Mining and Milling Machinery, Atlas Engines and Boilers, Worthington Steam Pumps

Baker Iron Works

RISDON IRON WORKS
Office and Works, Cor. Beale and Howard Sts., San Francisco

Manufacturers of
Johnston Concentrators
Risdon Improved Concentrators, True Type
Bryan Patent Roller Quartz Mills
Evans' Patent Hydraulic Gravel Elevators
Risdon Ore Feeders, 'Challenge' Type
Air Compressors
Mining, Milling, Pumping and Hoisting Plants,
Risdon Pat. Water Wheels,

KINNERTON THIRD TYPE
GOLD AND SILVER STAMP MILLS

Cable Address, "Risdon's," San Francisco

IMPROVED HYDRAULIC GIANT
The above cut illustrates the improved form of Hydraulic Giants, in which the Center Bolt is dispensed with, which was so liable to catch trash. Prices and illustrations of our specialties sent free on application.

PARKE & LACY COMPANY
21 and 23 Fremont St., San Francisco, Cal.

MINING MACHINERY

Sole Agents for
THE INGERSOLL-SERGEANT AIR COMPRESSORS AND ROCK DRILLS
Sole Licensee for the Manufacture and Sale of
THE ROPP STRAIGHT LINE FURNACE
WE CARRY IN STOCK


Estimates furnished for Complete Plants for Hoisting Works, Smelters, Concentrating and Stamp Mills.