

The Mining And Metallurgical Journal

VOL. XVII No. 3

LOS ANGELES, CAL., November 1, 1897, SAN FRANCISCO, CAL.

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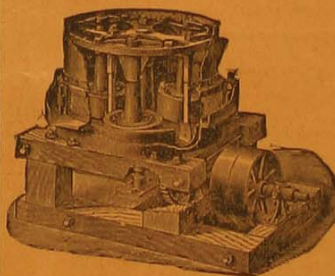
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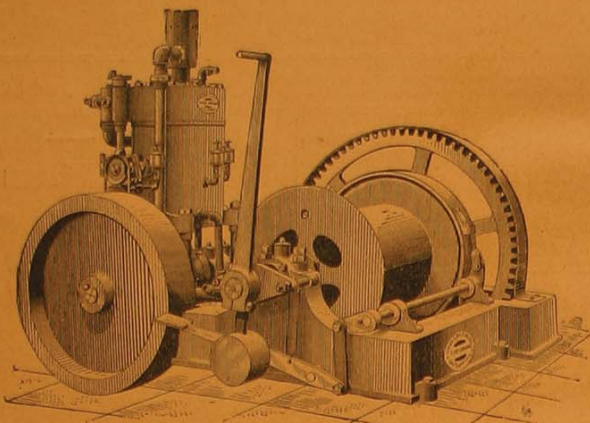
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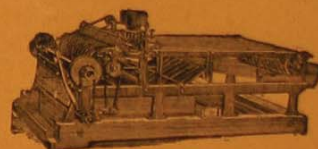
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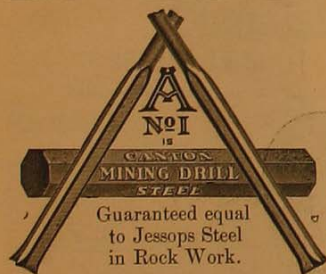
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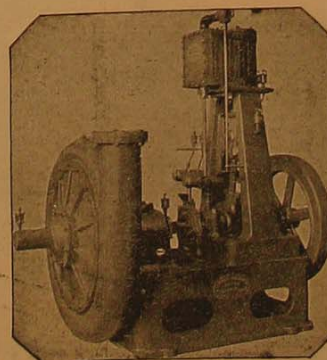
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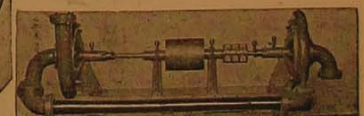
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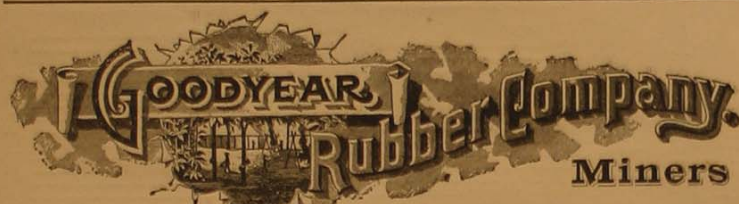
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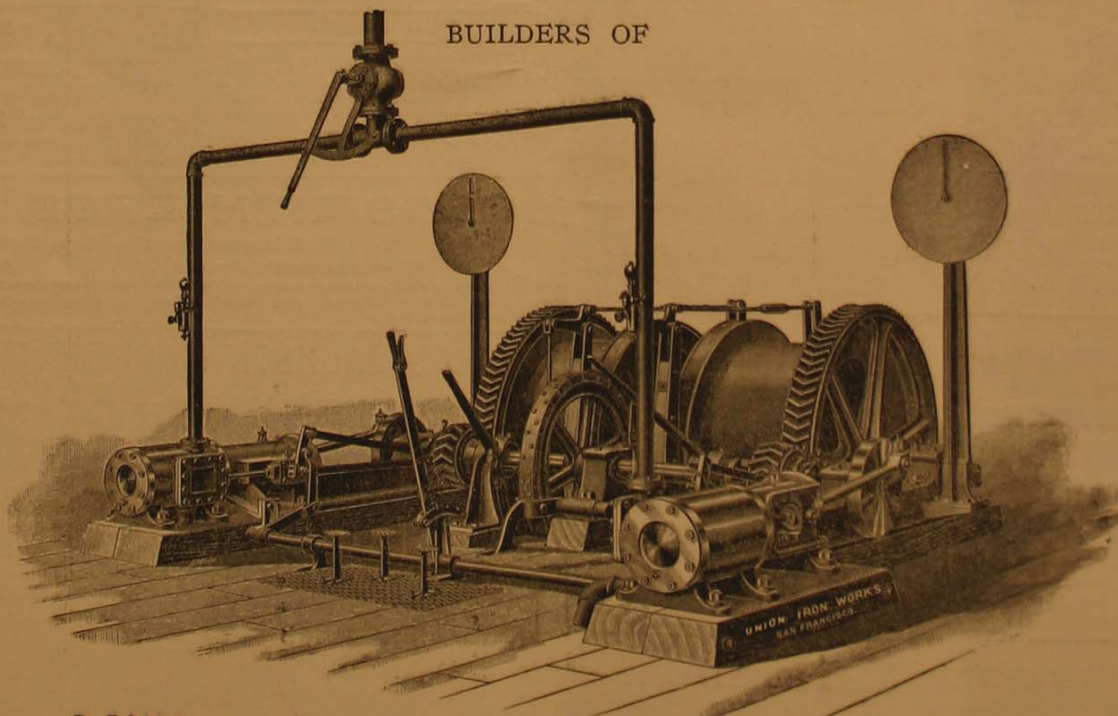
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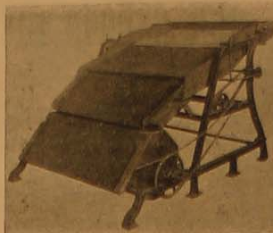
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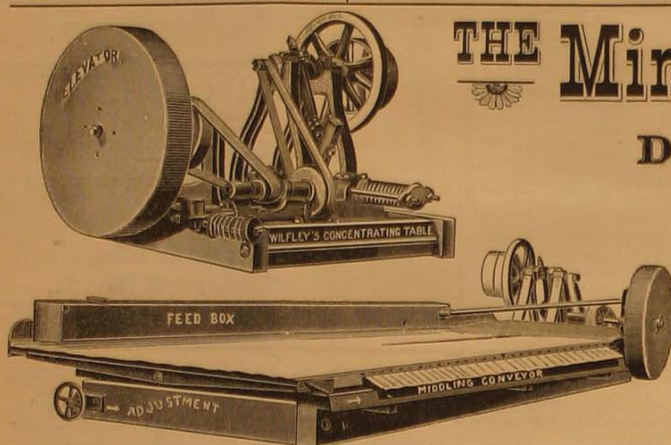
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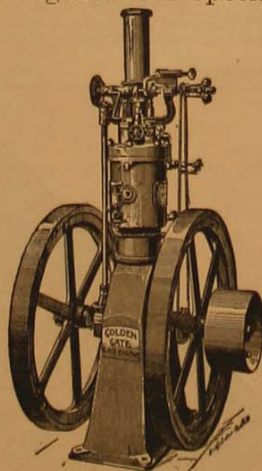
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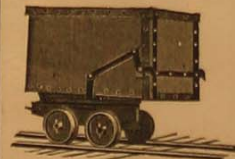
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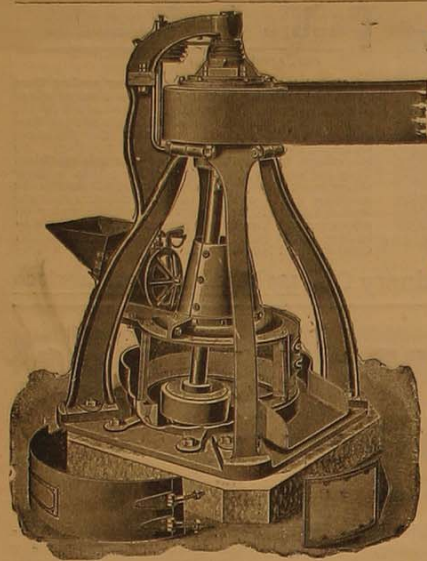
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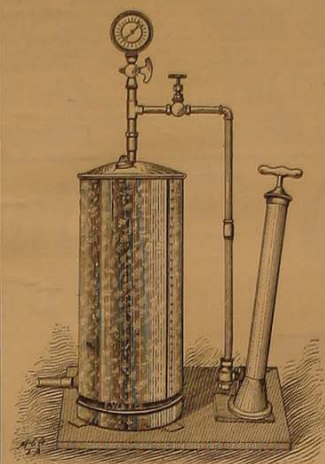
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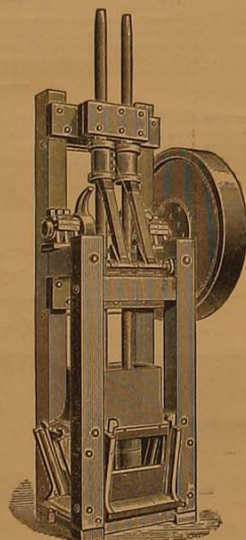
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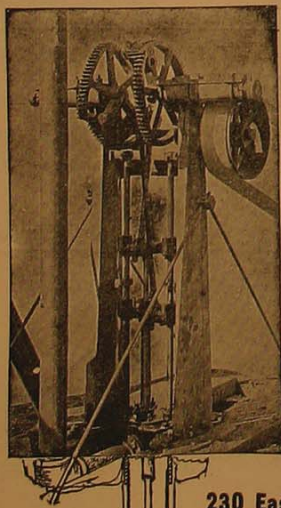
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THE SIDE BOUNDARIES OF A CLAIM

At the last meeting of the State Miners' Association a resolution or rather a series of resolutions were presented to the Convention by Colonel W. S. Keyes, of which the following one necessitates a few remarks:

¹*Resolved*, That the law of the apex and its corollary, the so-called extra lateral right, should be abolished and a return made to the common law right of surface boundaries, and that the claim of unit of location be of sufficient width, *i. e.*, of sufficient width on the side of the dip, to permit of excavations on the ledge to a depth of 1,800 or 2,000 feet when the angle of the dip is not less than 45 degrees."

The only part worth answering is the proposition "to return to the common law right of surface boundaries." In support of this proposed change Colonel W. S. Keyes said that Senator Stewart was years ago an advocate of surface locations on the Comstock, and Judge Whitman, attorney for the great Bonanza firm, said that with a square location there could be no litigation. Mining men would be more willing to invest in a square location than in what we call a ledge location." He quoted from Dr. Raymond, secretary of the American Institute of Mining Engineers, and an authority on the law of the apex; W. H. Stevens of Michigan and Colorado; Arthur F. Wendt, a mining engineer, and the *Mining and Scientific Press* of San Francisco, in favor of surface boundaries for lode claims.

As a warrior the gallant Colonel may be worthy of his spurs, but as one experienced in the injustice of the vertical production downwards of the side lines of a claim for its legal boundaries, he can not have had any

NATIONAL WEALTH DUE TO MINING.

THE COMBINE OR TRUST.

It is a common thing to read in the daily press in all sections of the country that the sugar, cotton, whiskey, iron, coal, etc., etc., interests of such a district or state, or of the whole country, have combined to control prices or trade. The question arises, is the combination of two or more corporations a legal act, when the intention is to regulate prices and stifle competition? When two or more individuals join in partnership, legal steps are necessary, and registration of partnership is demanded in some countries, to make such a firm or corporation a legally constituted body, and to protect the interests of the partners and also of their creditors. The combination of two or more corporations is a similar act, differing only in degree, and ought to require a further act of incorporation to make it legal; hence, the combine or trust is an illegal union of trade interests contrary to public policy, and the companies combining ought to be prosecuted, for it is illegal in the individual to combine with others to corner the market and monopolize trade; but the soulless corporation is at liberty to do that which the individual cannot do in the matter of a trade partnership, or, what is worse, to control the market price of the necessities of life. Possibly, at some future date, the Attorney General will awaken to the facts of the case, and tell the corporations and trusts who have combined, as he recently had to tell Secretary of War, Alger, with regard to his actions in delaying the San Pedro harbor construction, that "Congress passes laws and they must be obeyed."

CORRESPONDENCE

CALIFORNIA.

Tuolumne Mines.

Work is actively going on at the Trio mine.

The Keltz mill is running only five stamps now, and that during the night shift.

At the Tarantula grading for the hoist has been nearly completed and machinery is arriving.

The Alameda is drifting to the north and is sending up exceedingly good rock showing free gold.

The Rappahannock continues to show up splendidly. Superintendent Chute recently put in another engine and cable reel in the hoist.

The Fisher Gold Development Co. is making extensive improvements on their Merralls mill. The work has been intrusted to Demarest & Fullen.

The Lady Washington mine is running full handed and taking out good ore. This is one mine that has been very fortunate in not having to shut down owing to scarcity of water supply.

Rodger O'Donnel of Jamestown has sold nineteen acres of mineral land southeast of that town to a San Francisco syndicate who have gone to work to develop a mine. Work on a tunnel to tap the vein has commenced.

ALABAMA.

A force of men having a contract for sinking the Alabama shaft, arrived on the grounds, Friday of last week, from Angels Camp. There are six men under the contract-

ors, Gallagher & Serry. The work was begun last Monday, and is to result in sinking the shaft 100 feet below its present level of 300 feet. A pump station has been put in on the level for drainage and sinking the shaft. Supt. Nevills was in Sonora last Saturday in the interest of these improvements. At the present Gallagher & Serry have six months on their eight hour shift, but in all probability an additional force of men will be put on. Under the most favorable circumstances the work cannot be completed under three months.

OMEGA.

This mine, which is now in the hands of A. P. Dron, and which was worked some twenty years ago, and begun perhaps forty years prior to this time, is now just being extended beyond the old works, which have long since caved in, and this week has begun the advance work. The Omega, being situated in the best mining belt, on the mother lode and in the vicinity of Rawhide and Alabama, we cannot help joining expectations with the operator, Mr. Dron.

MAMMOTH.

This mine is not the busy one it has been in times past, but arrangements are under way to have it started up again soon and it is thought probable by November first.

SHAWMUT.

It is the presence of numerous carpenters busy with hammer and saw, that gives this mine a lively aspect just now. Recently the Shawmut put in ten additional stamps to their mill and now the company are building quite a number of cottages for the accommodation of employees. A number of men are also employed constructing a stone wall along the creek front as a provision against possible ravages from high water. The payroll calls for seventy-five men. Great things are expected of the Shawmut. Sufficient developments have been made to determine its rich character and the body of ore in sight would seem endless.

THE JUNCTION MINE.

The above struck \$1500 pay in a vein three to four feet wide. The rich sulphurets of arsenical pyrites are 18 inches (nearly solid metal) in width, of very high percentage. This find is of considerable importance, as regards great value in sight. Its future is now assured.

THE KELTZ MINE.

The present company are about to run a low level tunnel that will open up the mine to great depth. The tunnel will start from above high water mark of South Ford of Stanislaus River. The mill will eventually be moved to the tunnel mouth.

THE RIVERSIDE.

Below the Keltz mine, have completed their 100-stamp mill, and will soon commence crushing on the accumulated rock, which is of paying value in free gold. The sulphurets are of high grade. This mine, we expect, will shortly be on a dividend basis.

THE PROVIDENCE.

On the North Ford of Tuolumne River, looks exceedingly well, a four-foot vein, widening to six feet in places, shows free gold in abundance. The rock carries sulphide of lead in galena sulphurets, and is rich.

ARGUS.

FENNER, Cal., Oct. 29, 1897.

EDITOR JOURNAL: The following mining notes may be of interest to your readers:

Col. Thomas Ewing, the well-known mining man of San Francisco, who has been investigating some mines in the old Arrow mining district about 25 miles north of here, has secured a bond on the Hidden Hill, Golden Queen and three other claims belonging to Kean & Monaghan; the Mina Prieta, owned by John Domingo, and the Ben McKinley, a good mine belonging to Messrs. Miller, West and Monaghan. Col. Ewing is a pusher when it comes to making a bargain. He came out to examine the mines named, last week, and the next day he had a bond on the properties, and never had seen any of them before. The Colonel has taken immediate charge and will place the mines in the best condition in the shortest possible time. The terms are not given out for publication. A shaft is now down 183 feet on the Golden Queen. Ore worth from \$125 to \$250 per ton in gold and from 20 to 50 per cent. in copper has been shipped from the Golden Queen by the former owner. The present value of the ore is much richer than ever before.

The Hidden Hill is famous on account of a rich strike having been made there about a year ago. In two shots they broke into two pockets and took therefrom \$11,000. The first pocket disclosed contained \$3000 and in the second there was \$8,000. This statement is no estimate or an assertion that cannot be proven, as the cash was paid for the bullion by the Crocker-Woolworth National Bank of San Francisco to Monaghan & Murphy of the Needles, at that time. Kean & Monaghan have been arrastring ore from this mine that was very rich in gold and silver.

The Ben McKinley mine is also a large producer. Very recently 40 sacks of \$300 were shipped to the sampler at Kingman.

John Domingo has also shipped some very rich ore from his Mina Prieta.

W. R. Fales of Boston, who is well known in mining circles, has taken a bond on the Gannon & Barker group of mines in the vicinity of the properties that Col. Ewing has a bond on.

Henry & Berg of Goldstone have had experts examining their properties, and feel assured they will have a mill up crushing ore from their mines before spring.

Allen G. Campbell has taken a bond on a group of mines near Granite Springs, where he is now working eight men.

INDEFATIGABLE.

SIXTH ANNUAL CONVENTION OF THE STATE MINERS' ASSOCIATION.

The sixth annual meeting of this association met in the Odd Fellows' Hall, San Francisco, on the 18th, 19th and 20th ults., with an attendance of over 400 delegates from sundry counties. The hall was decorated with bunting, and on blue silk were the names of the counties represented, being Plumas, Yuba, Butte, Sierra, Sacramento, Los Angeles, San Diego, Nevada, Placer, Tuolumne, San Francisco, Shasta, Siskiyou, Trinity, Santa Clara, Amador, Alameda, Calaveras and El Dorado.

The Hon. J. H. Neff, the efficient president of the association, called the meeting to order at 10:30, and the first business was to appoint a committee on credentials:

J. S. McBride.....Nevada.....chairman
Thomas Clark.....El Dorado.....
John McMurray.....Trinity.....

A. M. McDonald.....Tuolumne.....
 Thomas W. Jeffress.....Alameda.....
 Dan T. Cole.....Sierra.....
 F. W. Edelsten.....Los Angeles.....
 J. M. Gleaves.....Shasta.....
 R. Larry.....Santa Clara.....
 A. G. Myers.....Siskiyou.....
 George Stone.....San Francisco.....
 M. B. Krerr.....Calaveras.....
 Joseph Durfee.....Yuba.....
 E. C. Voorhies.....Amador.....
 A. B. White.....Plumas.....
 J. L. Gould.....Placer.....

In the afternoon, Major McBride remarked that Judge Niles Searles, of Alameda, was present, and suggested that he address the convention. President Neff said: "There is no man whom we would more like to listen to than Judge Searles, whose words of wisdom the miners have often heard." The fact that Judge Searles had been chosen as spokesman to present a silver cup to the retiring president had been kept from Mr. Neff. After a neat speech the presentation took place, and President Neff thanked the Association for this token of regard and esteem and followed by reading the following address:

"We are happily assembled at a time when the mining industry in California has taken on new life and when its future outlook is more than ordinarily bright. The steady increase in the annual gold yield of our state is supplemented by renewed activity and increasing yields in other branches of mining, to the extent that the eyes of the world are now turned upon California, and legitimate investors are making careful and earnest examination of the advantages here offered.

This happy condition is in no small degree the result of the united efforts of the miners of California through the association whose representatives are here assembled. The value of organization and unity of action is thus signally emphasized, and the duty of the California miner made clear and plain. I sometimes question whether the miners of this state have always appreciated, or even realized, the substantial benefits that have resulted from their united efforts. Six years ago the mining industry of this state was in a lamentable condition. The annual gold yield was at a low ebb, and one branch of gold mining was practically destroyed. The yield of other minerals was limited, and the belief generally prevailed in the industrial world that mining in California was rapidly becoming a thing of the past. So general was this belief that capital, in its search for mining investments scarcely gave California a thought, but passed on to more alluring fields.

Then came the California Miners' Association, with its enthusiastic energy and co-operative determination. Our State Legislature promptly responded to our appeals and Congress lent us a willing ear. Public sentiment suddenly turned in our direction, and the people of the valley gave respectful attention to our appeal to reason and justice. Above all, the world once more learned of our marvelous resources, and capital hastened to make investments in California mines. Today the mining industry of California is better known, better understood, and is attracting more favorable attention than for a quarter of a century past.

It is not my purpose at this time to review the history of this association, or of the mining industry of California, nor shall I detain you with any detailed statement of the work of the association for the year just past. The

former I had the honor to present in my annual address a year ago, and the latter will be fully covered by the reports of the various committees.

I am glad to report that cordiality and good feeling exist between those in charge of the State Miners' Association and the executive officers of the Anti-Debris Association of the Sacramento Valley, and that there is no difference of opinion regarding these matters, leaving hope for future harmonious action. Several conferences have taken place during the past year between a committee representing this association and a committee representing the Anti-Debris Association, looking to a joint appeal to Congress for financial aid in the furtherance of such work as the two associations might be able to mutually approve. Although these conferences have so far produced no definite results, yet I am glad to report that cordiality and good feeling existed, and that there is no difference of opinion regarding the necessity of such action, each working in co-operation for the common good and mutual prosperity of our state, in which we are all so deeply interested. To this end we await the action of the government engineers in adopting and reporting a plan for the protection and improvement of the Sacramento and San Joaquin rivers, as contemplated in the Act of Congress known as the Caminetti Act.

You are doubtless, gentlemen, familiar with the fact that since we last met considerable progress has been made in the important matter of Federal and State appropriation for purposes agreed upon by mountain and valley residents of this state. You are also, doubtless, fully conversant with the protracted efforts in our state and national legislatures, and I will but direct your attention to the results.

By an Act of March 24, 1893, the legislature of this state appropriated \$250,000 to be applied to this work—namely, the building of restraining dams. This appropriation, contingent upon a like appropriation by Congress, was made good by a similar appropriation on the part of the Federal Government; and to obviate any possible legal technicalities, the California State Legislature, at its last session reappropriated the amount. At the same time the State Legislature appropriated \$300,000 for dredging the Sacramento river, which makes now available for the purpose on which all are united \$800,000, all of which, except the \$300,000 appropriated by the state and under state direction, is to be expended under the direction of the United States Government engineers for building dams and restraining debris.

There has been considerable delay and some impatience manifested regarding the beginning of the actual work, and some considerable discussion has been published concerning the proper character of such work. It may be said, in passing, that when the bill for the \$300,000 was signed by Governor Budd it was with the distinct understanding that the money was not to be immediately available. Without expressing any opinion one way or the other upon the state appropriation, it is believed that in a broad view of the matter, the state authorities are doing wisely in making haste slowly, and it is sincerely to be hoped that at the coming session of Congress the Federal Government may be induced to aid by further appropriation in this same work, as it is believed that such improvement naturally and rightfully belongs to the Federal Government.]

It is understood that the present conference between the state authorities in charge of the dredger scheme and the United States engineers will result satisfactorily. It is likewise understood that the delay in beginning the expenditure of the \$500,000 joint state and national appropriation in the construction of debris-restraining dams has been occasioned by the difficulty in determining the exact point at which the work should begin. In this connection it is to be noted that there has been considerable of a change in the United States Debris Commission, and it is believed that upon the return of Major Heuer from Cincinnati that progress in this matter will be stimulated.

The \$500,000 appropriated for the building of debris-restraining dams is not understood, nor was it so understood at the time, to be for the impounding of fresh debris, or for miners to use as dams for their tailings, but to stop the movement of material mined by miners, and stirred up by agricultural development when you and I were boys. It is also clearly understood that under the Caminetti Act, regardless of state or national appropriation, hydraulic miners must continue to build their own dams and take care of their own debris.

I would have been pleased to have given you a more favorable report of the progress made in the expenditure of the \$800,000 appropriated, but in the above have briefly outlined the facts as they exist. I would suggest that, in my judgment, it would be well for the association at this meeting to set forth the present status of the matter, and petition Congress for further appropriation, to continue the work which the \$300,000 was intended to inaugurate.

I also hope that the Mineral Land bill, so long pending in Congress may be passed at the ensuing session of that body.

I also desire to refer briefly to the International Gold Miners' Convention, held at Denver in July last, and the Transmississippi Commercial Congress, held at Salt Lake City during the same month. This association was represented at both conventions, and action was taken at each convention looking to the creation of a Department of Mines and Mining, and also to the revision of our Federal mining laws. At the Denver Convention, Col. W. S. Keyes of this association was made a member of the Committee for Revision of the Federal Mining Laws, and at the Salt Lake Convention, Hon. Tiley L. Ford was made chairman of the committee upon Department of Mines and Mining. These gentlemen will doubtless report what action, if any, has been taken by their respective committees.

I cannot conclude without adding a word in commendation of those who have thus far so successfully carried on the work of the association and of encouragement to those in whose hands its future usefulness must now be intrusted. The position with which you have so continuously and so generously honored me has afforded me unusual facilities for observing the unselfish labors of those who have so industriously devoted their time and energies to the cause. Whenever legal services have been required, they have been promptly rendered by eminent counsel without pecuniary reward. Whenever anything was to be done requiring executive or business ability, men of affairs have not been wanting to perform the needed service. When money was needed to defray the necessary expenses of important undertakings, that, too, was promptly furnished by the

friends of the mining industry. In short, gratuitous service and generous financial aid have marked the course of the association continuously since its birth. It must be confessed, however, that the mining counties themselves have not always responded as they should, and that the financial burdens of the association have fallen quite largely upon the merchants and manufacturers of San Francisco.

To all those who have so generously aided the cause, I desire to tender the thanks of the association, coupled with my own personal gratitude for the kind assistance of those upon whom have fallen the principal burdens of our noble work.

For those who shall succeed to the duties of the present officers of the association, I bespeak the same kind generous treatment that you have ever accorded to those whom you have so highly honored in the past. Above all, I appeal once more to the miners in the mountains to respond more liberally with financial aid. You are the direct beneficiaries of the great work that has been and is still being carried forward by the association, and upon you must the future of the association depend. Without your cordial support, the association must needs confine its work to a very narrow compass, while with your hearty co-operation and financial aid, the past achievements will but mark the beginning of a glorious dawn for the industry that means so much to our state and nation and upon which you must rely for your own prosperity and material advancement.

Secretary Julian Sonntag reported that up to October 15th the receipts were \$3,274.39, and the expenditures \$2,497.30, leaving a balance of \$777.09. Since then \$620 has been received. The Secretary stated that Treasurer Montague's accounts agree with his.

The Committee on Resolutions was appointed as follows: J. M. Walling, Nevada county, Chairman; J. F. Halloran, San Francisco; A. H. Ten Broeck, El Dorado; Harold T. Power, Placer; T. J. Parsons, San Francisco; A. Caminetti, Amador; F. R. Wehe, Sierra; John F. Davis, Amador; John McMurray, Trinity; James O'Brien, Yuba; J. R. Scupham, Alameda.

On the motion of ex-Judge Walling, it was ordered that all resolutions be referred to the Committee on Resolutions without discussion.

The following resolutions were presented: That the miners of the State of California should aid in every possible way to make a large and successful mineral exhibit, at the Paris Exposition in the year 1900, etc. That a committee of this association be appointed to confer with the Executive Committee of the State Anti-Debris Association—in urging the attention of the United States Debris Commission the importance of securing protection against a further flow of heavy material into the navigable rivers, etc.

Curtis H. Lindley, chairman of the Committee on the Revision of Mining Laws, said that this committee and the Committee on Legislation should be consolidated, as they consider the same matters. Incorporated in the report was a statement by Colonel W. S. Keyes, who was a member of the committee and also a delegate to the International Mining Congress at Denver. He presented resolutions favoring square locations and that the common-law right of surface boundaries be adopted for the side lines of mining claims, etc. The Committee on Resolutions, however, very wisely reported unfavorably on the resolutions of Colonel Keyes on the following day.

The day's proceedings closed with addresses from Curtis H. Lindley, A. H. Ricketts, S. K. Thornton, Ivan H. Parker, John Daggett, J. S. McBride. In the evening, Prof. S. B. Christy addressed the delegates on the "cyanide process" and Lieutenant Hasson on "electric power."

At the second day's meeting, resolutions were submitted from county associations, the State Board of Trade, on a Secretary of Mines and Mining.

Ex-Congressman Caminetti brought forward Congressman Marion de Vries, who addressed the meeting on the Mineral Lands bill. The Committee on the Protection of Mineral Lands reported that the conditions existing at the commencement of the year have remained practically unchanged, except in the marked diminution of the area of advertised selections by the railroad companies of lands lying within the limits of their grants. Report of the Committee on Dredgers favors the construction of restraining dams. The Committee on Legislation reported in part as follows:

According to the estimate made for your committee by the Commissioner of the General Land Office, on June 19th last, there remained unpatented at that date within the railroad land grants in California, 11,596,073.86 acres, distributed as follows, to wit:

Western Pacific (San Jose to Sacramento).....	1,128,317.25
Central Pacific (Sacramento to Nevada line).....	1,199,384.71
California and Oregon (Roseville to Oregon State Line).....	922,201.04
S. P. Main line (San Jose to the Needles).....	4,418,296.80
S. P. branch line.....	3,927,873.96
Total.....	11,596,072.86

Your committee has no means of knowing how much of this vast acreage is mineral in character, though it is believed that a large percentage of it would be found upon examination to be mineral land within the meaning of the proposed Mineral Lands bill.

After referring to the Acts passed by the Legislature at its last session, when much good was accomplished in the way of mining legislation, and your committee recommends:

First—That prompt and urgent measures be taken to secure the passage of the so-called Mineral Lands bill at the approaching session of Congress.

Second—That Congress be urged to make further appropriations for the construction of restraining barriers and other works, with a view to the protection of the Sacramento and San Joaquin river systems, to the end that all branches of mining may be successfully and profitably conducted without material injury to other interests.

Third—That further steps be taken to secure a revision of the Federal mining laws and the creation of a department of mines and mining.

State Mineralogist Cooper read a paper which we will produce next issue.

The following prominent men addressed the Convention: Governor Budd, Senator Perkins, Congressman Marion de Vries, Congressman Barham, Colonel W. S. Keyes, Hon. T. L. Ford, John P. Irish, Professor S. B. Christy and Professor George Davidson. Against his protestations, Jacob H. Neff was again elected president, and Julian Sonntag was re-elected secretary, T. J. Parsons, vice-president, and S. J. Hendy, treasurer.

The following members of the Executive Committee were named by counties:

Yuba—Joseph Durpee, Louis Conrad; Sierra—F. R. Wehe, J. O. Jones; Trinity—P. M. Paulsen; Amador—J. F. Parks, E. C. Voorhies; Nevada—E. J. Rector, J. S. McBride; Plumas—Dixon Brabbon, John Robberts; Shasta—J. M. Gleaves; Calaveras—Rich A. Parker, Mark B. Kerr; San Francisco—Andrew Carrigan; El Dorado—H. E. Pickett, G. H. Ten Broeck; Tuolumne—F. M. Wilmans, A. M. McDonald; Santa Clara—Charles C. Derby, R. R. Bulmore; Siskiyou—Andrew C. Myers, John Daggett; Placer—Charles H. Carr, H. T. Powers.

The Convention then adjourned *sine die*.

After the Convention had closed, Chairman Neff announced the following list of committees:

Executive Committee at Large—W. W. Montague, Edward Coleman, A. Caminetti, W. C. Ralston, W. S. Keyes, George Stone, R. McMurray, James O'Brien, S. B. Christy, L. F. Byington, D. T. Cole, J. J. Crawford, J. F. Halloran, John M. Wright, S. K. Thornton, C. W. Cross.

County Executive Committee—Yuba, Jos. Durfee, Louis Conrad; Sierra, F. R. Wehe, J. O. Jones; Trinity, P. M. Paulsen; Amador, J. F. Parks, E. C. Voorhies; Nevada, E. J. Rector, J. S. McBride; Plumas, A. Hall, John Roberts; Shasta, J. M. Gleaves; Calaveras, Richard A. Parker, Mark B. Kerr; San Francisco, Andrew Carrigan; El Dorado, H. E. Pickett, G. H. Ten Broeck; Tuolumne, N. M. Williams, A. M. McDonald; Santa Clara, Charles C. Derby, R. R. Bulmore; Siskiyou, Andrew G. Myers, John Daggett; Placer, Charles H. Carr, H. T. Tower.

Committee on Legislation—Fred Seales, John McMurray, Judge Soward, Louis Glass, E. C. Voorhies, F. R. Wehe, E. H. Chapman, Charles A. Swisler, W. F. Prisk.

Committee on Revision of Mining Laws—Curtis H. Lindley, W. S. Keyes, J. F. Halloran, John F. Davis, C. V. Gottschalk, T. L. Ford, A. H. Ricketts, Stanley A. Smith, R. C. Rust.

Committee on Mineral Exhibit, Paris Exposition, 1900—J. J. Crawford, John Daggett, A. H. Walrath, A. G. Myers, S. B. Christy.

Committee on Secretary of Mines and Mining—Tirey L. Ford, Louis Glass, Charles G. Yale, W. C. Ralston, J. J. Crawford.

Committee on Mineral Lands—A. H. Ricketts, H. T. Power, George C. Sargent, A. H. Ten Broeck, Robert J. Nixon.

Committee on Jetties and Dredging—John M. Wright, J. F. Halloran, W. F. Engelbright, John A. McIntire, R. V. Robertson.

Committee on Conference with Anti Debris Association—John Spaulding, James O'Brien, Thomas Clark.

Committee on Finance—Andrew Carrigan, A. A. Watkins, Louis Sloss, jr.

Miscellaneous Mining News.

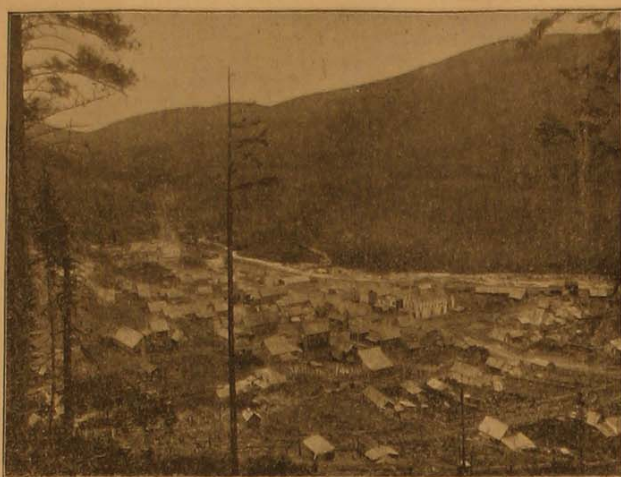
CALIFORNIA.

SAN BERNARDINO COUNTY.

Big Strike in the Rose.

An immense strike has been made in the Rose mine at the depth of 800 and 900 feet during the last few days, and one of the most wonderful strikes yet made has been found at its lowest levels, not only in richness, but in magnitude. Four feet of solid shipping ore, assaying from \$200 to \$500 per ton, was encountered while stopping between the 800 and 900-foot levels. At 900 they have

IDAHO.



VIEW OF MULLAN, IDAHO

large quantities of high-grade milling ore and no doubt will soon strike the shipping ore. The Rose people have enough of ore out and in sight to keep their 10-stamp mill running for years.

This extraordinary strike shows that by depth the mine is richer and the ore chimneys much larger. Such a strike at this depth would attract mining capital in the north and would make quite a boom. There is now no doubt that the mines of the south are liable to "go down" as in any other part of the State.

Tracey N. Stebbens, who has bonded the Memphis and Central mines from Mr. and Mrs. S. H. Baird, is giving the mines a thorough investigation.

The Valley Gold Company, W. E. Pedley manager, has given up working their placer ground and has bonded several quartz mines which they intend to develop this winter. They will employ about twenty men and are now getting in their winter supply of provisions.

The Golden Slope Mining Company is making a road into their gold mines for the purpose of bringing in reduction works at an early date.

of putting in crusher and rolls in order to expedite work.

CRIPPLE CREEK.

For the first half of October the output from the Maloney lease workings on the Orphan Belle aggregated 119 tons, all of the ore going to the smelters. The new find in the Herrington lease is rivalling the Maloney one in richness and the width is greater. From 10 to 15 tons are now being broken daily with the machine drills in driving the levels both ways from the crosscut.

The management of the Anaconda positively refuse to give any more leases on ground owned by that company, and as fast as the time of the few miners working under tribute expire they are politely invited to leave the property. The reason for this action, so the story goes, is due to the fact that an option for the entire estate is out and within sixty or ninety days the company may be asked to give possession and that in order to make it easier, did not want to be bothered with any lessees.—*Mining Industry and Review*.

It is possible that years must elapse before the mineral wealth of the State will be fully known in its true magnitude to the outside world, but when it is once properly set in motion many of the now barely known districts will give to the operators the largest rewards ever turned out of any State in the west, says the souvenir edition of the *Western Mining World*. But as yet the only means of conveyance to a great portion of the State is by cayuse or stage.

There was considerable talk of railroads, and especially that of the one from Butte, Montana, to San Francisco, which proposed building from Butte, up Big Hole, then over Gibbonsville divide, down Dahlonaga creek to North Fork, up North Fork to the main Salmon, and then 200 miles up Salmon to Bear Valley, and then by some means to Cape Horn and Boise City, thence to San Francisco, but it has never materialized. Such a road would be a paying proposition, and until it is built, or some other one in another direction, certain rich mineral districts must lie dormant.

A well known writer, in speaking of the gold deposits of the Salmon river and adjacent districts, says there is sufficient ore in sight to run 500 stamps for twenty years. This silent and unprofitable state arises wholly from the fact that there are no roads leading into this district, and again, the ores, though rich in gold, are base, and cannot be treated by the simple milling process. The removal of these two obstacles would leave room for the profitable employment of several thousand miners and a splendid return for the capital invested.

The Mullen mining district ought certainly to be one of the most prosperous sections in the whole State of Idaho, but owing to difficulties existing between the miners and the owners some few years ago nearly everything is at a standstill, and in consequence of which the camp has had a set-back that will take years of hard work to re-establish its old prosperity.

Mullen was located in 1885, but was not incorporated until 1893. It is located in the midst of a mountainous country, as nearly all Idaho mining camps are, surrounded by good timber lands and plenty of water.

COLORADO.

SUMMIT COUNTY.

A boiler, engine crusher, stamps and the complete machinery is being hauled to the Johannesburg mine, and will be put in position at once.

The Blue Hill mine is at work day and night on Minnie ore, with good returns to Lessees Foote and White.

The Jessie mine has been started up under the charge of Mr. Singer, and the work is being done further to the east than the present workings, with a view to development work. The mill will start up later on.

At the Ouray the water has all been taken out and drifting on the vein is being prosecuted with vigor. A large amount of ore is being taken out and thrown over the dump for future treatment.

The Jack mill is working right along with the stamps and cyanide. Manager Boone talks



MORNING CONCENTRATOR NEAR MULLAN

Among the most prominent mines and mills is the Morning Mining and Milling Company's properties. The mill has a capacity of 300 tons per day, and all ore is conveyed from the mine to the mill by a narrowgauge railway two and one-half miles long and also a gravity tramway. The mine is worked by a series of tunnels and at a nominal cost. The You Like and Just What are located about 1000 feet south of the Morning on the same mountain, and are worked by the same company. The ore is sent to the mill by a gravity tramway railroad. The mine is opened by a series of tunnels similar to the Morning. We show herewith a view of the Morning Concentrator.

Another very prominent mill is the Hunter Concentrator, which has a capacity of 250 tons per day. It is nearly one mile from the mine and the ore is conveyed in a bucket tramway. When in full operation this property employs from 100 to 150 men. The mine is worked through tunnels, of which 4500 feet have been run, and shows a back of some 500 feet. Drilling machines are worked exclusively. There are numerous other valuable prospects in the immediate vicinity of Mullen which will, with a little development work, prove to be valuable mines.

The formation of the district is a typical gold bearing one—magnesian and clay slates tilted to a high angle and traversed by dykes of diorite.

While mining so far has been confined chiefly to the neighborhood of Mullen, there are fair prospects for a larger output from the more distant properties, as the whole district is sprinkled with gold bearing ore, some of which will doubtless develop into profitable producers.

One of the most important finds that has been chronicled for some time is the large ledge of marble about six miles from Kendrick, on the Clearwater. The body of marble was discovered by Doc Ferguson, a former resident of Kendrick, who, since discovering it, has sent samples to different points, and received the most favorable replies as to its merits as a marble. A block of the marble was taken to Kendrick some time ago and polished in fine shape.

Henry and Lou Johnston have made a strike on the South Salmon. When Henry came back to Weiser from last season's trip he said he was going to strike it this year and he started out with all confidence last spring. The prediction has been verified, to judge from the samples sent by mail with a letter to a friend, which consisted of two pieces of quartz fairly glittering with gold over its entire surface. The letter states that they had only sunk eight feet on the vein, which was about a foot wide. From the bottom of the hole, Henry writes, he took a piece of quartz as large as he could lift, from which the gold projected in knobs, the piece evidently containing several hundred dollars.

Little is heard in regard to the placer mines along Secesh creek, this side of Warren, but though little spoken of, they are in truth of such genuine importance and value that it seems strange that more extensive capital has not found a resting place there. On this creek is found one of the most magnitudinous and promising placer propositions in the northwest. This consists of what is known as "Secesh Meadows," twelve miles this side of Warren. Secesh Meadows is a flat of about 1,000 acres on the creek of the same name. It is owned by E. B. True, Gayheart Behrens, R. Hambley, Folly Heckethorn, Chas. Wyatt,

Warren Heim, A. Grant, Jake Williams and others, who are ready to dispose of their interest at a reasonable figure to any company with the proper capital to handle the proposition. As this is a very similar enterprise to the Warren Meadows and the Warren Placer Mining company (dredge) ground, the success of the two latter will at once attract attention to this great gravel bed and bring the capital for its development. The Secesh Meadows are perfectly flat and cannot be worked with appliances now at hand. There is so much water that nine feet is as deep as prospectors have been able to sink, failing to reach bedrock, which is twelve feet or a little more. As far as prospected, which has been done all over the meadows, it yields about 60 cents to the yard, with bedrock to hear from yet. At one point E. B. True rocked out one yard of gravel and got \$1.35. From the lower end of these meadows the creek pitches off with sufficient fall to permit the working of this ground by means of a bedrock flume to great advantage. It is the firm conviction of parties competent to judge that the company to take hold of this ground will receive returns running into the millions.

MONTANA.

(Extracts from Western Mining World.)

F. M. Fuller has filed a labor lien for \$800 upon the Highland Chief quartz lode, Crevasse district, owned by the Crevasse Mountain Mining Company. The claim is for services as watchman, rendered between the 27th day of November, 1896, and October 8th, 1897.

James E. Keys and Mr. Brack, who have lately been operating the Alhambra lode on Strawberry Butte, near Clancy, have concluded to suspend operations there until silver comes up again. They have a pretty good showing of high grade ore in the property, but see no encouragement in further working the mine at this time. Mr. Keys has purchased from Jesse B. Garver his entire interest in the property, and intends starting for Alaska within a week or ten days.

W. de L. Benedict, who bonded the New Year mine, in Fergus county, while somewhat disappointed that the development crew had not yet struck the vein, said he was well satisfied with the work. He ordered the tunnel to be driven in a different direction than it had been run, and expects to find plenty of good ore in sight when he returns to the county next month.

The Ruby mine, once famous for its large production of silver and lead, has been bonded by the operators of the East Helena smelter, and is being fitted up preparatory to perpetuating its fame. This property is situated near Radersburg.

The Big Tizer Mining Company, at Clancy, have suspended work for the season. They are in shape to sluice as early in the spring as the weather will permit. A second 160 acres of placer ground has been taken up adjoining the first location, in which some of the original company are interested.

The property known as the Gold Hill, at about one and a half miles southwest of Radersburg, is causing no little excitement in that vicinity, owing to the great amount of free gold that is daily being taken therefrom. It is estimated by conservative old-timers that the richest part of the vein, if properly saved, will yield from seventy-five to one hundred and fifty dollars per sack, net. The Gold Hill is by no means a new discovery,

having been worked previous to nine or ten years ago by the Omaha company, but it was allowed to go by default. They had sunk a shaft some forty five or fifty feet, and were just beginning to uncover the rich ore when the thought occurred to them to hide their find, which they speedily and to all appearances effectually did by filling the shaft up; but the eagle eyes of Messrs. Chas. Crane and Wm. Starkweather were too experienced to be thus deceived, and when the fickle goddess, that is a stranger to so many, guided their footsteps near the hidden treasure, they at once remarked the locality and began an investigation by cleaning out the old shaft, at the bottom of which they found a well defined lead of dolomite of pyrites assaying some \$60 to the ton, of gold. The main lead is some three feet wide, and is said to be a fine concentrating ore. On the hanging wall is about two and one-half inches of silicious quartz, which is literally alive with free gold.

The output of coal at Johnson & McCarthy's mine, at Chestnut, is again assuming the proportions it maintained throughout the summer. The Northern Pacific is again a large purchaser, and the special coal train will soon again have to be placed in operation. The railroad company is putting in extra side tracks and will have a depot erected in less than thirty days.

The United Smelting and Refining Company, lessees of the Broadwater, is contemplating a piece of economy that will result in getting its ore down the hill very much cheaper than the present mode of hauling down by team, that is, by putting in a tramway from the lower tunnel to the railroad track. Mr. Henley, the superintendent, has had this in view ever since he took charge; but the old management did not feel like undertaking the proposition of putting \$3,000 or \$4,000 into the scheme when the price of silver might force the mine to shut down at any time. The smelting company apparently intending to keep right on extracting ore, regardless of the price of silver, has taken the matter up seriously, and the appearance of Mr. Henley, on behalf of the company, before the council last week to obtain permission to cross the streets, was a forerunner of their intentions. At present it costs the company 75 cents per ton to haul the ore down, besides the cost of hauling up timber and supplies. If a tramway is put in, the cost will be reduced to about 8 or 10 cents; in other words, at the present rate of shipping, the new machinery will pay for itself in about three months by the saving effected. Two schemes are being figured on, a tram with two five-ton cars, and a bucket system.

OREGON.

A Cyanide Plant for Ashland.

Mention was made some weeks ago of the bonding of 2000 tons of tailings owned by Hicks & Co., of the Ashland quartz mill, to Portland parties, Messrs. A. T. Caldwell and G. W. Ingalls. The sale has been so far completed that Mr. Caldwell is expected here within a few days, accompanied by a Denver expert, to commence the erection of a plant at Ashland to work the tailings by a patent cyanide process which Mr. Caldwell is representing. A test was made by the purchasers of 100 pounds of the tailings, and they are so highly pleased with the result that they purpose losing no time in putting in the plant, which will have a capacity of 300 tons per day.

FOREIGN MINING NEWS

BRITISH COLUMBIA.

A description of the mines contained in this far-famed section would fill a volume, so rapid has been the development in the past few years. This country, taken as a whole, is one of the most wonderful mineralized sections on the face of the globe.

In 1894 there was practically no ore shipped out of Trail Creek district. In 1895 the ore taken out of these mines amounted to 21,000 tons. The output for 1896 was 98,000 tons. From January 1st to August 28th, inclusive, the production of ore was 51,891 tons, of which the Le Roi produced 35,742 tons, the War Eagle produced 6,558 tons, Columbia and Kootenay 2,140 tons. The Iron Mask shipped 2,324 tons of rich ore. The O. K.

Thomas H. Fraser of Vancouver, B. C., says: During the last twelve months the country has settled down to legitimate mining, and there is now more real mining going on in British Columbia than at any time in its history. The Rossland district, I am convinced, will in the course of the next twelve months come to the front again, and my reason for thinking so is that better transportation facilities, and smelters built in close proximity to the mines, will enable the owners of low grade properties to go on with development work.

Of course more capital will be required for working the low grade propositions, as they must be worked on a large scale to make them profitable, but as mining proceeds and depth shows increased value of the ore, this capital is bound to come.

The hydraulic mines in the vicinity of Nelson is also a branch of the mining industry of British Columbia that is well worth

the different departments by tramways. The Blue Bell mine is the principal source of supply aside from that of custom ore. This mine is located some eight or nine miles distant, and the ore is transported by barges from the mine to the smelter. Pilot Bay is now of much importance to Kootenay, indeed to British Columbia, as it is the central point to a vast mineral country. Just south of this point is the Hall mines, which produce in the neighborhood of 6,210 tons of ore monthly, yielding something like 522 tons of matte, containing 249 tons of copper, 141,860 ounces of silver and 98 ounces of gold.

The following item, taken from a late issue of the *British Columbia Mining Critic*, will demonstrate the coke supply for British Columbia:

"The coke production of the Dunsmuir collieries at Comox, Vancouver Island, is so steadily enlarging in response to the



VIEWS OF ROSSLAND AND SURROUNDING COUNTRY

shipped 172 tons and milled in camp 2,472 tons of ore from January 14th to June 19th inclusive. The balance of the production is credited to well known mines of the Trail country, such as the Jumbo, Josie, Cliff, Centre Star, Red Mountain, Evening Star, Giant, I. X. L., etc.

The Rossland district, of which so much has been written, is located in West Kootenay, near the boundary line of the United States, bordering on Lower Arrow lake. The rich district in and around Rossland, or Trail creek, is but a fraction, and a small one, too, of the vastness and extent of the mining district included within the Canadian border. This does not detract anything, however, from Trail creek's fame, for there is no mining camp in the West which has so suddenly risen into prominence. At the present time Rossland is shipping a moderate total, aggregating 1,295 tons weekly.

mentioning. The company that has a lease on the hydraulic gold claims on Forty-nine Mile creek, just above the Nelson Hydraulic Company's property, will demonstrate by a ten foot shaft which has been sunk in an effort to reach bedrock, that it is only in its infancy as yet, and from good authority it is ascertained that the gravel is over fifty feet deep. Mr. Bennet, one of the lessees of the company, is of the opinion that bedrock has never been reached of Forty-nine Mile creek, and that the Nelson Hydraulic and other companies have been working rim rock.

The smelting and concentrating plant of the Kootenay Mining and Smelting Company, located at Pilot Bay, on a peninsula nearly in the center of the east shore of Kootenay lake, which is one of the first plants of British Columbia, is also a great feature in the advancement recorded. All ores and material used here are unloaded at the wharf and carried to

"growing demands of the mine country, that Messrs. Dunsmuir are about to build a large ferry steamer to carry this smelter fuel from Comox to Vancouver, whence it is forwarded by the C. P. R. R. to mine country points. The steam ferryboat now under construction will probably also be followed by a second designed also to carry passengers and plying between Nanaimo and Vancouver. Soon, too, the Crow's Nest coal measure will be utilized for coke production, which is certain in the early future to become a very important by industry of the Province."

An awakening to the fact that the mining industry is the chief source of wealth and that in it lies the future of the Province, is now becoming general; well might it be said it is yet difficult to foresee the amount or the end of the era of prosperity and expansion which is fairly under way.



KOOTENAY MINING AND SMELTING COMPANY'S PLANT AT PILOT BAY, B. C.

MEXICO.

President's Message.

The number of mining grants embracing new properties, issued during the period embraced by this report is 719, covering 7,278 claims of one hectare each. The total number of mining grants issued since the coming into force of the law of June 25th, 1892, is 7,519 while the mining property located under such grant amounts to 50,247 claims.

The exportation of ore increased last fiscal year to a value of \$74,000,000 in round numbers.

The exportation of silver in its different forms was practically the same in the two latest fiscal years, while the exportation of gold in the fiscal year 1896-7, was nearly a million dollars more than in the previous year. The exportation of antimony, lead, copper and coal increased and tin ore and zinc also figured among the exports.

Mexico.

The Dona Rosa mill in the district of Temascaltepec has been rented by Mr. Millan, who is running the plant on custom ores and shipping the concentrates. The Rincon company, the Quebradillas Co. and the Protectora are also shipping ores and concentrates.

In the district of Sultepec, the "zona minera de la Barranca" has recently made two successful runs with their smelter. The resulting matte was sold to the local agency of the Lewis Company.

In the district of Zacualtipan, de Alcan mine, as also the mina de la Socavon are both in bonanza. There is more activity in this district than usual.

Sonora.

The Indians who work in a crude way in the gold placers, only operating when in pressing need of money, get large returns for very little labor, and an explorer who has recently been through the remote regions states that Sonora will eventually equal California in its palmy days as a gold producer.

Hidalgo.

It is estimated that last year the output of silver from the Pachuco mines was fully \$8,000,000, of which \$6,000,000 was treated

in the vicinity and the rest in the form of ores was shipped to the United States and Europe.

It is reported that the principal lode of the La Reina mine has been cut with a width of one and a half meters. The ore runs ten to forty *marcos* to the *monton*. The *marca* is \$8 and the *monton* is 2,000 pounds. The shares, hitherto quoted at \$14, are now considered to be worth \$25, and may soon jump up to \$50.

Michoacan.

Messrs. Rothschild have acquired a vast copper deposit situated in this state. Some French engineers are at present studying the best modes of exploiting this section, and are surveying a line of railway to connect it with the Mexican National Railway. Other parties are negotiating the purchase of another copper deposit, owned by parties of the City, of Mexico which is regarded as one of the best in the state.

PERSONAL NEWS ITEMS

B. S. REVETT, who has been in Bennett, Idaho, superintending some placer mining enterprises, has recently returned to Salt Lake, Utah.

G. A. F. MOLENGRAFF, professor of mineralogy of the University of Amsterdam, has been appointed state geologist to the South African Republic.

PROF. JAMES M. CRAFTS has been appointed president of the Massachusetts Institute of Technology, to succeed the late Gen. Francis A. Walker. Professor Crafts holds the chair of organic chemistry, but has been acting president of the Institute since the death of General Walker, says the *Engineering and Mining Journal*. He was born in Boston, Mass., in 1839, and graduated from the Lawrence Scientific School at Harvard in 1859, after which he spent four years in Germany and France, studying chemistry. He received a medal of honor from the French Government for his discoveries in that science. He returned to America in 1865, and after two years' teaching at Cornell University became associated with the Institute Technology.

CHAS. G. YALE who has been in Alaska as a special newspaper representative has just returned to San Francisco, Cal.

T. R. HENACHAN was in Butte, Montana, last week, examining the Newhouse tunnel for the Exploration Company of England.

J. H. SUESSMAN, a noted mining expert, of Boston, Mass., has been examining some East Kootenay, B. C., mines.

HORACE F. BROWN has gone to Mercur, Utah, where he will superintend the erection of his patent furnaces and the Loomis gas producers for the new De La Mar Golden Gate mill. Mr. Brown can be addressed at Mercur, Utah, until January 1st.

HARRY BRATNOBER, the California mining man, has gone to London, to report the Klondyke excitement authentically.

SIR CHARLES ROSS, Rosshire, Scotland, has been visiting some mines, of which he is the owner, in Rossland, B. C.

A. L. PEARSE, a mining engineer of note from London, has made Gold Run, Calif., a visit last week.

JOHN R. TOOLE has recently returned to Montana, from Alaska, where he went in company with John Gillis and Col. A. Lamherth, to examine some copper properties.

LOWTHIAN BELL and WALTER L. JOHNSON, of Middlesborough, England, are making a tour of the iron manufacturing and ore producing regions of this country. Mr. Bell is a son of Sir Lowthian Bell.

A. S. HALLIDIE, inventor of the Hallidie patent wire rope tramway, has been deputed to visit the various technical schools in the East, before selecting the plans for the erection of the Wilmerding School in San Francisco, Cal.

JAS. W. ABBOTT, the former mining engineer and manager of the Ybarra Mining Company, at Calamalli, Lower California, Mexico, is now located at Grant's Pass, Oregon.

J. E. JACKSON, the agent of the Consolidated Kansas City Smelting and Refining Company, at Salt Lake, has been in British Columbia in the interest of his firm.

JOHN W. MACKAY is determined to buy a mine. He is now examining the Allison Ranch mine, at Grass Valley, California.

JOSEPH LADUE is now in San Francisco, making arrangements to ship some mining machinery to Klondyke, for a New York company.

SAMUEL J. HENDY, proprietor and general manager of the Joshua Hendy Machine Works, of San Francisco, has been selected to act as treasurer of the California State Miners' Association for the ensuing year, succeeding W. W. Montague, another manufacturer of mining machinery at San Francisco.

PHILIP MIXSELL, of Idaho Springs, Colo., has recently examined some large properties in Mercur, Utah, for some Chicago capitalists.

L. F. KWIATKOWSKI, the well known mining expert, who has been investing in some mines in Lower California, Mexico, was a caller at the JOURNAL office the other day.

GOVERNOR BUDD appointed and commissioned the following trustees of the State Mining Bureau, to hold office for one year: J. E. Doolittle, Placer county, W. S. Keyes of San Francisco, T. B. Bishop of San Francisco, Alexander F. Morrison of San Francisco and James F. Parks of Amador County. The new members are Parks and Morrison, who succeed W. S. Lyle and J. J. Davis. The others succeed themselves.

JUDGE W. H. DIXON, the Salt Lake mining man, has paid Tuscarora, Nev., a visit. He is largely interested in the Dexter mines at that place.

H. KING, Wells, Fargo's agent at Torres, will be agent at the new office at Minas Prietas, Sonora, Mexico.

F. W. WOOD, the gentleman who has installed a dry concentrator at Johannesburg, Kern county, Calif., has gone to San Francisco to investigate rock crushers to work in connection with his dry concentrator. If he does not succeed in securing one that will meet all the requirements, he will go to Denver for a further search.

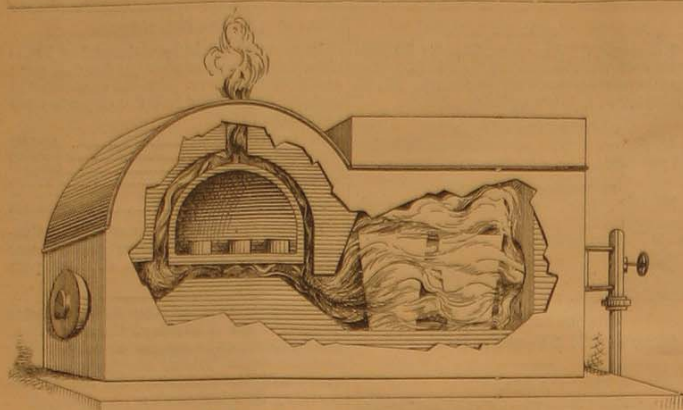
DON JOSE MORAGA, one of the owners of some large and high grade gold veins in the vicinity of Las Floras, in the Peninsula of Lower California, was a caller at the JOURNAL office the other day. Mr. Moraga brought with him on his return a retort of \$600, the result of a test of a few tons of ore, and also a vial of placer gold from the same vicinity.

JAMES BAIN has sold out his interest in mines at Kingman, Mohave county, Arizona, and has left for Ouray, Colorado, where he has some valuable mines.

C. A. LUDDEN, president of the Inyo County Mining and Development Company, is looking for a competent man to take charge of the company's smelter, now in course of erection at Darwin, Inyo county, California. Must have had experience with silver-lead carbonate ores, good references are also required. Address him at Darwin.

CAPT. L. W. MIX has returned to Nogales, Ariz., from Europe, where he went some time ago on business. His trip was a pleasant one, as well as a successful one.

SIR CHARLES TUPPER's party, comprising Mr. C. Ashworth, of London, and others, who have been visiting the Kootenay country, were lately reinforced by Sir William Van Horne, Mr. R. B. Angus, Mr. James Ross, Mr. E. S. Clauston, of Montreal; Mr. B. B. Smalley, of Burlington, Vt.; Mr. W. Whyte, Mr. R. Marpole and Mr. L. A. Hamilton, of Winnipeg, says the *B. C. Mining Record*. Sir William Van Horne's party made an especial visit to the mines at Rossland and at Nelson, and after visiting points in the Slokan division, they then proceeded to Vancouver and other points on the coast.



VIEW SHOWING FURNACE IN OPERATION

New Assay Furnace.

The chief object of the assayer, whether in the capacity of private work for a mining company, or in a custom establishment in a city or town, is speed and dispatch in making his assays. The first necessity, for expeditious work in making the assays is a compact, easily and quickly-heated furnace. The experience and inventive skill of Messrs. Lonergan & Calkins, assayers, 127 W. First st., Los Angeles, have given to this profession such a boon, in their combined melting and muffle furnace, of the gasoline fired type, which, for compactness and heating power, together with the advantage of being a good oxidizing furnace, places it superior to all others in the market. The three illustrations presented herewith show a cross section of the build and ideal view of the operation of the furnace, with the melting and cupelling operations in progress at one time, with the use of only one burner. Another one of the illustrations shows the swivel plate and knock-bottom. The furnace being built to revolve on a central pivot, so that either end can be used. If necessary, the bottom of the furnace can be quickly removed and cleaned through a trap door in the melting part, making it possible to recover bullion spilt, in a very few minutes, without disturbing the brick work of the furnace. The other illustration shows the sheet iron hood and damper, by means of which the oxidizing power of the furnace is under complete control of the operator, as a continuous flow of fresh air, regulated by the damper is passed through the muffle. In the cut, the burner is at the melting end, and also heats the muffle, which is ready for use when the fusion is over, thus saving one-half of the fuel and time. By turning the furnace round on its pivot the muffle alone can be used, or melting also conducted as desired. These furnaces have long ago passed the experimental stage in their construction, as the number in use and the increasing demand are the best guarantee of their appreciation and worth to assayers. The owners have wisely placed the price at the reasonable figure of \$20. For further information, address the inventors, as given in our advertising columns.

Electro-Magnets to Move Heavy Metal Beams.

Electro magnets capable of picking up a load not exceeding five tons are now used by the Illinois Steel Co. in its works at Joliet to transfer iron or steel beams or plates from one part of the shop to another. The amount of electricity necessary to give a magnet enough drawing power to make a five-ton load adhere to it is only four amperes at a pressure of 240

volts, or about one-tenth of that, required to move an ordinary trolley car on the level. The magnets used are in the form of the old-fashioned horse-shoe. The poles of the horse-shoe are $7\frac{1}{2}$ inches apart and are connected at the upper end by a soft steel plate one inch in thickness. The poles themselves are each ten inches long and are elliptical in cross section, being twenty-four inches in depth by three inches in width. The upper $7\frac{1}{2}$ inches of each pole are covered with coils of insulated copper wire, through which the current flows, to a depth of $1\frac{1}{2}$ inches.

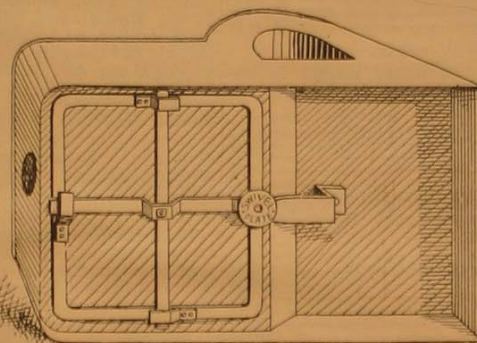
The working of the magnet is simple. When a plate or beam is lying anywhere else

every day with the improvement in electrical apparatus.

To guard against accidents the insulated coils are enclosed in water tight brass casing, and the whole magnet is covered in with half-inch steel. If the five-ton electro-magnets in the Illinois Steel Co.'s works prove a success when tested by long enough time, larger sizes will be employed. When used in connection with electric cranes, which are now becoming common, only two hand switches will be required to move iron or steel loads. Of course, loads of other materials could be picked up equally well by an electro-magnet, with a heavy keeper and a hook attached to it for the ordinary sling.

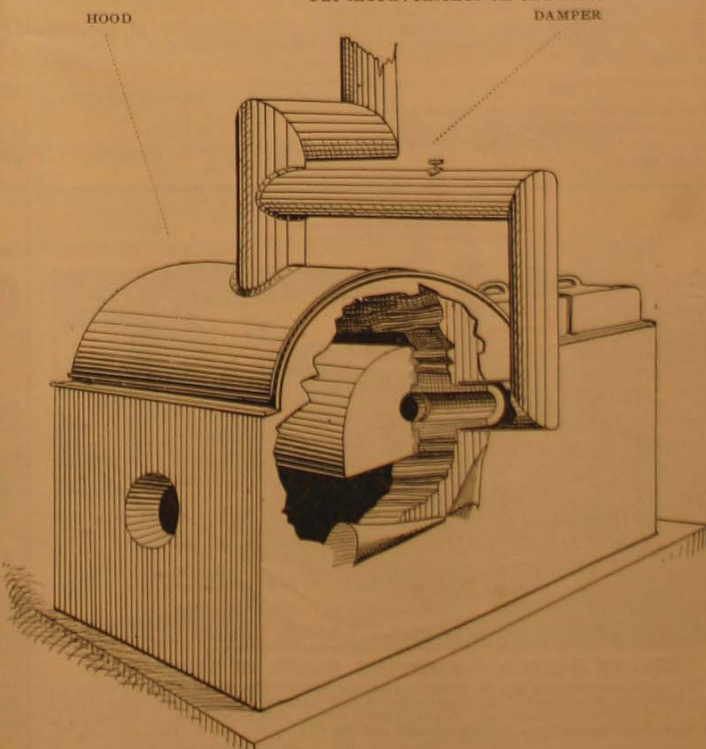
The Colorado Iron Works Company reports the following shipments of Mining Machinery during the last week. One carload mining machinery to Boston Battle Mountain Mining Co. of Victor, Colo. One carload machinery to Metallic Extraction Co. of Cyanide, Colo. One five stamp mill to Westchester Mining Co. of Breckenridge, Colorado.

J. S. MacArthur has taken out United States patent No. 592,153, dated October 19th, 1897, upon an improvement in the precipitation of gold by means of zinc from cyanide solutions containing copper, which is ordinarily precipitated on the zinc, interfering more or less with the precipitation of gold and silver. The zinc is previously coated, according to the new specifications, with metallic lead, the shavings being conveniently prepared by immersing them for about a minute in a solution containing 1 per cent of lead in the form of acetate or some other suitable salt. In the case of solutions containing mercury, metallic lead, preferable in the form of shot, is added, the claim being that the mercury and possibly a little of the silver will be precipitated on the lead, while the precipitation of the gold and the remainder of the silver will proceed without inconvenience on the zinc.



VIEW SHOWING SWIVEL PLATE AND KNOCK-OUT BOTTOM

than where it is wanted the magnet, attached to the crane tackle, in place of the ordinary sling or hook, is lowered, and its poles placed on the load to be moved as near the center as practicable. Then the current is turned on and the underlying plate or beam is held fast by the magnetic attraction. The crane is then put in motion in the usual manner and the beam is transferred to the spot where it is wanted. When it is fairly in its new position, the current switch is turned off and the action of the magnet ceases. The only reason why such magnets have not been long in use is because of the fear that the load would drop if there was any temporary failure of the current. This is always possible, though it is becoming less so



VIEW SHOWING HOOD AND DAMPER

The coinage executed at the Mints of the United States during September and the nine months of 1897 is reported by the Treasury Department as follows:

SEPTEMBER.		
Denominations	Pieces	Value
Gold	619,241	\$3,762,375.00
Silver	4,145,200	1,050,092.50
Minor	8,437,400	231,982.00

Totals.....13,204,841 \$10,044,449.50

NINE MONTHS		
Denominations	Pieces	Value
Gold	4,618,209	\$5,018,342.50
Silver	23,318,698	12,105,533.80
Minor	43,992,374	981,718.98

Totals.....71,029,281 \$78,100,095.28

The coinage in September was heavier than in August by \$448,753.50.

MINING STOCK MARKETS.

LOS ANGELES, Oct. 30, 1897.

Market on the Exchange is firm, active and looks well. Brokers are kept busy guessing the probabilities of Wedge stock and the possibilities of the new management. During the past week N. F. Wilshire has been elected president and Mr. Fleishman, cashier of the Farmers' and Merchants' Bank, secretary and treasurer of this company, and since the election the stock has stiffened quite a little, going up about a cent and a half. Many believe, now that the stock has been placed in such strong hands, that the ultimate outcome of the property is better than it ever has been. Physically, this mine is looking splendidly. Mr. McMahon, the superintendent, is down from Randsburg and reports everything in good shape and plenty of ore in sight.

This change in the affairs of the Wedge Company, if practically handled, will be a great factor during the coming winter in the speculation on the Exchange board.

Magganetta is strong at $3\frac{3}{4}$ —4, with a few thousand changing hands every day.

East Amargosa has surprised all holders by moving up to the eight-dollar mark, with no stock offered less than ten dollars per thousand shares.

The monthly reports from the different companies listed on the Exchange, are nearly all in and can be seen by members of the Exchange at any time. Copies of these reports will be furnished to outsiders over the secretary's signature, by addressing a letter to him. All the companies show money in the treasury and considerable stock on hand for the further development.

The party of inspection which left for Randsburg early in the week, reports through one of their members that they found all the properties listed from the Randsburg District in good condition; some, of course, being more promising than others, but all show well for the amount of work done.

A nice little flurry was created in Mohawk Acton on Monday's market by the short selling of 25,000 shares by one of the brokers, who was laboring under the impression that it was some other stock. He was able, however, to settle by paying the successful buyer a good round commission and taking considerable cash stock off the market.

SAN FRANCISCO, Cal., Oct. 26, 1897.

The market this week was entirely featureless. There was no sale in Alpha. The shares of Chollar are showing very good results. The Potosi began to show more activity and made quite an advance.

Hale & Norcross was much better, selling at \$1.45. On the Layton Tunnel in the Sierra Nevada they are taking out some ore, also on the 900-foot level. There is no change in Utah.

In the Consolidated Virginia, they are doing excellent work on the 1550 foot, 1650 foot and 1750 foot levels, which shows they are pushing work. The Best & Belcher and Gould & Curry show no change. In Yellow Jacket some good ore is said to be found recently in the 1000 foot level. They are now opening a 600 foot level in the Savage. On the old Central tunnel they are drifting south.

Between the 850 foot level of Belcher and the 750 foot level of Crown Point they have made air connection. Slight advance is being made in the Gold Hill shares and more trading done. There was an assessment levied by the Kentucky this week. This shows that they intend to prospect their ground and not wait for development work of Yellow Jacket and Crown Point.

They are still drifting east in their 1000 foot level in Mexican. Cross drifting to the west in their 1000 foot level in Ophir still continues.

SALT LAKE CITY, Utah, Oct. 29, 1897.

During the call of the mining exchange last week the tone of the market was decidedly firmer and stronger and several securities established quotations a notch or two higher than usual. Bullion-Beck traveled in this class, and at the

close was wanted at \$3.85 with offerings at \$4.25. Geyser-Marion exhibited more strength in the holdings, but was weak in the bidding while Mammoth advanced to \$1.40 in the bidding. Galena was in demand, but fluctuations were noticeable in this security, and the stock was decidedly coquettish. Northern Light was firmer with a decided upward tendency noticeable. Four Aces scored a sale, but more time was spent in effecting it than the commissions were worth.

In the unlisted stocks Chloride Point took the lead as a favorite, and although starting out with a bid of 35 cents, it was not long before this was raised to 39, at which figure a block of the stock made transfers, and this was the ruling bid at the close, with offerings at 41. Dexter developed considerable strength during the call, and advanced in the bidding as well as in the offerings. South Swansea was also a shining mark for the bulls and in the offerings were much higher than during the previous call. Swansea advanced in the bids and also in the offerings.

ROSELAND, B. C., Oct. 23, 1897.

Sir Charles Tupper and his party have been having a long stay in this part of the Kootenay country. He has been to Nelson and other important divisions and has been making some careful investigations. His visit here at this time of the year is regarded as being of more than ordinary importance. Besides, he has made some investments and contemplates on several more.

It is stated that the well known Reconite at Sloca shipped three carloads of ore in the early part of September that show a net return of \$13,267.50, checks for which sum have just been received.

It is reported that before the winter sets in a number of well known properties will have commenced work, particularly the White Bear, Homestake and O. K.

Dr. Carroll has, as trustee of a block of unissued treasury stock of the Golden Cache Company, refused to sign a certificate for the sale thereof, unless authorized by the High Court.

The directors of the Whitewater mine in the Kaslo district have declared a dividend of \$24,000, making \$64,000 in all dividends to date. It is stated that the returns from 42 cars of ore shipments, which should yield \$1000 each, remain to be collected, when another substantial dividend should be declared.

NEW YORK, Oct. 8th, 1897.

Though the public demand for mining stock is still small, prices in many instances are higher than last week, especially for the dividend paying stocks. The Comstocks, notably those whose properties are on Gold Hill, have moved upward in price owing to favorable reports. The Colorado stocks are steady. The California group is very quiet. Standard Consolidated sold at \$1.80, and is the first 100 share lot that has been sold for a long time. There were several sales of the South Dakota stock, Homestake at \$37.25@39; the latter price is 50c higher than last week. Horn Silver of Utah sold down to \$1.00 this week. There continues to be a fair demand for Fortuna, on the Consolidated Stock and Petroleum Exchange. It has declared another dividend of \$10,000 on its stock, which makes \$90,000 this year and \$130,000 since September, 1896.

A new company has called on the Mining Exchange this week—the Yukon Mining Company. This is an auxiliary to the Rosland Gold Mining Development and Investment Company, Limited, and is under the same management. The company is represented in New York by members of the Exploration Syndicate, of which Thos. J. Hurley is secretary and treasurer and F. G. Corning is manager. The company was formed to operate in the Klondike region. The stock has been selling at 18@22½c. on the Mining Exchange.

REPRESENT LEADING PROPERTIES

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

CORRESPONDENCE SOLICITED

Information promptly furnished. Address

J. C. O'Bannon,

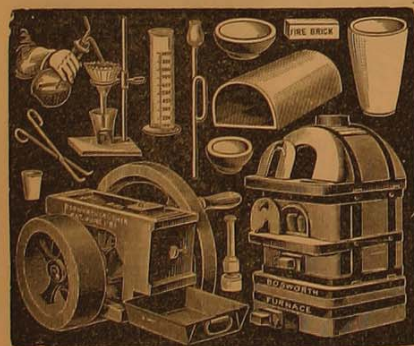
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Consign Shipments to Vallejo Junction, Cal.

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And all other kinds of

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Test Lead, Bone Ash, Cyanide
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Iron Sulphides, Litharge, Soda
Mining Fluxes, etc.

Sole Agents for the
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Stocks and Bonds

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Will show what is in your ORE.....

A Mill Test

Will show what you can get out of it

We Do Both

Practical working tests made of ALL CLASSES OF ORES and advice given as to best methods of extracting values. Mines examined and reported on. Twenty years experience with Pacific Coast ores.

F. M. Johnson & Co.

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Sulphuric Acid

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

MINING STOCK QUOTATIONS

BOSTON	
Aetna Con	4 25
Allouez	1 00
Anacoda	—
Arnold	4 00
Atlantic	21 00
Bonanza	—
Boston and C.C.	—
Boston & Mont'a	145 00
Butte & Boston	25 25
Calumet & Hecla	450 00
Catalpa	—
Central	18 00
Dominion Coal	23 50
Dominion Pref.	107 00
Franklin	21 03
Gold Coin	2 00

NEW YORK	
Alamo	03 1/2
Alice	40
Annetta	45
Best & Belcher	80
Brunswick	05
Bulwer	—
Crown Point	65
Con. Cal. & Va.	—
Cripple Creek Con	08 1/2
Deadwood	—
Favorite	11 25
Fortuna	—
Golden Fleece	04
Gould & Curry	45
Hale & Norcross	—

COLORADO SPRINGS STOCKS	
Alamo	03 1/2
Anacoda	43
Argonaut Juanita	20
Bakers	04 1/2
Ben Hur	02 1/2
C & N	00 1/2
C & C	02
Creede & C.C.	09
C.C. Consolidated	09
Garfield Grouse	04
Golden Fleece	30
Gold & Globe	—
Gold Standard	03 1/2
Insley	300
Iroclad	01 1/2

LOS ANGELES, CAL.

Armstrong	21
Brown Dake	—
Cavil	002
East Armagona	009
Gold Bug	—
Little Butte	—
Lucky Star	7 50
Magnetite	03 1/2
Mazourka	07 1/2

SAN FRANCISCO.

Alpha	—
Andes	10
Belcher	40
Best & Belcher	48
Bodie	—
Challenge	37
Chollar	85
Confidence	—
Con. Cal. & Va.	1 25
Con New York	—
Crown Point	36

SALT LAKE CITY

Ajax	25
Alliance	55
Bogan	—
Buckeye	02
Bull, Beck	2 50
Cent. Eureka	22 50
Chloride Point	35
Dalton	01
Daly	1 00
Daly West	2 50
Dalton & Lark	07
Exter	1 55
Eagle	02 1/2
East Golden Gate	—
Eureka Hill	—
Four Aces	02 1/2
Galena	50
Gemini	—
Geyser-Marion	1 10
Grand Central	75
Horn Silver	1 00
Little Pittsburg	02 1/2

ROSSLAND, BRITISH COLUMBIA.

Alberta	05
B. C. Gold King	07
Beaver	10
Big Three	10
Bluebird	07
Bruce	10
Butte	03
California Con	05
Colonia	15
Camp Bird	05
Celtic Queen	05
Centre Star	20
Commander	12
Deer Park	12
Della Colla	12
Delaware	12
Eastern Star	20
Enterprise	20
Eric	03 1/2
Evening Star	09
Georgia	15
Gertrude	10
Golden Drip	15
Great Western	12
Hattie Brown	10
Helena	04
High Ore	05
Imperial	10
Iron Horse	20
Iron Mask	45

DENVER STOCK REPORT.

Aetna	003 1/2
Alamo	02 1/2
Anacoda	42
Arcadia	004
Consolidated	01 1/2
Argonaut Junl	—
Bangkok-C-Bell	27
Bankers	04
Ben Hur	02 1/2
Bob Lee	04 1/2
Boston & C.C.	01 1/2
Chimbarazo	002
Colo. C. & M.	006
C. C. Con	08 1/2

HELENA, MONTANA

Am Den & M Co.	1 10
Bald Butte	2 50
Helena & Frisco	7 50
Iron Mountain	25

Bi-Metallic	—
Combination	—
Con T & P'n'n	25
Diamond Hill	8 50

MEXICO

Name of Company	State	Price
Alamosa	Hidalgo	\$ 5
Amistad y Concordia	"	26
Angustias	Guanajuato	800
Arevalo y Anexas	Hidalgo	200
Asturiana y Anexas	Zacatecas	300
Barradon y Cabras	Durango	300
Bartolome de Medina	Hidalgo	100
Cabezon y An	Zacatecas	30
Candelaria de Pinos	"	180
Candelaria de Panuco	"	20
Candelaria de Chalch	"	80
Capuzaya	Durango	120
Carmen	Hidalgo	350
Castellana y San Ram	Tepec	80
Cerro Colorado	Chihuahua	10
Cinco Senores y An	Guanajuato	985
Concepcion y Anexas	S. Luis Potosi	280
El Oro	Guanajuato	40
Esparanza y An	Mexico	1,300
Guadalupe	Guanajuato	180
Huasteca	Santa Ana	100
Luz de Borda	Michoacan	40
Luz de Maravillas	Hidalgo	200
Pabellon	"	150
Palma	Zacatecas	180
Purissima de los Com	"	5
Real del Monte	"	900
Refugio y Va	"	6
Restauradora	Durango	80
Rosario y Anexas	"	50
San Francisco	Hidalgo	280
S. Fed. Chalchihuites	"	100
San Rafael y Anexas	"	900
do, Free Stock	"	400
San Rafael del Oro	Hidalgo	70
Ste. Maria de la Paz	S. Luis Potosi	230
Sirena	Durango	80
Sorpesa	Hidalgo	400
Trinidad	Guanajuato	40
Tlanzingo	Puebla	27
Union	Hidalgo	50
Zaragoza	"	100
Zomelacan (gold)	Vera Cruz	50
Zona Min. de Pozos	Guanajuato	15

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

Lacy Manufacturing Co.

Manufacturers of

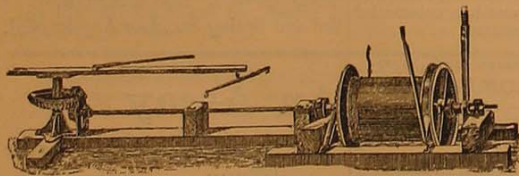
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Horse Powers!

Triple-Acting Pumps, Deep Well Pumps, Cornish and Jack Head Pumps for Deep Mining, Horse Power Mining Hoists, Stamp Mills, Ore Crushers, Ore Feeders, Ore Buckets, Ore Cars, Water Gate Valves up to 40 inches diameter, and Link Chain Elevators, Pipe and Pipe Fittings at lowest prices. Hydraulic Presses. We

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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
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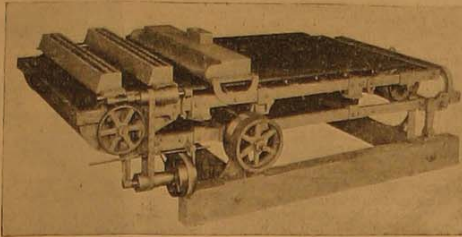
San Francisco, Cal.

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IN USE IN

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Patented
Sept.
1893

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.

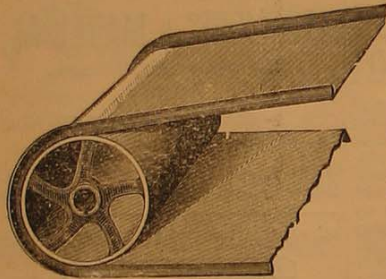
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Patented



This illustration shows the edge flanging outwardly as it passes over the pulley. This relieves the strain from the top and bottom of the edge by directing the strain automatically to the inside face surface of the edges. Heretofore all belts have been so constructed that when they pass over the pulleys or rolls, a direct strain comes upon the top or at the base of the edges, causing the edges to break away from the body of the belts in a very short time. *We avoid this Mechanical Defect by our Spadone Curved Edge.* Belts made to fit any machine—4, 5 and 6 feet wide. Prices and samples on application.

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30 and 32 PINE STREET,

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WASHBURN & MOEN MFG. CO.



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For all Processes



COMPLETE PLANTS DESIGNED and ERECTED



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

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Manufacturing Co.**

Stockton, California

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Iron and Steel. Miners, Blacksmiths, Machinists Supplies

Agents for Arizona and New Mexico for Marsh Steam Pump, Agents Hercules High Explosives, Miner's Supplies by car load, Fairbanks-Morse Hoisting Machinery and Engines. Full line of Steam Fittings and ENGINEERS Supplies. A specialty made of Supplying the Mining Trade of the SOUTH-WEST

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Nevada Metallurgical Works,

Established 1869

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Assaying, Analyses, Sampling.

Practical Working Tests of Ore by all Processes

**STAMP MILL AND CONCENTRATOR IN
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LUBRICATING OILS AND COMPOUNDS

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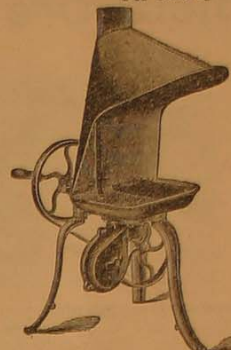
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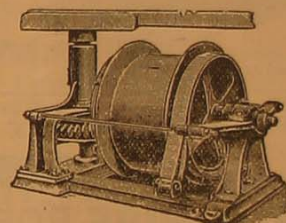
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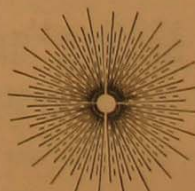
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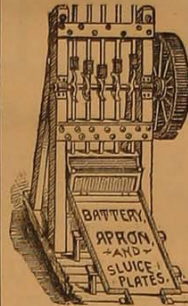
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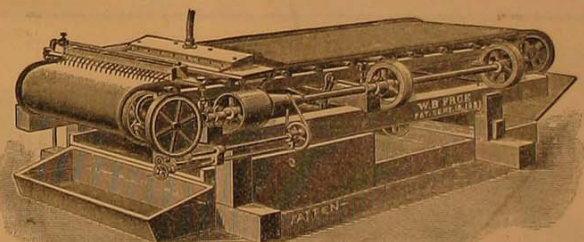
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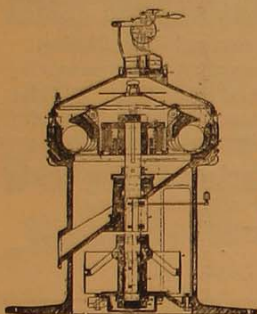
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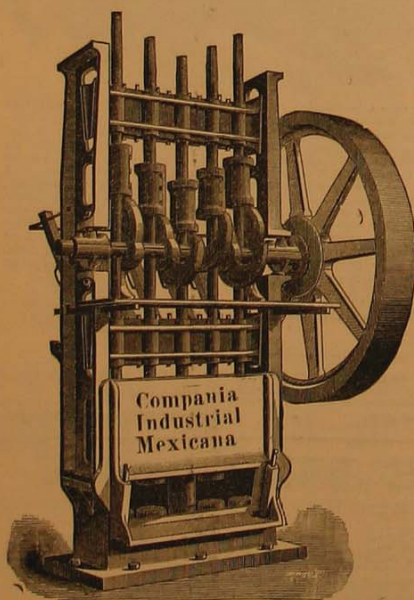
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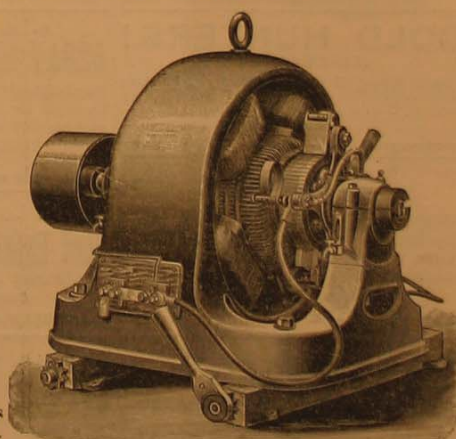
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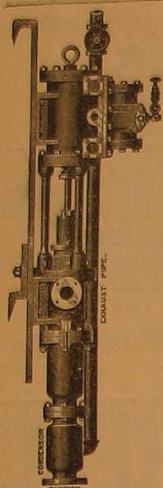
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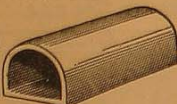
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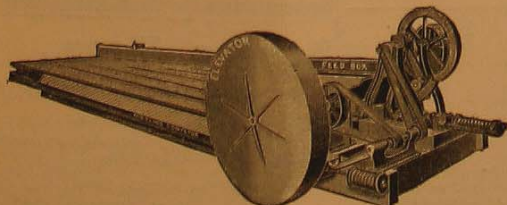
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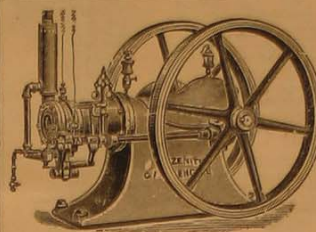
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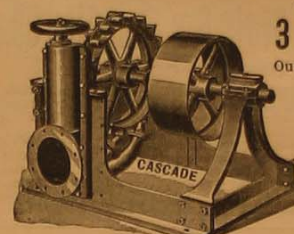
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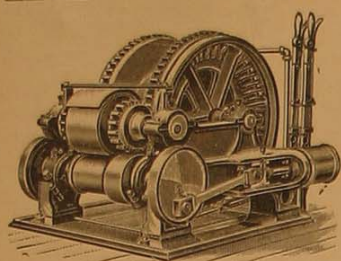
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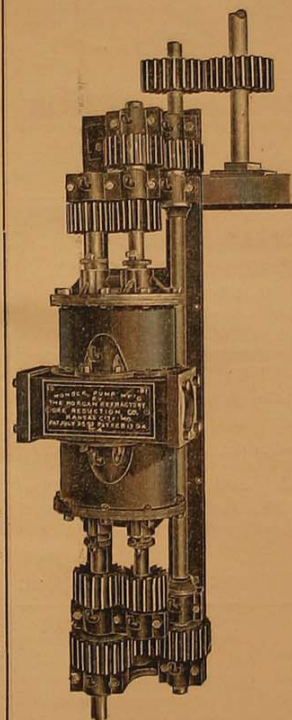
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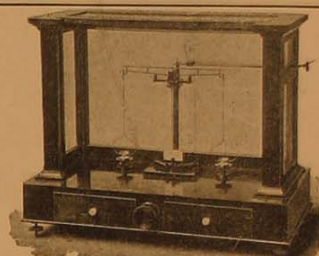


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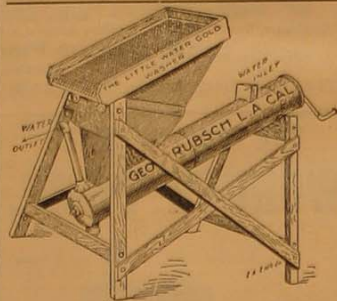
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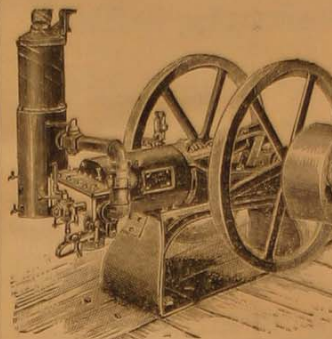
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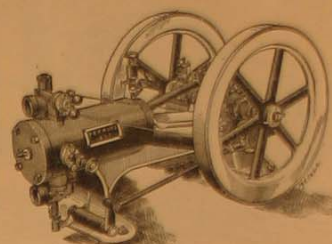
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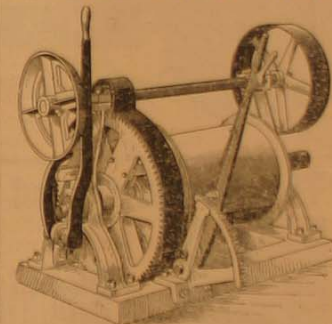
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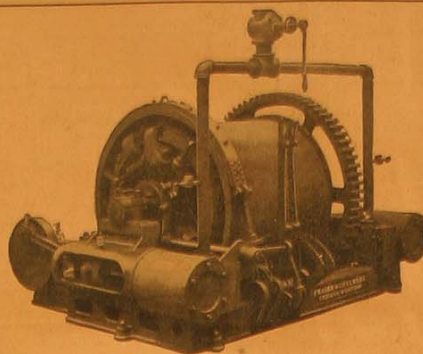
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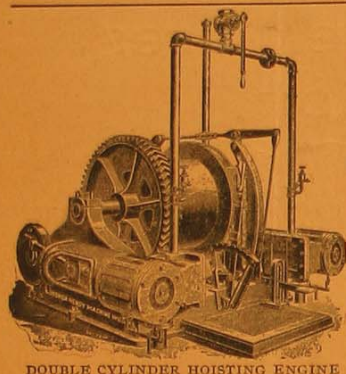
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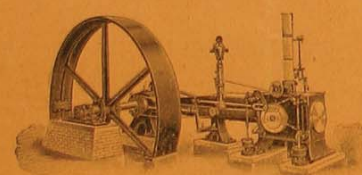
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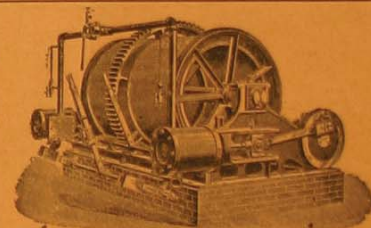
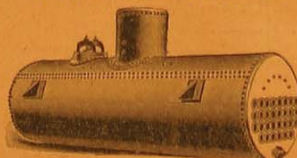
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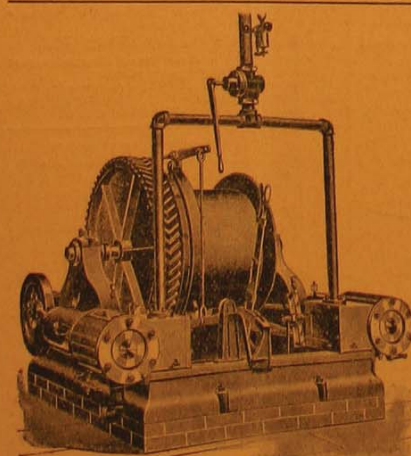
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