

# THE MINING AND METALLURGICAL JOURNAL.

Vol. XVIII., No. 1

LOS ANGELES, CAL., October 1, 1897.

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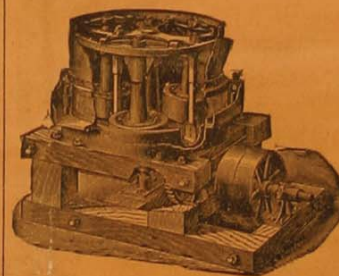
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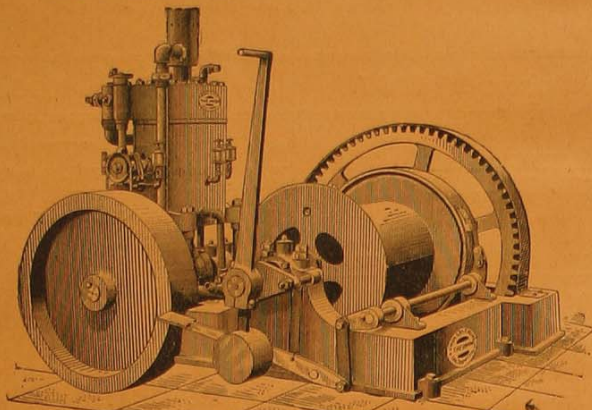
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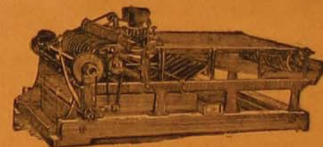
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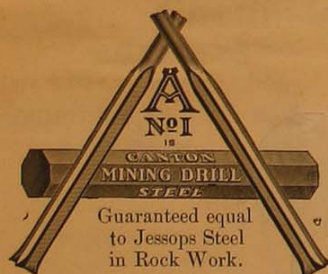
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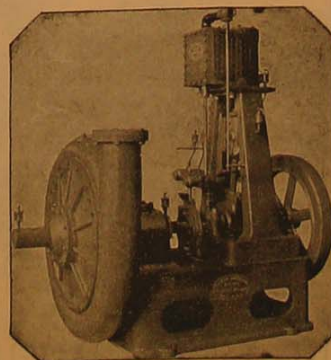
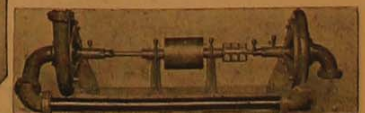
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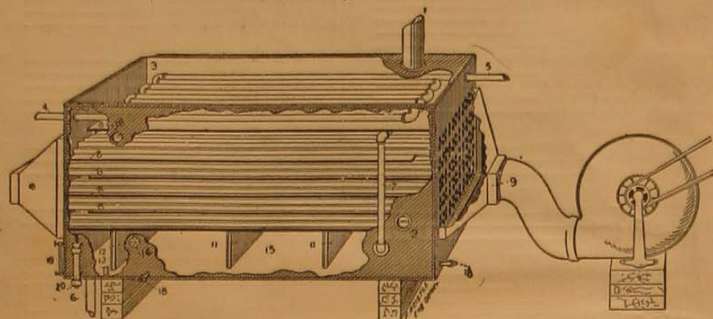
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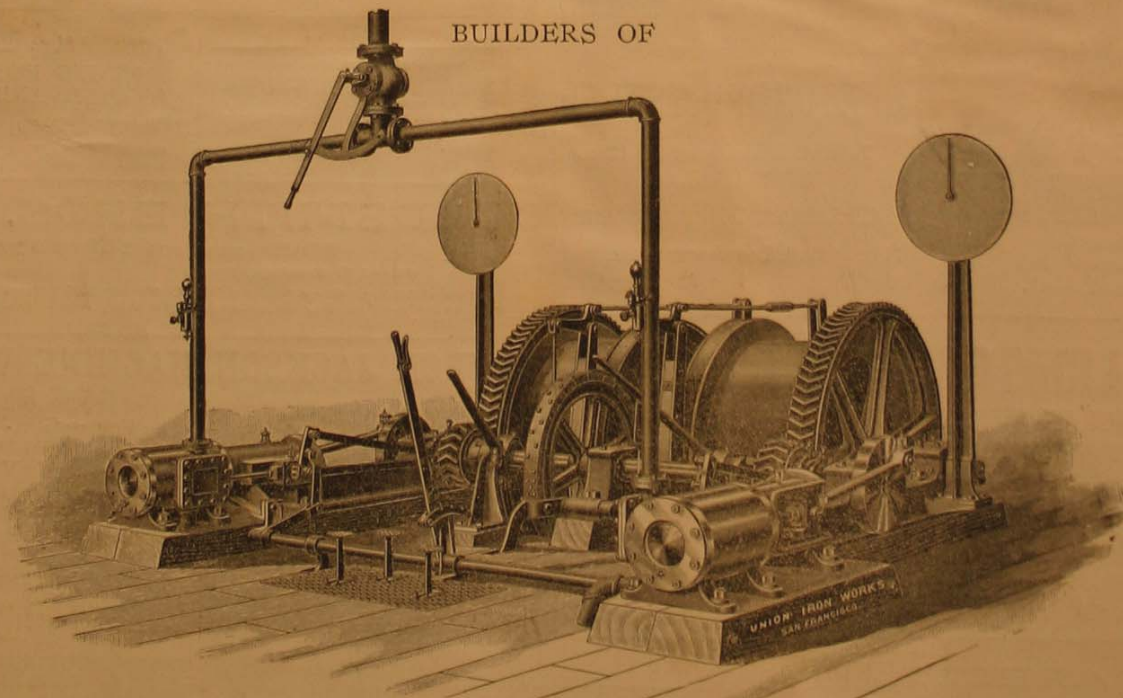
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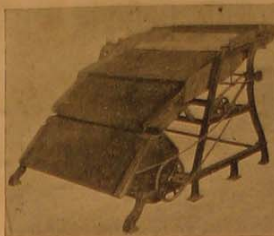


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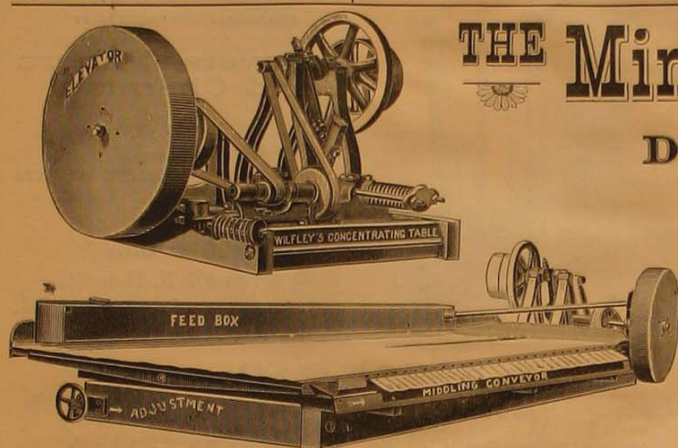
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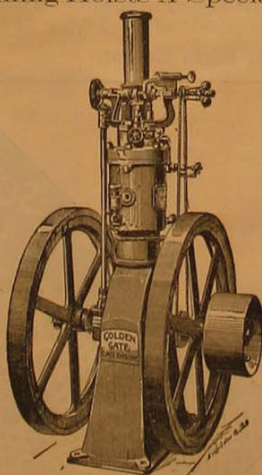
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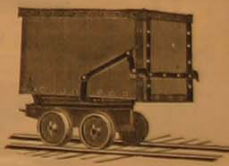
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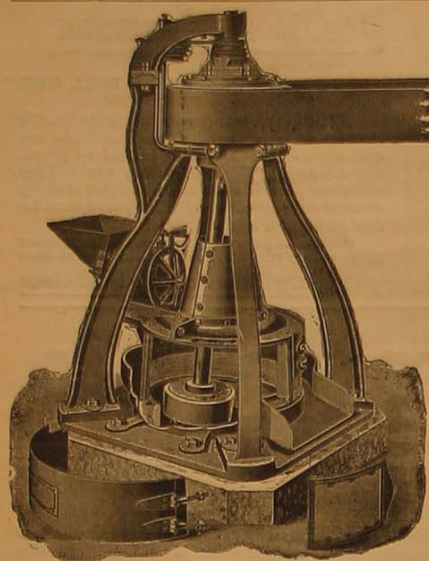
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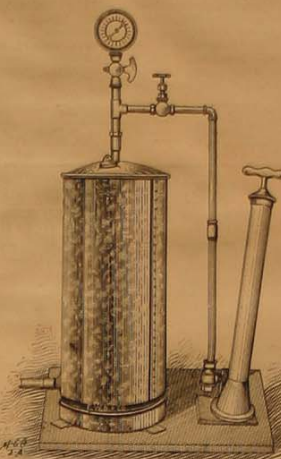
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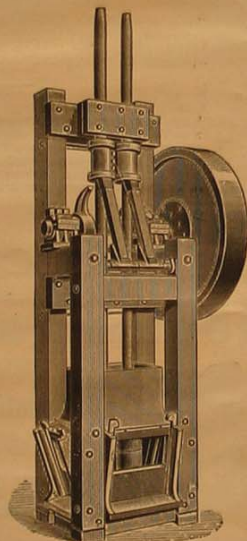


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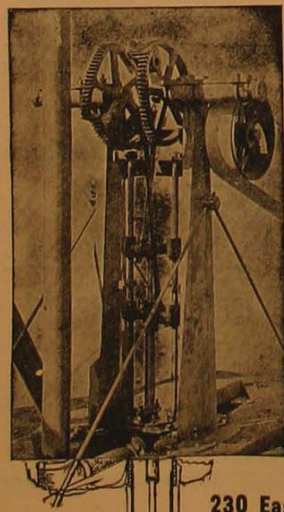
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management has been the most prolific cause of failure of British or foreign capital to earn dividends and make a success of the operation of all kinds of mines, not only in the United States but in other countries. Some capitalists do not seem to understand the fact that the successful operation of a mining concern in those times requires a long business training in mining, over and above the necessary qualification of ordinary commercial tact in trade and in the management of workmen.

The use of large plants in the operation of low grade ores has cheapened the mining and metallurgy of almost all minerals, and made experienced management necessary. The bonanza mine which is rich enough, so to speak, as to run itself, is not seeking a purchaser when it is found, for the owners know too well how scarce they are, and will not sell; they prefer to work on a small scale, and increase the enterprise from the profits of mining. At the present time, the class of properties requiring the investment of more capital are of the class which need the most experienced management.

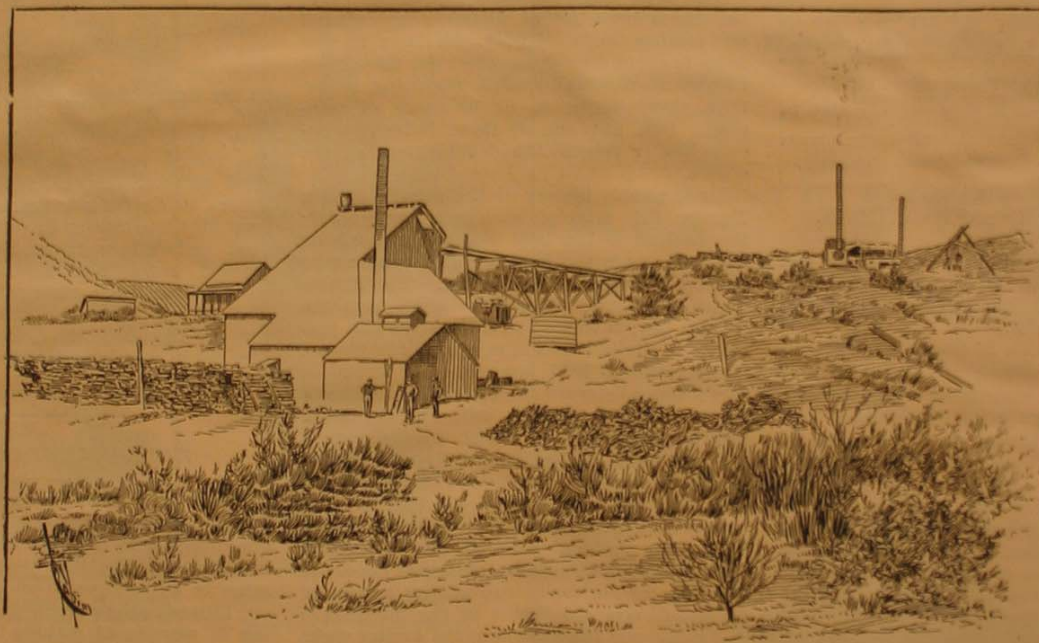
#### THE VIZNAGA MINE.

The Viznaga ledge was the first discovered in what has proved to be one of the richest mining districts on the coast. As is often the case, these mines were discovered by accident. A Mexican, named Malindoes got into trouble and shot another Mexican. The shooting occurred in the Santa Clara Valley, over the mountains from what is now known as the Alamo mining district, and the man hid in the vicinity of these mines, as there are numerous fine springs of water in the locality. He reported his find to his brother, who visited him for the purpose of taking provisions, etc. When the Governor learned of the discovery, he pardoned the man, as is often done in such cases in Mexico. This occurred in the fall of 1888; then followed one of the greatest mining excitements that has been known for years. Few people in this country will soon forget the mad rush that was made to this district when the report of the rich finds reached the settlements. Before sixty days, at least 3000 people were

the ore milling into the hundreds of dollars per ton.

The present owners, A. W. Davis, H. F. Hartzell, and John D. Bliss, are well known business men of Los Angeles. Mr. Bliss comes from New York, but is largely interested in Los Angeles county.

The mine is stocked for \$500,000 under the laws of California, and regularly recorded in Mexico as a corporation, thus affording every facility for doing business here and in Mexico. The Viznaga mines are well located, being about 70 miles east of Ensenada, Lower California, and 130 miles southeast of San Diego. Alamo, four miles distant, is a thriving mining town of about 500 people, about one-half of whom are Mexicans. The elevation is about 4500 feet. Climatic conditions very favorable—not too warm in summer nor cold in winter. English companies are working some good gold properties. Good mountain roads from Ensenada to the mines. Freight delivered at \$20 per ton. Telegraph and telephone lines from Alamo, and stage running between Ensenada and Alamo, carry-



MILL OF THE VIZNAGAR MINING AND MILLING COMPANY AT ALAMO, LOWER CALIFORNIA, MEXICO.

One of the chief reasons for competent supervision is that each mine has mineral conditions and local difficulties peculiar to itself; in fact, the environment is part of the mine. If these conditions and difficulties were a constant factor in operating a mine, the problem would be of easy solution, but they are constantly changing, which necessitates a different line of action. This is the great stumbling block or pit fall of inexperience in mining, and in it lies the contrast with the operation of a manufacturing industry where the raw material is of the same nature or quality, and the article made changes only in pattern or design. In the want of appreciation of this fact by capitalists, many errors have been made in placing a poor relation or inexperienced person in charge of a mining enterprise.

congregated in this one gulch, now known as Campo Viejo, and as many as 2000 more were camped on American Gulch, a half mile distant, searching for the precious metal. The work was well rewarded, for upwards of \$300,000 were taken out of the placer beds here in a few months. When the placer ground became exhausted, of course gold, which, for lack of water, was the only kind that could be saved, attention turned for the first time to the quartz ledges, from which the placer beds had received their gold. Then it was that the Viznaga as well as other rich quartz ledges were discovered. This is no doubt the mother ledge of the country, and crops out at intervals for several miles.

The Princess, Aurora, San David and Moctezuma mines, believed to be on the same vein, have each been big producers, some of

ing the mail, brings this camp within easy and direct communication with San Diego, Los Angeles and other important points.

The Viznaga group consists of eight claims, each of regular size, as prescribed by law, viz., 320 feet in length along the edge and same width, and contains about twenty acres. Course of vein northwest and southeast. The direction of lode is diagonally across the claims, and gives at least 1800 feet within the boundaries of the property.

The Viznaga mine, the only one of the group of mines that has been developed, presents all the characteristics of a true fissure vein. The vein matter is quartz, heavily impregnated with oxide of iron, and carrying gold in a remarkably free state. The gold is of a high grade, averaging \$16.50 per ounce, and milling as close as 95 per cent of fire



assay. At intervals in this mine, large bodies of quartz occur in a decomposed granular state, which mills an average of \$20 per ton. In places the bodies are 18 to 20 feet in width. When found in this state, the ore requires but little mining beyond loading into cars and hoisting to mill. In working these large stopes, two or three miners can keep the mill supplied with ore.

The regular formation of this country is porphyry and slate.

There is about 2000 feet of development work on this mine, consisting of two main shafts, the deepest 300 feet, with drifts and tunnels about every 50 feet, most all of which have been run in ore.

There is at present, blocked and ready for stoping, 5000 tons of ore, and not yet blocked and at hoist, 10,000 tons more. The ledge has averaged 6 to 8 feet wide. At the 200-foot level, ore shows an increase of sulphides of iron, and concentrators will be needed. We are informed by the owners that the ore has averaged twenty dollars per ton, and that the mine has produced over \$80,000 in gold the past two years. Most of the milling has been done on ore taken above the 150-foot level.

From assays made by Lonerger & Calkins, of Los Angeles, on samples of ore taken from all parts of mine gives an average of value of over \$40 per ton on ore in sight.

These samples were taken by Mr. J. J. Lonerger himself, and it is to him we are indebted for much of the information concerning this extensive mining property.

The owners of this property deserve great credit for the faith and energy displayed in pushing the work the way they have. At present there can be seen in the company's office, in Los Angeles, a collection of the finest specimens that were ever shown in Southern California from one mine.

The mine is well equipped, having a ten-stamp mill complete, steam hoist, pumps and necessary machinery, tools, etc., with buildings, owner's residence, superintendent's house, office and boarding house for employees, water in abundance for milling purposes, wood plentiful, at \$2.50 per cord.

There are few mining districts in the United States where mining can be carried on more economically than in Lower California—miners' wages \$2.00, laborers \$1.25 per day. The laws of the country are the very best for the protection of the investor, and, what is more to the point, the laws are strictly enforced. In all the writer's travels through mining districts, he has never discovered a greater spirit of cordiality existing between the officers of the government and civilians on one side and the representatives of foreign capital on the other.

## CORRESPONDENCE

### CALIFORNIA.

#### TOULUMNE MINING NOTES.

THE QUEEN OF SHEBA GOLD MINING AND DEVELOPMENT CO.'S GROUP OF MINES—MOTHER LODE, RAWHIDE MINING DISTRICT—TUOLUMNE COUNTY, CALIF.

The above company held their annual meeting at Mill's Building, San Francisco, and elected the following officers and directory for the ensuing year, as follows:

President—M. J. White.  
Vice-President—James MacMullen.  
Financial Secretary and Treasurer (con-

solidated)—H. R. Hurlbut.  
Directors—Dr. F. W. Drake, E. M.; Thos. Boyle; Geo. Boyne; A. S. Smith.

Dr. Drake was again elected as mine-managing director for ensuing year.

#### GOLDEN STAR MINE.

The above mine adjoins the Abona on the south. Tunnels are being entered. A cross cut and another on the vein. In each place rich rock is being extracted therefrom.

#### JACKASS HILL MINES.

There is a large area of land owned by James Gillies, who farms out claims to pocket miners and are leased on a percentage of the gross yield.

Large sums of money have been taken out of this tract of land—fully \$400,000 by individual miners and who have increased our golden output during the last twenty years by the above sum in coin, and which is increasing monthly by several thousand dollars on an average.

The gold is found in small quartz stringers, in black metallic slate formation, on the east series of the Mother Lode. The owner draws down year by year a regular bonanza, equal to any large real estate owner in the city, and much safer—needs no insurance or repairs.

#### THE RAWHIDE MINE.

Owing to the scarcity of water, have reduced half their working staff. The same men have been sent up to the company's new and powerful electric plant on the mountains—which when completed will furnish power and light to their own mines, the Rawhide and App, and any other mines that may have the good fortune to secure these privileges; further, the town of Sonora will have the advantage of two light-distributing companies. The present one being rather irregular at this season of the year, hence, frequently our town is in darkness. When the Rawhide company get in their wires, there will never be any lack of light as every part of their machinery is duplicated. Competition is the soul of trade.

#### THE DUTCH MINE.

This property is in full work. Their power, steam. Sinking main shaft and drifting on the 300-foot level is the order of the day. The rock coming to grass shows gold freely. Large ore body.

There is nothing of special importance along the line, except that the Santa Ysabel continues to take out rock of exceedingly high grade—the gold actually holding the quartz together.

#### THE JUNIPER.

like the above mine, sends up very rich rock. Nearly all the mines, for lack of water, are running short-handed.

The scarcity of water in this county, available for the working of our mines at the fall season of the year, is wholly attributable to the short-sightedness of the Tuolumne Water Company. If properly constructed reservoirs were built up in the snow belt and lake districts, there would be an abundance of water for all purposes all the year round, and then there would be no detention of our mines or falling off in our gold production. Specifications are out for the construction of a reservoir of some magnitude high up in the Stanislaus River; but this should have been taken in hand two or three years ago, and which would have saved the present water famine.

ARGUS.

## MOUNTAIN SPRING CANON.

### SOUTHERN INYO COUNTY.

September 22, 1897.

EDITOR JOURNAL:—This being the first time this camp has been mentioned in the JOURNAL, so that your readers may know where the future big and lasting camp will be, of our portion of the desert I will say, in going from Coyote Hole and Indian Wells to Darwin, in almost an easterly direction, after traveling about eighteen miles, passing Desert Spring on the way, you come to our canon, which is hailed with joy and pleasure, for the first sight one sees is a group of willows and alongside it a lovely spring of the coolest and freshest mountain water ever tasted. We travel through this canon on the old-established stage road to Darwin. After going east through the canon about five miles, we now come to where the wood begins, or what is known in Nevada as Knot Pine. Fourteen miles from the mouth of this canon to Summit, and on the east slope, is a quantity of this knotty pine—good wood for fuel and mine timbers.

Thousands of people passed through this canon during the Darwin excitement, but none of the miners ever knew that quartz ledges existed, and it was left to Juan Andrada, a Mexican and old Comstock miner, to discover the first ledge, not a dozen feet from the stage road and about half a mile from the mouth of the canon. The ledge is on an average of 5 feet, the assay value being about \$20 per ton, free gold and gold sulphurets. The canon cuts the ledge in two, and it runs in a northerly and southerly direction. The pitch of the ledge is about 45 degrees east. The hanging wall is porphyry, and foot, slate. The quartz ledges in this canon are capped with iron. Andrada called his first find Bonanza No. 1. In this there is a shaft or incline on the ledge 100 feet deep; also a shaft on another part of ledge 38 feet deep. About 600 feet from this, on same ledge is another incline 50 feet deep, with water in the bottom and in good milling ore. Juan Andrada has been developing his claims and paying for the same out of his mine.

The Bailey & Shannon claim comes next, with a tunnel 110 feet, with a 20 foot ledge of \$30 ore.

The Lowery ledge is a large one, but very little work has been done on it, the reason being, no money to develop it.

Next comes the Daisy Bell, with a four feet ledge of good milling ore. A tunnel is run in on the ledge 47 feet, with a shaft sunk at end of it, fifteen feet deep. Those mentioned are all in one group.

Next is the Old Jackass claim, located the same date as Bonanza No. 1, and relocated January 1, 1897, by Kemp & Co., has a 3 foot ledge of ore, which will average \$30 per ton. The owners have started an incline and are down about 18 feet on rich ore.

Vanburg & Shirley mine has a ledge 2½ feet wide, with a shaft 50 feet deep. In this group are four other claims that show up well, but there has been little work done.

The Morton has a ten-foot hole on 2 feet of good ore.

The Dead Cow, Thos. Pruitt owner, has in it a rich streak of free gold ore, 1 foot wide.

Davis mine, 15-foot shaft, on 18 inches good milling ore.

J. M. Wallbrick, of Los Angeles, has a mine, with incline 130 feet, on good ore. A good milling proposition.

Dye & King claim 38-foot shaft in eighteen inches of good ore. On same claim, another



ledge, 3 feet wide, with a 20-foot shaft. Frank Carterne claims 4-foot ledge in 40 feet tunnel, and a number of other claims, of which I have not the names.

The Slate Range come in from the south at this point, with porphyry on either side, and apparently cuts into this granite mountain in such a manner as to form dykes of all possible shapes. The top of the mountain above the canon at this place is 4000 feet higher than the canon—the canon being 2000 feet above sea level.

The owners of the above-named claims are all poor men, and, notwithstanding, they all firmly believe they have a big thing, they will one and all give capitalists an even show if they come in and put up a good mill—this is all that is needed to make this camp more of a moneyed proposition than Randsburg ever was. We have wood and water, in a regular formation, with our ledges prospected 4000 feet deep, with a chance of getting cheap electric power from south fork of Kearn.

MINER.

## COLORADO.

BOULDER, COLO., Sept. 17, '97.

EDITOR JOURNAL:—Colorado has caught the Klondyke fever badly in certain localities, Cripple Creek, Aspen, Colorado Springs, Leadville, Denver, and other sections south and west are suffering more severely than the more northern camps.

Bogus mining organizations, capitalized in millions of dollars, have their glowing prospectuses scattered all over the country, and stock is offered for sale on imaginary property, which produces untold wealth annually. Suckers are found to invest with such rare companies, so full of glitter and rosy generalities. Boulder has not yet furnished any victims, although there is great unrest among the more ambitious gold hunters, and if this class of people had the necessary amount of cash to purchase provisions and outfit, there would certainly be a stampede for Alaska.

It is wonderfully strange that men of good judgment and sound business ability would leave Colorado, where immense gold fields are open for prospecting, and enormous fortunes are piled up every year by mining, for the polar region of Alaska; but such is a fact beyond controversy, and life is of little moment to those who have the Klondyke fever and gold as the incentive to wealth and ambition.

The Colorado Northwestern Railroad Company has a large number of workmen on the line grading for the new railroad from this city to Ward, via the old roadbed from Boulder to Sunset, where it has not been carried away by the flood, thence to Ward, the great sulphide mining camp of Boulder country. The company has the backing of shrewd railroad men and iron kings of Pennsylvania, who have been in Boulder and made careful examinations of the route. When the road is completed to Ward, then active steps will be taken to push the road into Middle Park and through to Salt Lake City and California. From Boulder depot east, the route will be to Cannahan coal mine, thence to Lafayette, where it will meet the Burlington and Missouri Railroad, forming connections with the great trunk lines east. It is a wonderful unexplored country through which the new railroad will travel, and from 300 to 400 miles shorter to the Pacific Coast.

Word was received from Prof. B. C. Hinman, who has spent the past nine months in London and Paris, that he will leave Liver-

pool, September 14th, for New York, where he will spend a short season with the members of the Nellie Bly Mining and Milling Company before leaving for Boulder.

The Nellie Bly bromine mill has been shut down for over a year, and was pronounced a failure; the company having over \$150,000 on the mill and mine. Heavy debts were left unpaid by the management, and a receiver was appointed by the Court to take charge of the property of the company. This indebtedness will be liquidated on the arrival of Prof. Hinman, and the Keystone, Kakionga and Mountain Lion mines will be started up again in full blast, which will furnish employment to over 100 men.

These two chlorination works, Delano and Kilton Companies, are running in this city on custom ore. The former plant has a capacity of 50 tons per day of 24 hours, while the latter utilizes about 10 tons per day.

It is alleged the new railroad company will build a plant for treating low grade ores of 300 tons daily capacity. This company will have an agent in every mining camp in the county, to purchase ore at the mine and run the stuff on their own road into their mill. With such a market in our county, the miner will receive great benefit, as the highest price will be paid for the mineral product after check samples have been made.

At Jamestown, a Chicago company is at work on a process for treating ore and extracting therefrom the bullion. The process is unknown at this writing, but the management claims that six dollar ore can be treated at a profit to the miner. Boulder county is somewhat sceptical on new processes, as this county seems to be the dumping ground for all wonderful inventions for saving gold and silver. Last week, the writer was quietly informed by an attorney, who seemed to be perfectly sane, that he had discovered a process for saving "tender" telluride ores which is far superior to any results that can possibly be obtained by fire assay. He can save ten per cent more gold, from the same ore, than the best assayer in this country. This man still practices law, and goes at large among the inhabitants of this county; but how long before he will appear before the county judge and a jury, on a charge of insanity, is a problem.

Very rich telluride ore is being mined from the Inter-Ocean mine at Sunshine, Golden Age at Jamestown, Slide at Gold Hill, and other prominent properties in this county, while the Utica of Ward is the stand-by of that camp, making regular monthly dividends to the company. Times are improving rapidly in this county, and everything looks well for greater prosperity hereafter.

BOULDER.

## THE HOCUMAC HYDRAULIC MINES.

The boundary line between Los Angeles and San Bernardino counties runs between Pomona and Ontario, leaving Ontario in San Bernardino county, and running north across the meanderings of San Antonio Canyon, passes through the summit of San Antonio peak (locally known as "Old Baldy.")

The head of San Antonio canyon terminates in two forks—the main canyon and the "North Fork," the latter running right to the summit of "Old Baldy," the former continuing in its course northeasterly, about two miles from the junction to the Hocumac placer camp at the top of the "divide" between Lytle creek and San Antonio Canyon—8,000 feet above sea level in San Bernardino county. Here, at this narrow divide of a few

hundred feet in width, in a beautiful grove of yellow pine and fir trees, are found substantial log cabins, the camp of the Hocumac Placer Mining Company. A wonderful view from this elevation is here presented, where from the western rim of the divide through San Antonio canyon is seen Pomona and the fertile San Gabriel valley; and from the eastern rim, the arid plains of the Mojave desert, through which runs the rich mineral belt from the Randsburg district southeasterly by the "Lost Horse," "Bay Horse," "Gold Cross," "King of Arizona" and "La Fortuna" mines. And while contemplating the rich developments to come in this great belt, and the rich quartz discoveries near by, made in June last, at the head of the North Fork of San Antonio canyon, the observer is conscious of the fact that he stands on deposits of auriferous gravel reputed to be rich.

It is a fact that from "Bank's Gulch," which heads at the cabins and runs along the center of the divide a short distance, has been taken considerable quantities of coarse gold, long years ago. Banks, for whom the gulch was named, found a nugget weighing \$486. Another nugget was taken from the same gulch worth \$300, another \$98 and another from the Criterion mine last year weighing 2½ ounces. The old-timers say that shortly after Banks' discovery, many rich finds were made, two Irishmen taking out \$4000 from the upper part of Banks Gulch, near where the cabins now stand, in six weeks' time, while over on the west side of the ridge, looking down San Antonio canyon, a labyrinth of tunnels thread the Criterion mine.

In 1893, a wealthy Omaha syndicate purchased the fifteen locations covering 300 acres, and the entire ridge, also all water rights at the head of the "North Fork," two and one-half miles from camp, and under the able supervision of their chief engineer, Col. Robert Stanton, assisted by George Fugards, proceeded to put in an elaborate hydraulic system, involving the laying of ten miles of pipe line. This begins at the diverting dam, under the very head of Old Baldy, and is carried to camp around the precipitous slate and granite walls of the intervening mountainsides and conveys the water to an immense reservoir 460 feet above the placers; thence pipe is laid and distributed over the entire system. There are two large monitors and twelve gates. This was done at an expense of \$98,000, and for such a large outlay of money it was reasonably expected that the company would reap rich rewards and incidentally that San Bernardino county would be largely benefited. However, shortly after hydraulicking began, the Ontario Water Company procured a temporary injunction against the company, enjoining it "from contaminating the waters of San Antonio creek." Excessive and possibly careless hydraulicking had resulted in muddying the waters of San Antonio creek, the source of Ontario's domestic water supply. The company in disgust shut down operations in 1894, and the property has since been leased on a royalty. Information as to what gold was taken out by the company before shutting down, and since then by lessees, is withheld from the public. The work now done is on a small scale, smaller than necessary.

The plan adopted the beginning of this season by the lessee, Mr. Stephen A. Douglass, that of building retaining dams in the gulches below, thereby preventing the water from running down the canyon, effectually prevents a recurrence of the trouble. But in the zeal of his work on June 30th, while mak-



ing a clean-up in the "Grubstake" mine, poor Douglass lost his life. A cave-in of the banks covered him with a large mass of earth and boulders, killing him instantly. He was buried on the mountain, near the cabins, but it is expected that his remains will shortly be removed to San Francisco. Douglass was an able metallurgist and mining engineer, thoroughly honest, and his death was a great loss.

#### THE GRAVEL DEPOSITS.

The average depth of these gravel beds is thirty feet, and they bear every indication of being an ancient river bed. It is claimed by our State Mineralogist to be the bed of the old Owens river. It is coarse gold that is found here, and the quartz found clinging to it is perfectly white. No such quartz is found on the mountains except some ledges of barren bull quartz. "Where did it come from?" is the question long asked and unanswered.

#### QUARTZ LEDGES.

In addition to the location of the "Agamemnan Group," embracing the rich find at the head of the "North Fork" of this canyon, the "Douglas Group" is immediately adjoining, and many other promising locations have been made in the Hocumac District within the last few months, and miners there are working their assessments in good faith and under the new law, and staying by it, and the probabilities are that this will prove to be a rich camp. The "Agamemnan" people are doing an immense amount of work, and report finding \$4000 and \$5000 ore in the last two weeks. The exposed ore on the surface of this claim is heavily oxidized, and some of it horns "away up," but under the surface it is a sulphide ore. Peter Fleming, Esq., is building a stone house and fixing to stay there all winter, nearly 9000 feet above sea level.

GEO. N. NOLAN.

On the Tip Top they are sinking on a 4½-foot ledge, that averages \$25. In this ledge is a vein, 8 to 16 inches in width, that carries \$100 rock.

The *Randsburg Miner* says, on the Golden Bar mine at Johannesburg, they are down 120 feet in shaft No. 1, and have a 13-foot ledge.

The Alameda has made another rich strike in shaft No. 3, where they found two feet of \$250 ore, at a depth of 75 feet.

Grading for the 10-stamp mill will be begun the first of next week, when Messrs. Griffith and Ritchie, of Los Angeles, will be in Johannesburg to supervise the work.

The concentrator expected to start up last week to run regularly. They have been much delayed by the non-arrival of some necessary parts of their machinery.



HOCUMAC HYDRAULIC MINES ON SAN ANTONIO MOUNTAIN (OLD BALDY) IN SAN BERNARDINO COUNTY

#### "HOCUMAC-OLD INDIAN NAME!"

The origin of the name taken by this company, given to the camp, and now claimed for the "Hocumac Mining District," on the San Bernardino side of Old Baldy, is said by many old-timers, and "well posted" people to be "an old Indian name, although the tribe to which this warrior belonged is involved in some doubt."

After a close inquiry, we are able to give a positive statement that this is a mistake. Inquiry of Judge Lewis A. Graff, who is attorney for the company, elicits the fact that the name was coined by Col. Stanton from the first letters of the names of three members of the company, who are distinguished citizens of Omaha, Nebraska, and these are the braves for whom the Hocumac is named.

Mr. W. H. Buckler is the present licensee of the company and is pushing operations.

### Miscellaneous Mining News.

#### CALIFORNIA.

##### KERN COUNTY.

Work has commenced on the new railroad from Kramer to Randsburg. It is stated that this road will be an independent line, and will not be in control of the company that is to build the road from Salt Lake City to San Pedro.

Messrs. Hammond and Lively, owners of the Zelda, an extension of the Phoenix mine at Randsburg, uncovered a 13-foot ledge on that claim last week. The ore is free milling and averages about \$10 on top.

A piece of ore, weighing more than 1000 pounds was knocked down in the Rattlesnake mine, near the Red Mountain, last week at Randsburg, and the boys had a nice time sledging and gadding it into pieces of a suitable size to hoist. A drift was being started at a depth of 27 feet where the big piece was knocked down. The rock goes about \$40 per ton, and the prospect looks well.

##### LOS ANGELES COUNTY.

Articles of incorporation have been prepared for the Mohawk-Acton mine, formerly the Madge, later the Yellow Rover, in the Soledad canon, near the town of Acton, this county. It will be incorporated under the laws of Arizona for 1,000,000 shares at the par value of \$1, fully paid and non-assessable. There will be 200,000 shares of treasury



stock, 50,000 of which will be put on the market, through the call-board of the local mining and stock exchange. The officers and directors of the new company are: President, Oscar Roberts; vice-president, E. D. Brown; secretary, Geo. B. Ketzenstein, jr.; M. V. Hartranft and Theo. Summerland.

A cave occurred at the Red Rover mine, in Acton, last week, about 35 feet below the top of the shaft; but nothing serious happened. It will perhaps delay the work in the mine for a week or so, but, as there is plenty ore on the dump, it will not stop the mill. New timber is being now put in. The Red Rover has just finished another 30-day mill run. Reports say it has exceeded the clean-up recently, and which was the largest in the history of the mine.

#### RIVERSIDE COUNTY.

Messrs. Beach, Moore and others have bonded the Iron Chief mine, in the Eagle Mountains, to Chas. D. Lane, of the Utica mine, at Angels' Camp, Calaveras county.

Considerable ore has been shipped from the mine, that gave returns of from \$250 to \$400 per ton of smelting ore.

#### SAN DIEGO COUNTY.

Judge Robert Gardner, of Julian, has purchased the Ruby mill, at Banner, and will hereafter develop and work his own mines and crush the ore in this mill.

G. H. Hubbs has found a rich ledge of smelting ore in the Alpine mine near Descanso.

Speaking of the mines at Hedges, C. W. Panly said recently: "The mines are in good shape. We have been running 50 of the 140 stamps until recently, and are now running 70. The gold is taken from the Cross and Crown mine. The rock runs about \$8 per ton, and we crush 240 tons per day. Just before I left, we made a very satisfactory clean-up. Between 100 and 200 men are at work, partly Americans and partly Mexicans. The Americans shovel, cut wood and do purely manual labor. The wood is found on the desert, twelve or fourteen miles from camp, and it sells by the ton instead of by the cord. We pay \$4 per ton at the scales. It is ironwood, very hard and good fuel.

There are about 400 people in camp, and about 100 more in the vicinity. All are dependent upon the mines for support."

#### SAN BERNARDINO COUNTY.

A correspondent of the *San Bernardino Free Press* says: Baird's mill will be ready to start up in two days. There are now over 200 tons of ore ready to mill.

Frank Sabbath has an eight-horse team hauling ore from Sweezy & Arbois' Black Lead mine. Next week he will start hauling ore from Botsford's Brooklyn mine. This ore is to be worked by Baird's cyanide plant.

C. N. Moore has hauled to Reitz & Sherman's mill 18 sacks of ore, which is said will run \$50 to the sack.

Ellerman & Company have started work on their Ivanhoe. They have a 75-foot shaft and two drifts 50 feet in. The ore body is three feet in width and averages \$50 to the ton, the ore being free milling.

Fred Envoldsen started work on the Sapphire mine and has also begun hauling ore to Baird's mill.

Holiday & Ashmead are working on the Orizaba, taking out ore which assays \$65 per ton. This ore will be hauled to the mill next week.

### COLORADO.

Some high grade ore is being taken out of the Sweetheart mine, in the Mount Wilson district, which lies near the Seymore and Rock of Ages, and free gold is also encountered in considerable quantities in this property. Seneca W. Young is in charge, and has a number of men constantly employed in the tunnel, which is rapidly driving on to a much better quality of ore and a fast-increasing vein.

#### Cripple Creek Notes.

The dump of the Lucky Guss has been leased by J. F. Topping.

Important development work is going on in the Blue Bird, connecting Nos. 1 and 2 shafts, which will not only give better ventilation but economize cost of operating, by hoisting through one shaft instead of two.

Michigan parties, who have taken a lease on the Burns lode, have begun active development, sinking with air drills.

The following new mining companies have been incorporated in Colorado:

The Grassy Hill Deep Mining and Tunnel Company; capital stock, \$50,000; location, Cripple Creek district; offices in Pueblo; incorporators, Edmund H. Lunken, Lincoln E. Moses and E. G. Donley.

Johnson Leasing and Mining Co., capital stock, \$32,000; location, El Paso county; incorporators, Carl Johnson, W. C. Bales, H. F. Nash, L. Hartig, G. T. Nash, E. T. Asmusen and M. G. McLean.

Imperial Gold Extraction Company; \$100,000; Colorado; Denver; Henry B. Snyder, Edward Ring, Elon F. Wilcox.

### IDAHO.

It is reported that two feet of ore was struck in the Red Cloud, located two miles southwest of Wardner. The strike was made last week in the tunnel, about 126 feet from the mouth, and at a depth of about 100 feet. Ore is silver bearing galena. Assays have run as high as 80 per cent lead and 20 ounces silver per ton. The property is incorporated. Most of the stock is owned by Wallace parties.

A number of locations have been made within the past ten days on the north fork of the Little St. Joe. Claims are located on the headwaters of the river, about 12 miles on the east of Wallace. It is said one ledge can be traced several miles. The vein is immense and carries a high percentage of copper. Samples of ore taken from the ledge show up well.

The owners of the Feather Lode, on Sunset Peak, are making arrangements to resume operations in the lower tunnel, and expect to keep a force at work all winter. The mine has had but little work done on it for several years. At one time it was considered one of the most promising claims in the Coeur d'Alenes.

The case of Snyder vs. Bell, the famous Eureka mining case, was called in the district court, Monday, Sept. 20th, and is now being

heard. The litigation grew out of the location of a claim which took in the Eureka tunnel site after the rich ore had been discovered. Snyder's partner, Frank Bell, is a brother of the locator of the fraction, and the impression prevails that he was a silent partner in the location of the fraction. Some novel points are involved. W. C. Beale is looking after Snyder's interests, while Bell is being cared for by Major W. W. Woods and A. G. Kerns. Every point is being bitterly contested, and the case is creating a great deal of interest.

### NEVADA.

The largest bodies of ore ever found in Southern Nevada are now being opened up in the Techaticup and Wall street mines, owned by the Southwestern Mining Company. One of the ledges shows a 50-foot breast of ore that will mill \$20 to the ton in gold. In another ledge an 8-foot body of ore runs over five ounces in gold to the ton. Charles Gracey, has opened the two mines in excellent shape, and has enough ore in sight to keep the 15-stamp mill pounding away for five years. The June output of the mill was \$15,000.

At Bald Mountain, White Pine County, Nevada, Charley Born recently discovered a rich gold quartz vein while digging post holes for a fence. He has taken several tons of quartz from the veins, and thinks he has discovered a valuable mine.

### OREGON

(Extracts from Oregon Mining Journal.)

Frank Houston a few days ago discovered a rich free milling gold-bearing ledge near his famous placer mine at the head of Althouse creek. The ledge is fourteen inches wide and the rock is fairly alive with free gold.

H. C. Perkins of Grant's Pass, was appointed receiver of the Coffman-Allen-McPhee ledge on Forrest creek, under a bond of \$500, with instructions to maintain the *status quo* at the mine pending the final determination of the issues involved.

The new machinery for the mill to be used on the Miller ledge by the Humboldt Mining Co., of Josephine county has arrived at the mine and will be put in place as soon as possible.

The Joe Bar mines, owned by Reid, McMurray & Co., of Tacoma, were sold last week to W. H. Smith and J. D. McGill of San Francisco, for \$20,000. The property is located at the mouth of Elliott creek on the Big Applegate, thirty miles south of Jacksonville. There are nine placer claims containing 170 acres, upon which there are now 4,100 inches of water running with a 300 foot pressure, all of which has not been utilized, as there was only one small giant in operation last year.

J. W. Bevan and A. H. Bannister, of San Francisco, have purchased seven placer claims on Star Gulch, near Grant's Pass, at a good round price, from B. E. Haney.

A rich strike was made near Sparta, Union county, last week by Dugley Curl & Son. Ore from the ledge crushed in a mortar yielded \$1 to the pound.

Nineteen and a half tons of ore from Dr. De Bar's mine, in Jackson creek district, Jackson county, was crushed in Beekman & Huffer's mill last week and yielded well.



Mr. Franks of San Francisco, has closed a deal for the Woodcock claim on Red Dog and the John Taylor and Dudley Depuy placer claims on the upper Briggs creek, in Josephine county, the Woodcock claim being desirable on account of its water right. We are informed that Mr. Franks will start in at once to equip the claims with a good ditch.

A joint stock company consisting of W. H. Beidler, A. J. Hicks, C. F. Young, E. N. Williams, W. H. Cane, E. J. Lampson, C. P. Parker, F. L. Heft and C. Froman, of Gold Hill, and M. L. Burns, E. Burns, R. Burns, F. Strong and S. Woody, of Josephine county, have located 320 acres of high channel gravel on the banks of the Illinois river. The dirt runs 50 cents per yard in gold. Thirteen thousand inches of water been located and the ground has 500 feet of dump.

The company who owns the Olalla Mines in Douglass county is building seven miles of ditch, upon which 140 men are at work, receiving from \$1.75 to \$2.50 a day. All construction work is under the personal supervision of James Moylan, and is being done in the most substantial manner. The main ditch is 8 feet 10 inches wide at the top, 4 feet at the bottom and about 3½ feet deep with a carrying capacity of 4000 inches of water. Two number seven and two number four giants will be put to work when the rainy season sets in, and they are now putting in a fifty arc electric light plant which will enable them to work day and night. They also have a two-stamp quartz mill at the mine which will be used in thoroughly prospecting a large deposit of conglomerate which is on their property and assays between \$7 and \$8 per ton. Messrs. J. G. Day, W. L. Boise, and J. G. Day, Jr., constitute the board of directors and own all the stock.

After a thorough investigation a Portland company headed by J. D. Hart, has closed a deal on the well-known Kaiser ledge in Douglass county and are putting in a 20-ton capacity mill.

The Glenwood group, on the west slope of the Bohemia mountain in Lane county, is reported bonded to Eastern parties, through a Portland agent, and 200 feet of development work is to be started soon.

The Yellow Jacket group of eight claims, on the south slope of Grouse mountain, in Douglas county, are bonded to a Portland company. As soon as the preliminary work is complete it will begin active operations.

The Wall street group of seven claims adjoining the Yellow Jacket on the west is also bonded with a sale well under way.

J. G. Davidson, a mining broker of Portland, and associates have made a tunnel location, running under the peak of Pilot Rock mountain in Douglass county; also having a number of claims bonded on the west on the famous Music ledge. They think it will be a great property in the near future.

The Champion property in Lane county that was idle so long, was recently purchased by a Chicago capitalist. He has opened a new body of ore. The vein is wide and pretty high grade. The mine is dropping ten stamps, full time with a prosperous hum.

The Star Mining Co, on Martin's creek, is putting in a new boiler and engine, and expect to have their five stamps dropping by October 1.

The owners of the Black Republican mine in Douglass county are still pushing develop-

ment work, and they will soon be in 200 feet. How much further they will go before they cross-cut the vein they cannot tell.

The contractor who is running a tunnel near Roseburg for the Roseburg Mining Co. Expects to complete, it inside of thirty days. The prospects are good. Already a small vein shows by assay \$15 in gold and 10 per cent. copper, and the same character of rock as in the true vein.

Considerable work is being done in the Blue River mines, in Eastern Oregon. The Exchange mine shows a 6-foot ledge of high grade ore. The Lucky Boy mine has had 300 feet of tunnel cleared out and partially re-timbered, and has a streak of rich free gold ore in the face of the tunnel, much rock showing gold to the naked eye.

## UTAH.

The Northern Light Company has just erected a three-muffle assay furnace on its nace on its Lion Hill property, which is up-to-date in every respect, and one of the finest to be found in the state.

Work at the Creche, at Park City is going forward as usual notwithstanding reports that operations had been suspended. Secretary Lockhart is authority for saying the regular force, consisting of one shift of three men, is at work under Foreman Adam Paul on the 100 level sinking on the vein, and as rapidly as it is encountered, hoisting ore, though not for shipment.

Articles of incorporation of the Bonneville Mining Company, with a capital stock of \$50,000, were filed September 24th, with the county clerk. John Kirkman is president, John Wells treasurer and secretary, and these with John R. Sands and Thomas Cunningham, constitute the board of directors. The company's property consists of four locations in Lakeside mining district, Tooele county, Utah.

## WASHINGTON.

### A Very Rich Discovery.

The first authentic news concerning Washington's new El Dorado, near Mount Baker, was brought to Seattle the other day, by E. W. Saportas, president of the Information and Registry Bureau, who, with Frank Crydo and Gus Wagner, experienced miners of Dawson City, left for the scene of the latest excitement, September 18th. According to Mr. Saportas, the route is passable, and not very difficult until within five miles of the promised land, but the last five miles present obstacles that would forever discourage any one who was not an experienced prospector and mountaineer. There, in Mount Baker and its surrounding heights, enough gold, says Mr. Saportas, exists to keep prospectors busy for the next ten years.

In samples of ore that were brought back by the informant, Mr. Bogardus, the assayer, by a cursory inspection, declared that free gold existed in large quantities.

The great strike of \$10,900 to the ton, made in Bear Mountain, was verified.

In Tomohoy, Easterbrook and several others have found ore equal to the discovery in Bear Mountain.

East of these mountains is Silicia Creek, along which, many people say, is placer gold.

There are 300 people on the mountains now, and sixty more were met going in.

A well informed mining man of Sumas says: The gold discoveries in the mountains of Whatcom county are beyond doubt the richest in the annals of the Pacific Coast, or even in Alaska. The most experienced prospectors who have just visited the scene of the recent "finds," corroborated the above.

The most recent find is Bald Mountain, situated in the most northeasterly portion of Whatcom county, northeast of Mount Baker. The mineral range runs northwest and southeast, and today is located for thirty miles. There is no telling how much further it extends.

Every hill in the immediate vicinity of the find is covered with location stakes.

At present there are 350 prospectors in the field, running from experienced men to "office seekers," who have forsaken their employers' offices to try their luck in the new fields.

The vein in the five claims, Lone Jack, Bennie, Sidney, Lulu and Whist, varies from three to five feet in thickness. It runs northwest and southeast, under a layer of porphyry ledge, in a serpentine manner, and auriferous shale appears in the ledge. It is free milling quartz of sugar and rose color, carrying copper and silver. The vein can be traced half a mile. The cropping is under solid porphyry.

The gold is "wire" gold, and can be seen by the naked eye and picked out. That there is great quantities of it there, no one who has seen the ledge can doubt. The formation of the range in which the find is located does not look to be very rich in minerals. If there is any placer mining, it has not as yet been demonstrated to be a paying proposition.

All claims in the immediate vicinity of the great finds have been taken and new men must go farther on. The country in which the finds are located is as rugged as can be imagined, and will take enormous sums to develop it.

Major Wood of the Washington mines recently shipped 200 pounds of rich galena ore to Tacoma to be placed on exhibition at that place. The Major reports the working tunnel in now sixty feet and driving away on the three-foot ledge toward the main shaft some sixty feet further in on the ledge.

Within fifty miles of Spokane and inside the borders of the state of Washington is a promising mineral district which as been overlooked in the rush to distant camps. This district is reached from Newport on the Great Northern. Four miles down the Pend d' Oreille river on the east side and near Marshall Lake are a group of as fine prospects as can be found anywhere. They carry gold and silver, and from one claim two carloads of ore is being sacked that average \$100. One hundred men are working claims and prospecting around Newport. On the same side of the river, but thirty miles lower down, several prospects have lately been discovered which assay from twenty to thirty per cent. in copper and carry a few dollars in gold and silver. With the exception of one or two claims little development work has been done.

William Geisler of Darrington, was in Arlington the other day with some fine specimens of ore from his mine on the White Horse, being enroute to Tacoma to have it assayed. Previous assays on this ore have run from \$65 to \$96, principally in gold. Mr. Geisler and Frank Lawrence have been engaged in driving a tunnel on this claim for some time and they are now in 40 feet. They will continue work until the snow flies.



C. A. Hudson and Mr. Evarts, who in partnership with James Smith own the Smith group of seven mining claims on Jumbo Mountain in the North Fork district, completed doing the annual assessments last week, being assisted by John Elwood and James McGuire, who own a claim in the same group. Besides driving three tunnels to a depth of about fifteen feet, they cut a trail to the mine, and expect to return and build a cabin soon, being highly elated over the good showing which the lodes make and the fine appearance of the ore. They will have the ore tested soon.

E. B. Burdick is at work with several men on the Acme, located near Kettle Falls. A new hoist is expected and shipments will be commenced. It is said the ore will yield \$140 to the ton.

Gold has been found in the dumps of the Highlander and Highland mines at Ainsworth which assays \$29 per ton. Hereafter they will have all ores tested for gold, as well as for silver and lead.

The Enterprise properties, situated six miles east of Bossburg are preparing to make early shipments. The Enterprise is a heavy lead producer.

The third annual meeting of the Northwestern Mining Association will be held in Spokane, October 7th, 8th and 9th. Leading subjects pertaining to mining will be discussed, and each member will be given an opportunity to be heard.

News from Eureka says that last month one of the largest and best veins of white quartz in the camp was discovered about two miles east of this belt, and located by W. A. Stewart, John Myerhofer and John Meyers, all residents of Eureka. The quartz is of the same character as that of the Republic, showing in instances a wavy structure not unlike a fortification agate in appearance. This new discovery has attracted a great deal of attention, and the surrounding country is covered with enough stakes to enclose a hundred claims. Some fine-looking rock was brought to town last week from a new discovery, 12 miles south, near the reservation line.

## FOREIGN MINING NEWS

### BRITISH COLUMBIA.

#### Nelson.

During the month of August there were 257 notices of assessment work recorded in the Nelson office, representing at least \$25,700 worth of work done on the claims. Since January 1st, 1897, there have been 1,107 notices of assessment work recorded representing a total of at least \$110,700 worth of work done in this district alone. This amount does not include a vast amount of development work done, no record of which has been made.

#### Canyon Creek Placers.

These placer deposits at Canyon Creek near Golden—the leases of the land containing which are held by Messrs. McDonald & Carlin, Mitchell Innes, Estelle and Moody and other—are not being worked this year to any great extent, though Messrs. Mitchell Innes have done much more than others on their leasehold. Next year it is hoped that these river gravels will be more fully worked, as good surface returns were here got more

than a decade since, and evidences of far richer gold deposits are found by shaft sinking to bed rock.

It is generally believed that coincident with the railroad extension of the C. P. R. there will be a large development of copper-gold mining in East Kootenay next year. The district has in the North Star and other mines some large and rich galena deposits, but speaking generally East Kootenay is expected to yield far more richly in copper bearing a fair amount of gold than in lead bearing silver. Many prospectors are now at work all over the district, but East Kootenay greatly needs more outside capital.

At the Ainsworth Camp, the Petersons, of Philadelphia, are building a 20-ton concentrating plant and a tram in conjunction, in connection with their mine, the Highlander. It is claimed that the concentrator will treat ores for \$2.75 a ton and the tram save \$1 a ton in the cost of handling most of the ores on Munn Creek. It is claimed that though the Ainsworth silver-lead ores are low grade, they can in many cases be worked for \$1.50 a ton, and being thus cheaply operated yield substantial profits. The Pilot Bay smelter will, moreover, under its new management, reduce rates considerably below the present usual one of \$21 a ton for freight and treatment. Ainsworth mine and claim owners are therefore in much better spirits.

The Golden Cache stamp mill is now ready to run as soon as the connecting tramway is completed, in respect of which a few days' further work is needed.—*B. C. Mining Critic.*

The Maud Hydraulic Gold Mining Company's property in Cariboo has been rebonded to a New York Syndicate for \$100,000, a second sum of \$5,000 being paid to bind the conditional bargain. It is likely that the deferred deal will soon now be consummated.

## MEXICO.

During the half-year, which ended June 30th last, 1,025 title deeds to mines were issued, covering 9,335 claims and a fraction. This exceeds the record of any other years—as will be seen by the following table. The number of claims taken up is of more importance as a gauge of mining activity than the number of title deeds issued.

TABLE SHOWING THE NUMBER OF TITLE DEEDS ISSUED, AND THE AREA COVERED BY HALF-YEARS.

|                          | No. of Title Deeds. | Comprising Hectares. | Ares. | Centiares. |
|--------------------------|---------------------|----------------------|-------|------------|
| First half 1892-1893...  | 34                  | 241                  | 78    | 22         |
| Second half 1892-1893... | 383                 | 2,418                | 97    | 82         |
| First half 1893-1894...  | 340                 | 5,020                | 97    | 53         |
| Second half 1893-1894... | 621                 | 3,809                | 49    | 67         |
| First half 1894-1895...  | 577                 | 3,093                | 86    | 72         |
| Second half 1894-1895... | 467                 | 4,766                | 42    | 29         |
| First half 1895-1896...  | 880                 | 7,484                | 69    | 87         |
| Second half 1895-1896... | 1,844               | 7,966                | 81    | 73         |
| First half 1896-1897...  | 908                 | 7,099                | 64    | 53         |
| Second half 1896-1897... | 1,025               | 9,335                | 04    | 61         |
|                          | 6,279               | 48,237               | 72    | 99         |

#### Sonora.

A syndicate, organized by Mr. F. E. Dickinson, has bought La Mina Blanca, a property which was worked in the days of the

Spanish occupation, yielding very richly, and he will operate it on an extensive scale. A 40-ton concentrator will be erected and everything put in first class order. Mr. P. Wilson, who secured the property for the syndicate, will be in immediate charge of the operations. It is only a few weeks since Mr. Wilson received from the City of Mexico the titles to the property. In the old working of the mine there is a great deal of rich ore in sight, and the value of the old dump is estimated to exceed \$100,000, much of it of very high grade.

A Cochise (Arizona) prospector, W. H. Randall, has located some rich copper and gold claims in the Ojo Mountains, Sonora. Assays of 8-foot cropping show copper and gold, with a good strong ledge cropping out for several hundred feet. William C. Miller of Brooklyn, is interested and is now completing the papers necessary to work the find.

A very rich gold mine was found lately by a Mexican wood peddler, near Corralitos, while digging for mesquite roots, or sepa. The Corralitos company heard of it by some means, and immediately purchased the claim, paying a good price for the same. It is said to be fabulously rich in gold, and the ore is free milling, so that there will be no trouble in working it. It is thought to be the richest mine in that section of the country.

The new owners of Las Animas mine have begun the development work on the property and have already made a wonderfully rich strike of gold. Some of the ore runs as high as \$800 in gold to the ton. Extensive machinery for the proper stocking of the mine will be put in very soon.

(Extracts from Mexican Trader.)

#### Puebla.

The large deposits of copper oxides recently discovered in this state have just been secured by Isham Brothers. Without doubt, this will shortly be developed into one of the best paying properties in the country.

The new Hacienda de Beneficio, in connection with the Paríam gold mines, is fast nearing completion. Gold is being extracted in considerable quantities, and the possessors of shares, other than in exceptional cases, will not even entertain the idea of selling. The prospects are remarkably good, and the investors are correspondingly jubilant.

#### Morélos.

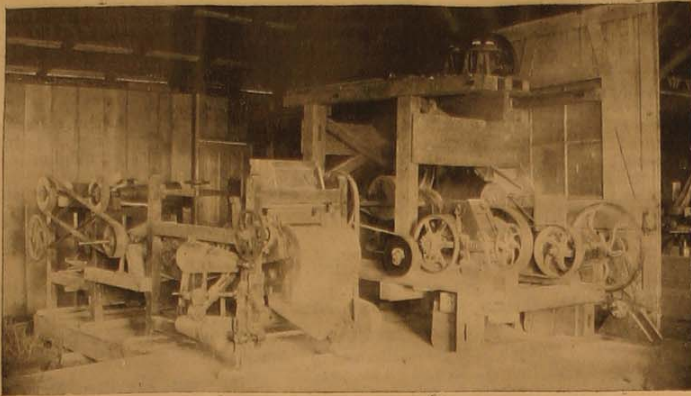
The San Francisco mine at Huautla in this state, has about 16,700 tons of ore in sight, which will average 60 ounces of silver to the ton. The mine has extensive workings and is about to be operated on a large scale.

The Santa Ana mine, in the same district, is in a most prosperous condition. The monthly extraction amounts to \$30,000, the ore averaging 53 ounces to the ton, and in addition, about 12 tons of picked ore, running as high as 600 ounces per ton, is shipped monthly.

#### Durango.

The Guanecevi camp is doing remarkably well just at present. Among the most prosperous mines of the locality are those of the Anita Mining Company, which was organized in New York, and of which Jos. McDonough is the president, D. H. Norris the vice-president, R. H. Husted the manager, and John R. Harbottle the superintendent. A 10-stamp mill is working at the mines. Mr. Norris started the run on the 27th of May,





FREEMAN'S DRY PROCESS CONCENTRATING PLANT

but had to shut down for the lack of water; and regular work began on the 1st of July. Since then the shipments in high grade ores and concentrates have amounted to \$16,000. On July 17th was shipped \$5,000 worth of ore, showing 5 ounces of gold and 220 ounces of silver, and on August 3rd another exceptionally fine shipment was made of concentrates from purchased ores, showing 3 ounces of gold and 160 ounces of silver. About the same time, concentrates from the principal mine showed  $6\frac{1}{2}$  ounces of gold and 141 ounces of silver.

#### Michoacan.

There is a great deal of prospecting going on in this state, attempts are being made by several syndicates to secure control of the immense copper deposits found there. The recent sale of the Inguaran property for \$6,000,000, to a French syndicate, has caused a great boom in copper mining. Isham Brothers of Mexico have recently secured the most valuable property in the state, because of its high assay value in both gold and copper, and its especial advantages for cheap extraction and treatment. Several other smaller properties have also been sold to American and English capitalists.

### GENERAL NEWS.

#### A DRY CONCENTRATOR.

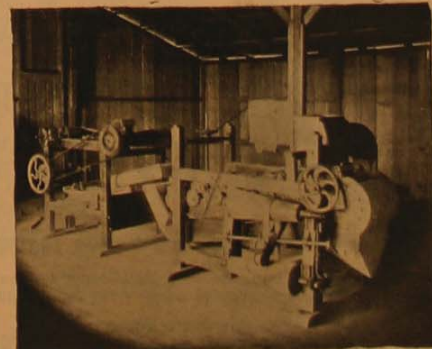
It has been fully demonstrated that, to effect a close concentration of the metal from the gangue, it is needful that the granulation of the ore should be as near even as it can be made. To accomplish this, Mr. J. B. Freeman has invented and perfected a peculiar mechanism in an ore breaker and an ore pulverizer, in which both jaw plates are caused to be moved in opposite directions; there is at the same time a closing motion—virtually tearing the rock apart along the lines of its cleavage and fracture. An exhibition of the small amount of power required was made to the writer by the inventor placing within the jaws of the breaker a piece of hard quartz, about three inches in diameter, and, by a direct pull on the balance wheel, breaking the rock in several pieces. The pulverizer is made on the same principle, only the construction is somewhat different. While the jaws of the rock breaker move only to the center of closing, the jaws of the pulverizer pass as far the reverse way, thereby making a peculiar motion, one jaw going one way, while the other jaw is going the

reverse way. By this method, a very even granulation of the ore is made, and the manner of making three or four sizes of the granulated ore enables a very close saving and concentration of the ore to be made.

The ore is passed through the rock breaker, where it is broken to what will pass a  $1\frac{1}{2}$  inch ring. It then goes to the pulverizing machine, where it is reduced to where it will pass a No. 10 mesh screen. About one half of the ore has been reduced to a size that will pass a 60 mesh screen. The remainder is sent to a pair of rolls for finishing.

By this manner of pulverizing, the granulation of the ore is very even. The finer particles, that will pass a 100-mesh screen, having a sharp feeling, in strong contrast with the product of a stamp mill, which will have a soft, greasy feeling. The ore, after passing the rolls, is elevated to a revolving screen, where it is sized to the required fineness, the particles that are not fine enough are returned to the rolls for regrinding.

By various experiments, it has been found that by sizing the particles of pulverized ore, *i. e.*, getting the particles of quartz and particles of metal classed together as to size, a better separation of the metallic substances can be made. A force sufficient to effect a concentration of ore that would ordinarily pass a 40-mesh screen, will be far in excess of what will be required for that which will pass a 100-mesh in the Freeman Concentrator. Thus, by making different sizes, and passing each size to a concentrator of its own, a more perfect concentration can be made than could be by passing the pulp through old-style concentrators. After the ore is granulated, it passes through another revolving reel, where it is made into four grades, and is then conducted to the pulverizer.



FREEMAN'S DRY PROCESS SEPARATOR AND CONCENTRATOR

There have been placed two of these plants, one of 20-tons capacity, at the Corona Mining and Milling Company, in the San Jacinto Mountains, and the other of 10-tons capacity, at Dale, California.

The following results have been made from samples of ore treated at the works— $\frac{1}{4}$  ton of ore, assay \$24.50 gold per ton, saving free gold \$5.99; 10 lbs. concentrates, value \$175 per ton.

400 lbs. ore, value \$125 per ton gold and silver, saving \$123.96.

And many others, where the saving has been from 78 to 96 per cent of the precious metals. The plant can be seen in operation at 2070 Willow Street, Los Angeles, Calif.

### PERSONAL NEWS ITEMS

BEN T. LLOYD, of Salt Lake City, the energetic assayer, has taken a trip to Mercur recently.

R. B. WOLF, a mining man from Johannesburg, South Africa, has been visiting Johannesburg, Kern county California.

BEN HAYWOOD has accepted the position as manager of the Blue Mountain Tunnel and Mining Co.

FRANK GRIFFITH, of Los Angeles, has gone out to Johannesburg, to superintend the construction of a stamp mill which he is interested in.

COLONEL H. G. HEFFSON has returned to Salt Lake, Utah, from Idaho, where, near Custer City, he has been making an examination of some low grade propositions for Chicago parties.

JACK FLANNERY has returned to San Bernardino from Klondyke. He has been north for the last two years, between Sandon and Alaska.

A. H. KELLAR, of the Siskiyou copper mines, was in Grant's Pass, Oregon, last week.

F. E. DICKINSON, of Minneapolis, Minn., has arrived at Hermosillo, Sonora, Mex., and will shortly go to Snaqui Grande, where he is heavily interested in some very promising mining operations.

W. R. FALES, a Boston mining engineer, has been spending several days at Johannesburg, looking over the camp with the idea of investing in Kern county mines.

N. J. COLEMAN, a prominent mining man of San Francisco, is in Grant's Pass, Oregon, experting the Oregon Bonanza quartz mine.

J. C. CRIBB, a large stockholder in the Val Verde mines, at Johannesburg, Cal., spent several days at the mine examining the property.

JESSE COPE, of Santa Cruz, Cal., is visiting Josephine county, Oregon, inspecting some mining property in the vicinity of Grant's Pass.

R. P. BLAISDELL, of Los Angeles, was in Johannesburg, Sept. 18th, on business.

PETE ANDERSON, son of deputy assessor, W. A. Anderson, of Riverside, Cal., has gone to Klondyke.

Prof. GEO. W. TREADWELL, who is superintendent for an English company, operating in Nevada City, Calif., has been on a visit to Phoenix, Ariz., his old home.

H. B. MATHEWS, a well known machinist and millwright, in Clear Creek and Boulder counties, Colorado, left Denver last week for Vernon, British Columbia, to erect a stamp mill, built by the J. H. Montgomery Machinery Co., of Denver, Colo., who reports business as rustling.







The statement of the United States Treasury, on Thursday, September 2d, shows balances in excess of outstanding certificates as below, comparison being made with the statement for the corresponding date last week:

|              | August 26     | September 2   |
|--------------|---------------|---------------|
| Gold.....    | \$143,256,797 | \$144,184,272 |
| Silver.....  | 29,268,594    | 24,881,526    |
| Leg. tender  | 27,379,482    | 29,145,411    |
| Treas. notes |               |               |
| etc.....     | 30,222,465    | 29,419,535    |
| Totals.....  | \$227,058,038 | \$227,630,765 |

Treasury deposits with national banks amounted to \$16,982,257, a decrease of \$230,728 during the week.

Exports of specie from San Francisco by water for the eight months ending August 31st were:

|             | 1896         | 1897         |
|-------------|--------------|--------------|
| Gold.....   | \$11,227,498 | \$17,874,871 |
| Silver..... | 8,494,859    | 8,474,969    |

Total.....\$29,722,357 \$26,349,840

Of the gold this year \$2,105 was in bullion and the balance in coin. The silver included \$231,024 in United States coin, \$71,320 in Peruvian sols, \$4,351,073 in Mexican dollars, and \$3,821,552 in bars. The destinations of these shipments were as follows:

|                  | 1896        | 1897        |
|------------------|-------------|-------------|
| Hongkong.....    | \$2,344,154 | \$3,491,973 |
| Shanghai.....    | 2,283,850   | 2,057,030   |
| Japan.....       | 3,431,246   | 1,742,270   |
| India.....       |             | 985,988     |
| Honolulu.....    | 799,790     | 415,522     |
| Tahiti.....      |             | 3,300       |
| Central America. | 23,563      | 9,200       |
| Mexico.....      | 3,446       | 760         |
| New York.....    | 10,836,211  | 17,643,797  |

Total.....\$19,722,357 26,349,840

The increase in gold this year was entirely in gold coin shipped to New York. Shipments of silver to China are now large, the total amount sent in August having been \$1,441,017, of which \$1,333,427 was in Mexican dollars.

#### MINING STOCK MARKETS.

LOS ANGELES, Sept. 30, 1897.

Owing to the removal of the Los Angeles Mining and Stock Exchange to its new quarters in the Henne Block, the condition of the market could not be ascertained, but is of necessity somewhat upset.

Wedge stock has fallen to 4 cents, at which figure considerable business was done. Laguna stock has advanced a little. Rand Mt. holds steady. Pacific Consolidated stocks seem to be active. Of the unlisted stock Portland of Colorado takes the lead, shares selling at 65 cents. Little Butte follows with 20 cents per share.

At a meeting of the brokers last week it was determined to secure if possible the co-operation of the railroads in the advertising of the mining districts in the southwest in such a manner as is done in Colorado and Utah, and resolutions were passed to that effect.

NEW YORK, Sept., 20, 1897.

The mining stock market shows an increased volume of business and the tendency is toward an improvement in this class of speculation. During the last week prices have advanced admirably, some of the most prominent stock selling at nearly double last week's quotations.

The most active stock on the Consolidated Stock and Petroleum Exchange was Fortuna. The Comstock and Colorado stocks are moving in a good way, and in the majority of cases advances have been made in the price. Another good stroke of luck is the advancement of the silver stocks on account of the rise in the value of the metal.

The Mining Exchange is doing a fair business in a few stocks, which are held by a party of Colorado people. This body is at the head of the Annetta and Mima companies, and their latest stock is the Waldorf, situated in Idaho Springs, Colorado. The capitalization of this company is placed at \$2,000,000, and there are 800,000 shares of the stock in the treasury; par value, \$1.

Homestake of South Dakota was a very active stock in regard to bids and offers but few sales are reported.

Canon Ball of Colorado was quite a feature, good prices ruling and numerous sales consummated.

Some activity was reported in Nevada stocks, but few sales were made. Other stocks remain featureless.

SALT LAKE CITY, Sept. 24, 1897.

The mining stock market this week was more active than for some time past. No special change in Ajax. Operations at the mine are light. Anchor stock at a standstill. Regular operation

continue at the mine. Bullion-Beck will resume dividend payments in October, stock is advancing. No change in Buckeye stock; developing work at the mine continues.

Continental-Eureka continues strong with few sellers in the market. Properties looking very well. Considerable activity was displayed by Chloride Point.

The Dalys were slightly stronger. Dexter stock holding its own. Some high-grade gold ore sent in from Dexter. Dalton and Daton & Lark were inactive. Eagle stock is quiet as only development work is being prosecuted. Four Ace strengthening.

Geyser-Marion has declared its September dividend of 3 cents per share. The directory has been changed. President Dern of the Mercier company is president of the Geyser-Marion. Stock has advanced rapidly. Galena was somewhat stronger, while Grand Central remained inactive. No change whatever in Horn Silver.

Offerings of Mercur were not heavy and prices are holding strong. Properties looking extremely well and making a fine record. Mammoth stronger on account of high grade ore being taken out. Northern Light selling well with better prices. Ontario gaining. Omaha again in litigation. Reports say both the Swanses will pay usual dividends. Stocks stronger and mines in better condition. Silver King though a strong stock is still stronger this week. Sacramento declining. No change in Sunshine—operations not resumed yet. Sunbeam was inactive. Utah is looking well and making good ore shipments.

SAN FRANCISCO, Sept. 22, 1897.

The market has fallen off to a much lower figure this week. Occidental has held its own though with a strong figure. There is a latent strength present in the stock of the Hale & Norcross, which shows that the shares are being picked up. At this writing the market looks completely demoralized but those who are well informed look for better prices before long.

From the Comstock the mines' reports continue to come in of active work going on from one end of the lode to the other. Con. Virginia has recently completed some milling tests which prove very satisfactory in every way.

There is no change in the Utah, either

in the stock on the exchange, development work or material encountered in the mine.

Sierra Nevada stocks were featureless, the development work being confined to the Layton tunnel and the 900-foot level.

They are still drifting south in the Union with porphyry in the face of the drift. The joint work by Best & Belcher and Gould & Curry is confined to the east cross-drift on the 800-foot Bonner shaft level. No reports whatever are obtainable from the Bullion.

Caledonia has taken a decided advance. Work continues at the mine very satisfactory. Active work is reported on the Alta, but the stock has been declining. There are great expectations ahead at the Brunswick lode, and active work is being prosecuted.

In Chollar work is confined to the 300 foot, 400-foot, 500-foot and 600-foot levels. Connection has been made between the two last.

ROSSLAND, B. C., Sept. 24, 1897.

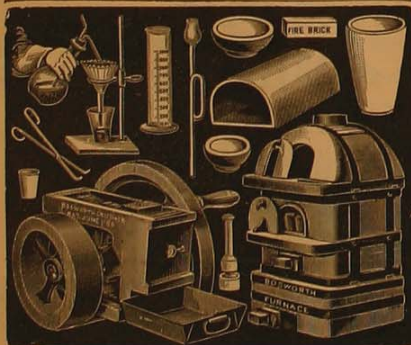
The mining stock market here is entirely devoid of any new features. The bulk of the stock is declining. Some of the more important ones are holding their own. Quotations from Le Roi are unchanged, remaining at about \$8.00. It is, however, attracting considerable attention, but it is a difficult matter to obtain any authentic reports regarding the progression of development work.

Alberta is selling at about half what it was last week. Big Three is holding its own. Blue Bird and Butte stocks are at a standstill. No change is reported on the Caledonia Con.

California has taken a decided fall. Stock that was selling last week at 15 cents is only worth about five cents now. Cariboo is advancing. Coloma has also declined. Commander stock is fairly steady.

Iron Mask stock has gone up to cents. There is considerable talk of proposed new railroads.

It is stated that the railroad from Trail to Penticton will be built next year by Mr. Heinze and his associates, aided by the Government subsidy for 20,000 acres per mile or 4,000,000 acres in all. What will greatly facilitate construction is the discovery of a new pass only 4,000 feet high. This is to be named after Mr. Heinze. The lowest pass previously dis-



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Assayers' and Chemists' Supplies

MANUFACTURERS OF

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SPECIALTIES—Strictly c. p. Acids  
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Will show what is in your ore.....

## A Mill Test

Will show what you can get out of it

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# Sulphuric Acid

Manufactured by the Western Chemical Co. Denver, Col. For Chlorination, Refining and other processes. Also Muriatic and Nitric Acids, Blue Vitriol, Copperas Refined Sulphate of Soda, Etc.



covered was at an elevation of 7,500 feet.

Sir Adolphe Caron is transferring his attention from politics to mining and is said to have floated the North Star Mining and Development Co., Limited, in a capital of \$1,000,000, to operate chiefly in British Columbia. A well known consulting engineer has been appointed in Professor Hardman of Montreal.

### MINING STOCK QUOTATIONS

| BOSTON           |        |
|------------------|--------|
| Aetna Con        | —      |
| Alhambra         | —      |
| Anaconda         | 47 00  |
| Arnold           | 21 13  |
| Atlantic         | 25 50  |
| Bonanza          | —      |
| Boston and C. C. | 68     |
| Boston & Mont.   | 143 00 |
| Butte & Boston   | 26 88  |
| Calumet & Hecla  | —      |
| Catalpa          | —      |
| Centennial       | 10 75  |
| Central          | —      |
| Dominion Coal    | 17 00  |
| Dominion Pref.   | 100 00 |
| Franklin         | —      |
| Gold Coin        | 3 00   |

| NEW YORK        |       |
|-----------------|-------|
| Crown Point     | 19    |
| Con. Cal. & Va. | 1 80  |
| Gould & Curry   | 30    |
| Hale & Norcross | 80    |
| Homestake       | 80 50 |
| Mexican         | 30    |
| Ontario         | 10 50 |
| Ophir           | 71    |
| Plymouth        | 20    |

| HELENA, MONTANA |      |
|-----------------|------|
| Am Den & M Co.  | 1 10 |
| Bald Butte      | 2 50 |
| Bi-Metallic     | —    |
| Combination     | —    |
| Con T & P'n'n.  | 25   |
| Diamond Hill    | 8 50 |

### LOS ANGELES, CAL.

|               |        |
|---------------|--------|
| Armstrong     | 10     |
| Brown Duke    | 05     |
| Cavil         | 01 1/2 |
| East Armagosa | 00 00  |
| Gold Bug      | 01 1/2 |
| Ivy Group     | 15     |
| Little Butte  | 40     |
| Lucky Star    | 01 1/2 |
| Magnetite     | 02 1/2 |

### SAN FRANCISCO

|              |      |
|--------------|------|
| Alpha        | 17   |
| Alta Con     | 11   |
| Andes        | 17   |
| Belcher      | 29   |
| Bodie        | 71   |
| Bollin       | 09   |
| Challenge    | —    |
| Chollar      | 58   |
| Confidence   | 1 00 |
| National     | 1 45 |
| Con New York | 33   |
| Crown Point  | 33   |

### SALT LAKE CITY

|                  |        |
|------------------|--------|
| Ajax             | 25     |
| Alliance         | —      |
| Anchor           | 50     |
| Bogan            | —      |
| Buckeye          | 04     |
| Bull, Beck       | 4 50   |
| Cent. Eureka     | 22     |
| Chloride Point   | 35     |
| Dalton           | 01     |
| Daly             | 1 15   |
| Daly West        | 2 50   |
| Dalton & Lark    | 07     |
| Dexter           | —      |
| East Golden Gate | —      |
| Eureka Hill      | —      |
| Four Aces        | 08     |
| Galeana          | 50     |
| Gemini           | 1 50   |
| Geyser-Marion    | 1 20   |
| Grand Central    | 75     |
| Horn Silver      | 1 00   |
| Little Pittsburg | 02 1/2 |

### ROSSLAND, BRITISH COLUMBIA

|                 |        |
|-----------------|--------|
| Alberta         | 55     |
| B. C. Gold King | 07     |
| Beaver          | 10     |
| Big Three       | 10     |
| Bluebird        | 07     |
| Brice           | 10     |
| California      | 05     |
| Caledonia Con   | 05     |
| Camp Bird       | 05     |
| Celtic Queen    | 05     |
| Colonna         | 13     |
| Commander       | 20     |
| Deer Park       | 07     |
| Della Colla     | 03     |
| Delaware        | —      |
| Eastern Star    | 20     |
| Enterprise      | 20     |
| Eric            | 03 1/2 |
| Evening Star    | 10     |
| Georgia         | 15     |
| Gertrude        | 10     |
| Golden Drip     | 10     |
| Great Western   | 10     |
| Hattie Brown    | —      |
| Hecla           | 04     |
| High Ore        | 05     |
| Imperial        | 08     |
| Iron Horse      | 15     |
| Iron Mask       | 50     |
| I. X. L.        | 10     |

### DENVER STOCK REPORT

|                |         |
|----------------|---------|
| Aetna          | 063 1/2 |
| Alamo          | 02 1/2  |
| Anaconda       | 04      |
| Arcadia        | 004     |
| " Consolidated | 01 1/2  |
| Argentine Jun. | —       |
| Bangkok-C-Bell | 27      |
| Bankers        | 02      |
| Ben Hur        | 02 1/2  |
| Bob Lee        | 04 1/2  |
| Boston & C. C. | 01 1/2  |
| Chimbarazo     | 002     |
| C. K. & N.     | 006     |
| Colo. C. & M.  | 01 1/2  |
| C. C. Con      | 08 1/2  |

### COLORADO SPRINGS STOCKS

|          |        |
|----------|--------|
| Aetna    | 005    |
| Alamo    | 03 1/2 |
| Anaconda | 45 1/2 |

|                    |         |
|--------------------|---------|
| Argentine Juanita  | 20      |
| Bangkok-C-Bell     | 04 1/2  |
| Bankers            | 02 1/2  |
| Ben Hur            | 02 1/2  |
| C. K. & N.         | 006 1/2 |
| C. C. & Manitou    | 02      |
| Credie & C. C.     | 02 1/2  |
| C. C. Consolidated | 10      |
| Garfield Grouse    | 04      |
| Golden Fleece      | 30      |
| Gold & Globe       | 03 1/2  |
| Gold Standard      | 300     |
| Insley             | —       |

### MEXICO

| Name of Company      | State          | Price  |
|----------------------|----------------|--------|
| Angustias            | Guanajuato     | \$ 500 |
| Asturiana y Anexas   | Zacatecas      | 225    |
| Cerro Colorado       | Chihuahua      | 100    |
| Concepcion y Anexas  | S. Luis Potosi | 100    |
| El Oro               | Guanajuato     | 60     |
| do pre.              | "              | 90     |
| Luz de Borda         | Michoacan      | 30     |
| do Free Stock        | "              | 100    |
| Luz de Maravillas    | Hidalgo        | 30     |
| Real del Monte       | "              | 1,100  |
| Rosario y Anexas     | Durango        | 50     |
| do pref.             | "              | 50     |
| San Rafael del Oro   | Guanajuato     | 80     |
| Sta. Gertr. y Anexas | Hidalgo        | 187    |
| do Free Stock        | "              | 201    |
| Sta. Maria de la Paz | S. Luis Potosi | 400    |
| Tlaxiango            | Puebla         | 10     |
| Zamalahuan (gold)    | Vera Cruz      | 100    |
| Zona Min de Pozos    | Guanajuato     | 40     |

Note.—The above Mexican stocks are figured on the basis of Mexican silver

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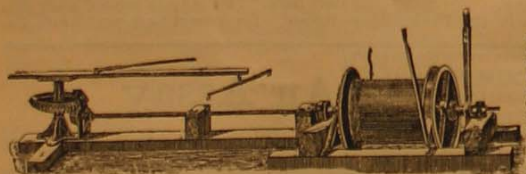
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AND FOR EVERY PURPOSE

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A High Grade Insulator for Long Distance  
Transmission of Power.

INSULATORS, BRACKETS, PINS

WIRE NETTING, WIRE CLOTH

WIRE FENCING ALL KINDS

WIRE NAILS

AGENTS OTTO TRAMWAY

BARE and INSULATED COPPER

—AND—  
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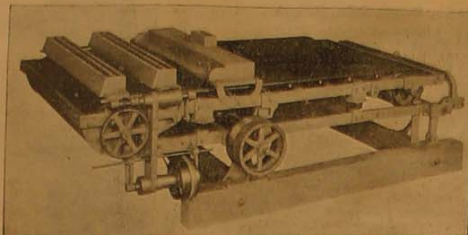
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We guarantee these machines to handle an average of ten tons per 24 hours, and to do cleaner and closer work than any other CONCENTRATOR in use.

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Dealers in all kinds of Pumping and Irrigating Machinery

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**WIRE ROPE AND WIRE**  
OF EVERY DESCRIPTION

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ALBUQUERQUE

NEW MEXICO

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Nevada Metallurgical Works,

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**STAMP MILL AND CONCENTRATOR IN  
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## THE COLORADO IRON WORKS COMPANY, DENVER, COLORADO.

ENGINEERS AND MANUFACTURERS

**Ore Milling and Smelting  
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COMPLETE PLANTS DESIGNED and ERECTED



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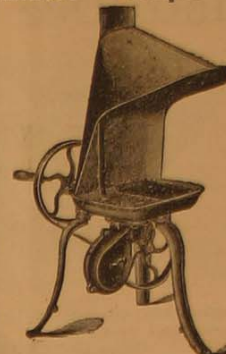
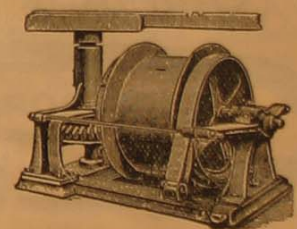
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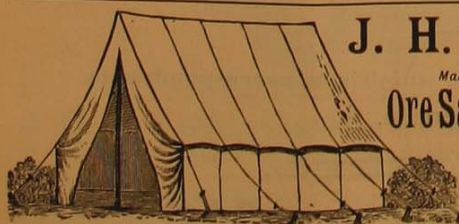
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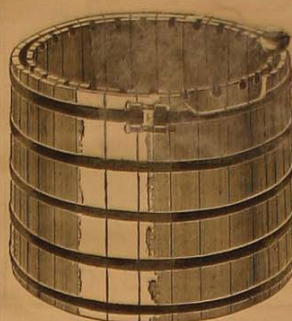
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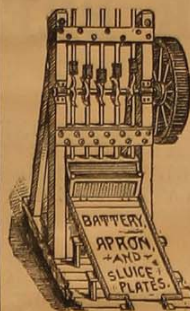
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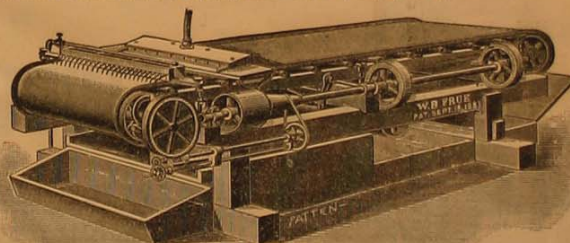
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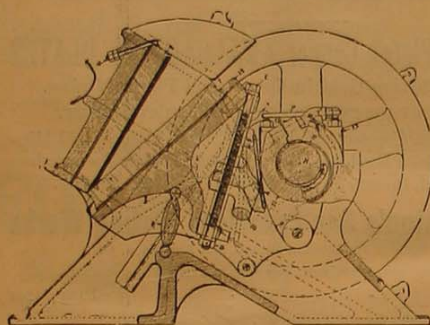
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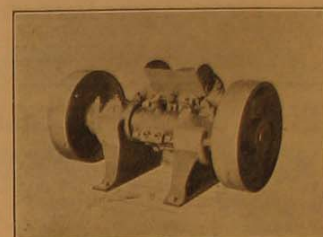
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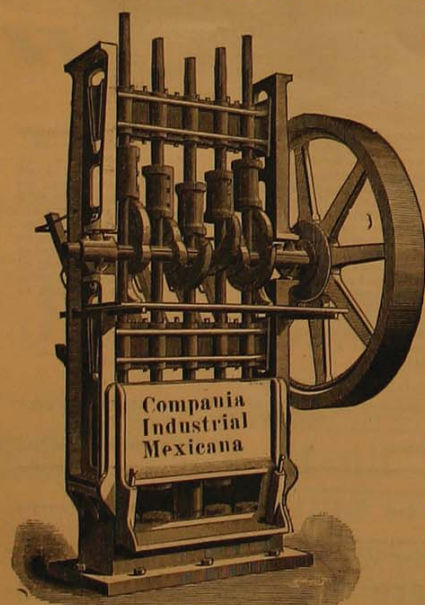
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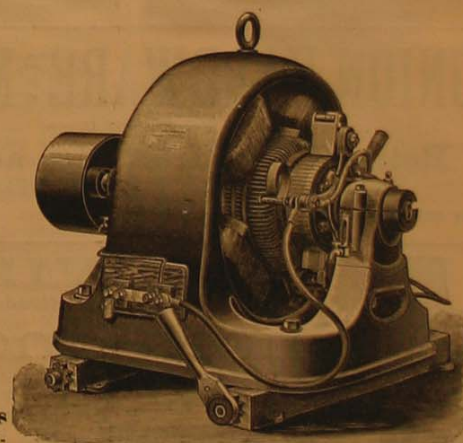
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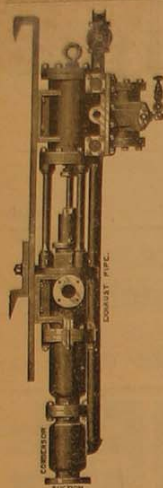
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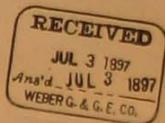
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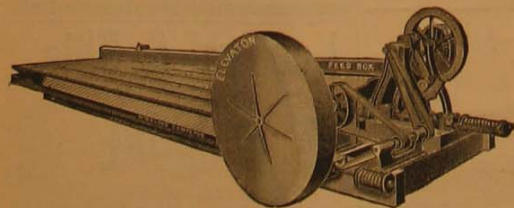
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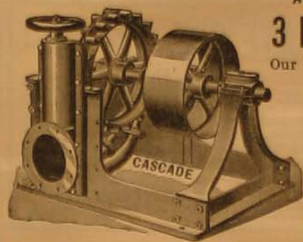
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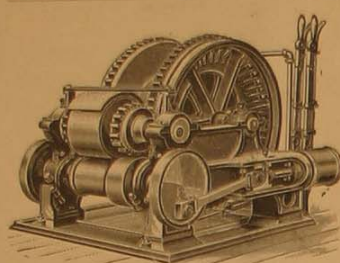
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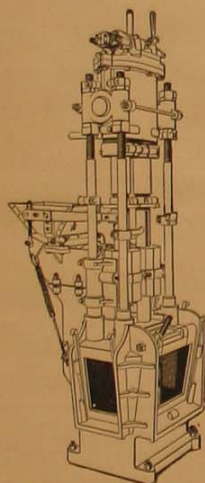
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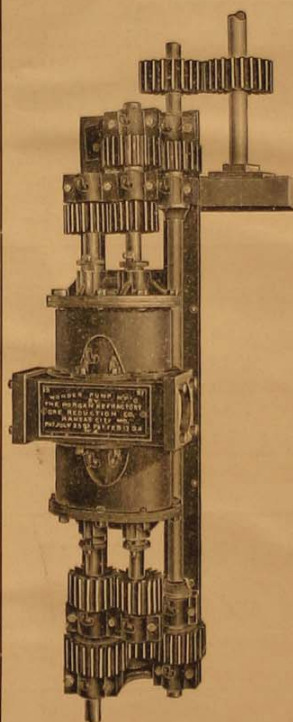
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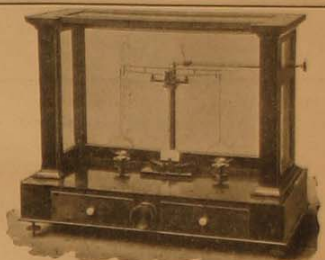


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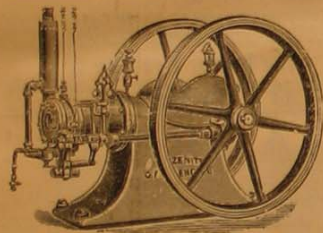
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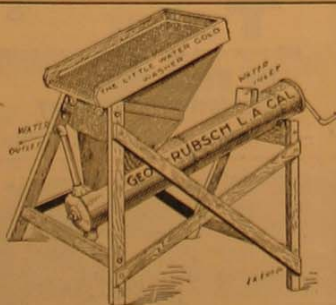
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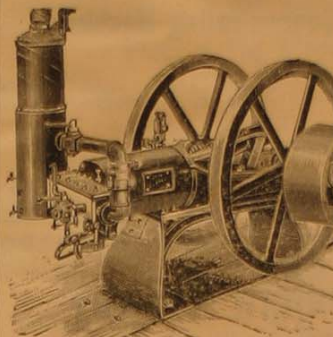
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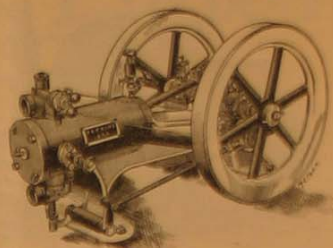
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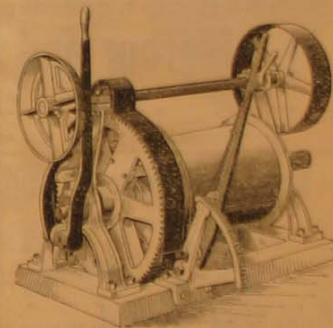
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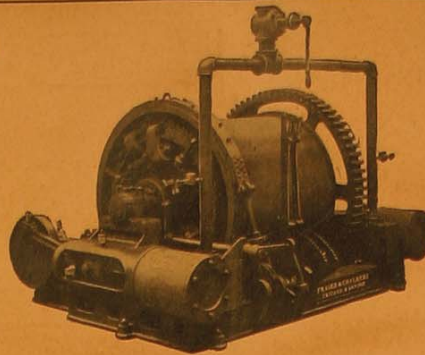
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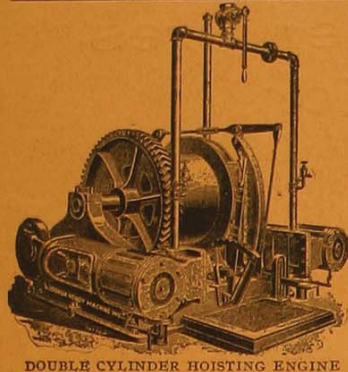
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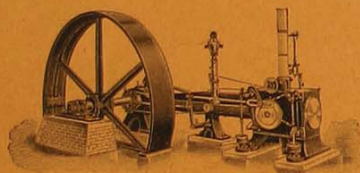
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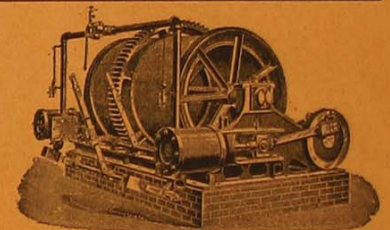
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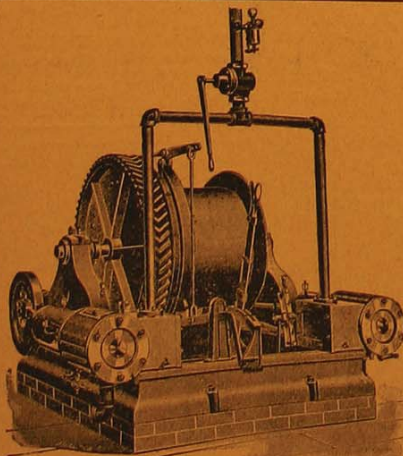
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