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CONTENTS.

PAGE.	PAGE.
EDITORIALS..... 37	Disappearance of Diamond Reef..... 41
Utah and Idaho Mining Notes..... 37	Fire at a Colliery..... 41
Summit Mining District, Colorado..... 38	Striking against a Reduction of Pay.. 41
San Juan Silver Mines—The Mines of Imogene Basin, near Ouray, Colo..... 38	Leadville Railroad Facilities..... 41
Ore-Deposits..... 39	Important Coal Miners' Movement in Ohio..... 41
Maine Mining News..... 40	Frightful Colliery Explosion..... 41
Roberts Dry Placer and Ore-Concentrating Co..... 40	GENERAL MINING NEWS:
Machine for Washing and Sorting Coal..... 41	Arizona..... 42
PROGRESS IN SCIENCE AND THE ARTS:	California..... 42
Physical Notes..... 40	Colorado..... 42
Technical Brevities..... 40	Idaho..... 44
The Steel Industry of the World... 41	Montana..... 44
For Separating Brass and Copper Turnings..... 41	Nevada..... 44
Interesting Facts Respecting the Last Great Tunnel..... 41	PROPOSALS..... 44
Condition of the Iron Furnaces of the United States..... 41	FINANCIAL:
NOTES:	Gold and Silver Stocks..... 45
Demand for Labor in the West..... 39	Copper Stocks..... 48
A Tunnel under the St. Lawrence..... 40	Coal Stocks..... 48
Damaging Flood in Colorado..... 40	Gas Stocks..... 48
Alleged Gold Discovery in New York. 41	Miscellaneous Stocks and Quotations... 49
	BULLION MARKET..... 49
	METALS..... 50
	IRON MARKET REVIEW..... 50
	THE COAL TRADE REVIEW..... 51
	STATISTICS OF COAL PRODUCTION..... 52

THE nineteenth Exhibition of the American Institute will open on the 15th of September next. Heavy machinery will be received August 23d; other goods, September 6th. For blanks and information, address the General Superintendent, New York City.

A COMPETENT underground foreman is wanted to work bituminous coal mines in a foreign country. A liberal salary will be paid to a thoroughly qualified man. Application should be made to the Editor of the ENGINEERING AND MINING JOURNAL, P.O. Box 4404, New York City.

CALIFORNIA management is earning the same reputation here in the East that it made for itself long ago in San Francisco. Our advice has always been, that it makes little difference whether a mine is good or bad, if the management is not trustworthy—above suspicion, honest men had better leave it alone.

CHRYSOLITE goes down and down and down, and the officers are nearly all out of the way spending their vacations. The public suspects unfair treatment; but since the mines are said to be in fine condition, there will probably be a boom early in the autumn, and those who hold on now may then be happy.

MR. ELLSWORTH DAGGETT, Mining Engineer, of Salt Lake City, expects to arrive in New York on a brief visit, in a few days. Those wishing to avail themselves of his professional services or who desire special information about Utah, Idaho, and Montana mines, can address him at the office of the ENGINEERING AND MINING JOURNAL.

CAPTAIN THOMAS COUCH has been put in charge of the underground operations of the Horn-Silver mine in Utah. The appointment is an excellent one; for Mr. Couch is experienced and skillful in his profession, and has a well-earned reputation for honest and straightforward dealing which will make his appointment satisfactory to stockholders, and which is in keeping with the honorable management this great mine has always possessed.

MR. FRED. M. AMELUNG, Mining Engineer, who has for some time past been a regular correspondent of the ENGINEERING AND MINING JOURNAL, is now making a tour of inspection of the San Juan, Colo., mining region. Mount Sneffels, Imogene and Poughkeepsie Districts, San Miguel, Southern San Juan, are to be visited, and the new camp of Rico will be ex-

amined. Parties desiring reliable expert examination of properties in any part of the central and south-western Colorado mining districts can avail themselves of Mr. AMELUNG's services, by addressing him at Ouray, Colo.

In the Silver Reef *Miner* of July 3d, the ENGINEERING AND MINING JOURNAL is dealt with most liberally. It is credited with an article of a column and a half, entitled, "The Christy Mill and Mining Company—an Interesting Exhibit." Our esteemed contemporary is too generous by half. The first two paragraphs of the article are republished from the ENGINEERING AND MINING JOURNAL; but the comments thereon and the opinions expressed are not ours, and we have no desire to take that which doth not belong to us. What is the *Miner* puffing the Christy Company for, when, a few months ago, it could not be too severe on it? Has our esteemed contemporary experienced a change of heart, or has it struck a bonanza?

In an editorial note in our last issue, it was stated that the June output for the Stormont mine was \$67,000: the figures should read \$83,000, assay value. The July output, it is rumored, will amount to nearly \$70,000. The mines are said to be looking very well, and there is a prospect, in the near future, of dividends for the stockholders. At the same time, we have received several severe criticisms upon the management of the company, for neglecting to make the statement of its financial condition which was promised many months ago. One of the inconveniences of a good name is, that men expect more from one bearing it than they do from others; and we believe that the stockholders were justified in expecting from the honorable gentlemen who managed the Stormont Company such an open and straightforward course as could be held out for an example to other companies. We shall be pleased to afford the management an opportunity, through our columns, to justify the favorable opinion we have expressed.

UTAH AND IDAHO MINING NOTES.

Special Correspondence of the Engineering and Mining Journal.

ANTIMONY DEPOSITS.

On Coyote Creek, Iron County, Utah, last winter, some quite extensive deposits of antimony were discovered and located by Messrs. Day and Loomis. The veins lie between conglomerate and sandstone walls, and are from two to ten feet thick—solid ore, the lowest assay of which goes thirty-three per cent antimony, and the highest, seventy per cent. It is in the oxide form, and can be reduced at little cost. At present, the deposits are so large and easy of access that one man can break it down as fast as it can be loaded on to the wagon. The company owning the property holds ten of these antimony claims, and it claims to have enough ore in sight now to supply the world's demand. Several car-loads of this ore have been shipped to London, England, and to San Francisco, at which last-named place it is marketed at \$85 per ton.

BINGHAM.

The Bingham mines are all looking first-rate. Mr. May's Telegraph mine is shipping considerable ore constantly. This property is opening out well. Work on the Tiewaukee is pushing. The lower workings of the mine show a strong vein of high-grade ore at every point, and exhibit unmistakable evidence of being a true fissure. The Northern Chief claims are all looking well. Work on them is carried along. The Live Pine has been put into very good shape for vigorous operations, and it is showing considerable high-grade ore. The new shaft in the Lead mine is down to the ore-body. The water which flooded the mine did extensive damage to the workings, which, however, are being retimbered and straightened up.

TINTIC

remains quiet. Some developing is in progress in the Eureka, which continues to improve.

FRISCO.

Large shipments of bullion from the Horn-Silver have been resumed, and Wells, Fargo & Co.'s agent here, through whom the shipments are made, informs your correspondent that for some time to come this mining company will send out about ten car-loads of bullion daily. The new steam hoisting-works are completed. The Frisco Company's mines continue to improve. The Carrie Lucielle has commenced shipping to this market high-grade ore, which will sample nearly 200 ounces of silver per ton. The superintendent, writing to one of the owners in this city, says, "The ore-seam holds its strength four and a half feet."

SILVER REEF.

The Christy Company has increased the pan and settling capacity of its mill, and thereby its bullion shipments. This company's mines are all looking very well, having ore enough in sight to keep the mill running for at least one year. Developments in the Barbee & Walker continue to reveal ore. The Stormont Company's mines are yielding an abundance of good ore.

PARLEY'S PARK.

Developments in the Ontario are driving ahead, and the ore now being hoisted comes exclusively from dead-work. The ore-reserves are therefore increasing. The station at the 700 is completed, and the main shaft commenced for the 800 level. The Empire Company's new ore-house, of a capacity of 5000 tons, is approaching completion. The machinery for the mill is arriving, and the grading of the mill-site is nearly finished. An additional pump is to be put in at the 400 and another at the 300 station, as a precaution against flooding the mine, which was feared would be the case on cutting the vein at the 400 level. The mine looks well in

the 300. A very flattering strike is reported in the Wahsatch. It is claimed that the eastern extension of the Ontario vein has been cut in the Parley's Park mine at the 300 level. The Utah and the White Pine are shipping ore to the Park City smelter. The new hoisting-engines and boilers for the Jones Bonanza are expected every day. The Park is experiencing quite a boom.

WOOD RIVER,

Idaho, is attracting much attention. Parties from that country bring with them exceedingly rich specimens of silver and gold ores. The mines were discovered there last fall, and since the first of June prospecting has resulted in the opening up of a number of very rich leads, the extent of which, however, is unknown. W. S. McCormick, the banker; R. C. Chambers, of the Ontario, and Dick McIntosh, mining man, leave here this P.M., to visit the new bonanzas of Wood River. YOSEMITE.

SALT LAKE CITY, UTAH, July 9.

SUMMIT MINING DISTRICT, COLORADO.

Special Correspondence of the Engineering and Mining Journal.

All those who are familiar with the life of mining camps know that there is no class of men more patriotic than miners, and that no day is held by them in more cordial respect than the Fourth of July.

It was therefore essential that the inhabitants of this, the highest gold-mining camp in the world, should commemorate in some suitable manner the approval by our great-grandfathers of Mr. Jefferson's essay.

At the suggestion of a young lady recently arrived from Ohio (nothing can be done without Ohio), the ceremonies of the day were begun at a quarter-past three o'clock A.M.; and in this wise: A select party, headed by the young lady, at that hour commenced the ascent to the summit of South Mountain. The prophetic flush of amber light in the east was sufficient, as we passed the thermometer at the Signal Service station, to advise us that the mercury stood 1° above freezing-point. We commenced our climb, and passed up, mostly in silence (for two and a quarter miles above sea-level is not propitious to peripatetic conversation), until we reached timber-line, where we made a short halt and took in a relay of oxygen. Twenty minutes more brought us to the Locating Monument on the apex of South Mountain, where we sat down at 12,500 feet over tide.

To the west lay a boundless sea of dark blue mountains, bearing on their summits and flanks thousands of snow-fields; among them, to the north, the butting mass of Uncompahgre,* sixty-five miles away, in an air-line, as clearly cut on the horizon as if but ten miles off. To the east was spread out a hundred and twenty miles of the Sangre de Cristo range, its serrated summits standing in sharpest silhouette before the impending sunburst which aureoled them with a light like that of the corona in a solar eclipse. Above the rest, towered the twin pyramids of the Spanish Peaks, and above all, sixty-three miles distant, Sierra Blanca,† whose altitude was the surprise of those who less than four years ago included it in the primary triangulation of Colorado.

Fifteen minutes after our party reached the Locating Monument, the sun rose above the upper edge of the Sangre de Cristo, and bathed all the vast ranges beneath our gaze in a glory of purple light—a "rose of dawn" such as but a few favored eyes have seen. When, years ago, I used to read in Ruskin about purple mountains, I thought it a poetic license, and, as misstating a physical appearance, an unwarrantable one. But after the prosiest person has lived five years at the summit of our continental divide, he will understand about purple mountains. The description is truest in winter, when, clad in white robes from peak to foot, they gather and throw back the rays of the just emerging or just departing sun.

As the "overflowings of the day-spring" shot toward us from the ragged summits of the Sangre de Cristo, we welcomed them in the patriotic American way by a salvo of revolver-shots. How could any body certify his approval of the "Declaration" without burning powder and making a noise?

After the sun was safely up and duly welcomed, and our shadows, at first a thousand yards long, had dwindled to somewhat reasonable dimensions, we took up our walk westerly, keeping near the crest of South Mountain. Our way lay over vast snow-fields, hardened now into a glacier-like solidity—one of them, in fact, over seventy feet deep. Resting on the western summit, we looked down upon the little rill beneath our feet, which is the visible beginning of the south fork of the Rio Grande del Norte. A mile south of it are the head-waters of the Rio Alamosa, like it on the way to the Mexican Gulf. A mile west heads the rivulet, which, when a little older, is christened the Rio San Juan—on its journey to the Gulf of California. Here, at "the dividing of ways," on the roof-tree of the western world, we broke upon the majestic stillness of the mountains with the "Star-Spangled Banner," and "My Country, 'tis of thee."

Satisfying ourselves that the day had at least been begun in a proper spirit, we commenced our descent. On the way down, just at timber-line, we stopped at the Empire mine (*vide London Mining Journal*, March 20th, ult.), where the writer interpolated a minor performance not set down in the programme. Moved and instigated by the Adversary, it occurred to him to descend the shaft. As he had on the previous afternoon spent some time at the windlass, and seen a number of bucket-fuls of rock drawn up, there seemed no peril in going down "hand over hand" on the rope. There was a ladder-way, but the rope was preferred, and, throwing his weight on it, he commenced to go down—and proceeded to go down much more rapidly than intended. After a few turns of the windlass, for some unexplained reason, the rope began to slip from the roller, soon sliding entirely off, and the remainder of the descent was accomplished on the automatic-gravity plan. There was nothing to do but to hold on to the rope, and throw tension into the muscles. The clear fall was not over fourteen feet, but the bottom of the shaft was uneven, and one leg suffered from striking between the bucket and a projecting rock. A preliminary repair of damages was soon effected—but you came near missing this letter!

Arriving at the Little Annie camp at eight o'clock, we discussed a patriotic

* Altitude, 14,235 feet.

† 14,464 feet—the highest point of land in the United States.

breakfast; and at nine o'clock the lady from Ohio read, by request, to the miners assembled, the immortal indictment and compact which stirred the souls and nerved the arms of our fathers to claim and to win for us our inheritance in this great land.

Newspaper rumors reach us to the effect that there has recently been some warm weather in New York. It is difficult to understand it, writing by a hot fire; but it may be so, and if so, this letter may be serviceable as a "cooler" to your readers. After dinner to-day, I put my daughter Bessie on snow-shoes, and she disported thereon for a while upon a snow-field joining this cabin (office of Little Annie Gold Mining Company) on the west. Afterward we had a game of snow-ball. The ground, where bare of snow, is carpeted with flowers.

As elsewhere throughout the Rocky Mountains, last winter's snow-fall was exceptionally heavy, and the commencement of active operations in this mining district has been proportionately delayed. In March last, Judge Bowen made a strike of very rich rock in his Little Ida 200-foot tunnel. So far as can be ascertained from a tunnel section, it is a ledge some twenty feet in width, with a pay-streak 3 to 5 feet broad, and a course approximating north-east and south-west, showing free gold abundantly. Three days ago, it was discovered that fifty feet nearer the tunnel mouth another deposit of quartz was as rich as the one first named, if not richer. No fire-tests have as yet been made, but results yielded in the prospect-pan are sufficiently encouraging, not to say stimulating, to justify the energy with which Judge Bowen is prosecuting development.

The Empire mine (Empire Gold Mining Company of London, Limited) is reported to be looking better than heretofore. It is on an apparently large deposit of quartz, some of which, I am told, shows free gold. The developments are not yet sufficiently extensive to warrant definite judgment. They are actively pushed, though the force employed is small.

One mill-run has been made this summer on Missionary ore; product, \$36 per ton.

The majority ownership in the Little Annie property changed hands last winter, passing from the original discoverers to wealthy parties in New York and Boston. Hereafter it will no doubt be worked on a scale somewhat commensurate with the indications furnished by its past record, and by the physical facts in sight on its patented territory. The "true inwardness" of mountains is a mystery to all but experts; but if the \$183,000 Au hitherto sent to the mints, with most inadequate means of reduction, from this property—\$33.73 for each ton of ore so far crushed in the Little Annie ten-stamp mill—be not a delusion and a snare, a false directrix, a beacon which "leads to bewilder, and dazzles to blind," the new Little Annie Gold Mining Company, with a methodical exploitation of its property and ample facilities for ore-treatment, should take a prominent place among the gold producers of the country. Experts and engineers are expected, within a few days, to make a full examination of the ground, and to lay out a definite plan for future work.

For a week past, there has been in progress a considerable forest fire on the main Alamosa River, some four miles to the south of us. The destruction of timber in this manner is a very serious evil in Colorado. Whether the present fire resulted from carelessness on the part of prospectors, or was started by a party of Utes now in this vicinity, has not been ascertained.

The San Juan mill, thirty stamps, will start up in a few days; the Little Annie mill, after the placing in position of new pan-machinery, the arrival of which is expected during the present week.

SUMMIT, COLO., July 4.

C. E. ROBINS.

SAN JUAN SILVER MINES—THE MINES OF IMOGENE BASIN, NEAR OURAY, COLO.

Special Correspondence of the Engineering and Mining Journal.

Approaching Ouray by the well-traveled toll-road from the outer world, you pass through a level park traversed by the Uncompahgre River. It is about eight miles in length and from a mile to a mile and a half in width. At the lower end are some very large hot springs, the temperature of whose waters nearly reaches boiling-point, and are impregnated with iron, salts of lime, and the alkalies. This park is bordered on the west side by a straight line of cliffs of sandstone, capped with volcanic rock, gradually decreasing in height toward the north; and on the east by slopes, more or less steep, from the Uncompahgre peak group and its spurs. On either side of the road are flourishing ranches, and the stream toward Ouray is well wooded with cotton-wood, scrub-oak, and pines. Within about two miles of Ouray, this park narrows into a magnificent gorge, bounded on each side by precipitous cliffs of sandstones of the Carboniferous age, and sloping backward from the edge dense forests of pine and quaking aspen timber, the whole crowned by serried peaks and truncated masses of gray trachyte, the summit of these peaks being from three to four thousand feet above the valley. From this gorge you emerge into the beautiful amphitheater in which stands the town of Ouray. Here, scattered through the town and on the banks of the river above it, is the group of hot and cold mineral springs, from which the river derives its Indian name—Uncompahgre, or "Valley of Fountains." There are at least a dozen of these warm springs, whose waters flow into the river, for which reason, no matter how severe the winter, its waters are never frozen, and in the winter you will see its course down the valley marked by a cloud of steam. For reduction-work at this altitude, this is an inestimable boon.

We now leave Ouray, ascending the picturesque and heavily-wooded gorge of Cañon Creek, toward Imogene Basin, in the Sneffels District. About three and a half miles from town, and two thousand feet above it, we see the last of the red sandstone, where the creek has cut through it, and we are now between walls of trachyte, the sheer cliffs on the east side stretching upward in some places for over a thousand feet. The west side, however, is more broken and sloping, and offers good facilities for the bed of the wagon-road now constructing. Five and a half miles from Ouray is the junction of Sneffels and Imogene creeks, these two then becoming Cañon Creek. Here, toward the west, passing through a narrow neck, open out the Virginus and Sneffels basins, and straight ahead, or to the south, is Imogene Basin, separated from the others by a spur called Ruby Mountain, on which is situated the justly celebrated Wheel of Fortune mine, Mark Twain, Potosi, and a group of very rich prospects as yet only partially opened up.

These three basins, together with Red Mountain Park on the east of Imogene Basin, form a fan-like series traversed by a belt of lodes about five miles in length by two in width, which I shall describe here as they appear in their crossing of Imogene Basin only. The basin is about two miles in length from the forks of the creek to its head, and about one mile in width at its widest part. It is oval in shape, and its sides clothed with dense pine timber to an altitude of 11,000 to 11,200 feet. The altitude of the mill-site at the forks or lower end is 9400 feet, and the outcrop of the Gertrude lode, the highest in the series, 11,300 feet above tide-water. The summits of the ridges and peaks which inclose the basin vary from 12,200 to 13,000 feet altitude.

There are eight well-defined lodes crossing the basin, and may be seen on the surface of the ridge dividing it from Red Mountain Valley, and again on the opposite or west ridge as they cross over toward the Virginius Basin; and in some instances, the porphyry vein-matter and mineral-bearing quartz, having decomposed more easily than the trachyte which they intersect, have cut deep sags or notches in the summit of the ridges where they cross. The average width of these lodes, beginning with the most northerly one—the Umpcah—is respectively 10 ft., 4 ft., 7 ft., 4 ft. 6 in., 4 ft. 6 in., 4 ft., 3 ft. 6 in., and 20 ft. These are the width of crevice, or from wall to wall.

Their principal strike is about N.W., S.E.; but toward the east or Red Mountain Valley, they seem to converge. On the east side of Red Mountain Valley, are two brilliant scarlet peaks, forming part of a sort of horseshoe of mountains of a similar color around a crateriform basin. Their bright color is derived from the decomposition of the iron pyrites in the trachyte, and makes these peaks a well-known landmark. We have always looked on this point as our volcanic center, and to these peaks our lodes seem to point; that is to say, from these peaks our lodes appear to radiate or stretch in fan-like form across Imogene and into the Virginius and Sneffels basins.

From the great uniformity among the lodes *per se*, I regard the whole group as a system of fissures formed contemporaneously; and from the similarity of the character of the ore, I think the ores and vein-matter they contain had a common origin. These lodes crop boldly at intervals in their course across the basin, and show a remarkable permanence of the ore-bodies. They were prospected as early as '75, and many claims staked; but in most instances, only those were retained which showed rich surface-ore, and these in most instances were where eroded to a considerable depth by bygone glacial and other action, and, of consequence, most of them above timber-line or nearly so. In those days, prospects could be sold on rich specimens, and the main object therefore was to get a claim off which you could knock a rich specimen, no matter if inaccessible (owing to snow) for eight months out of the twelve. These same veins, where they cropped out down in the valley or gulch, showed splendid bodies of ore, but on assay proved low-grade; and the prospectors of that day made up their minds that these lodes were "filled in from the top," and that the only rich mineral they contained was that found in them where they crossed the highest peaks.

When my partner and I prospected these lodes in the spring of 1877, and looked at nature's vast dumps—acres upon acres of "slide-rock," from 25 to 200 feet in depth, that lie at the foot of the mountains in the basin, it occurred to us that, after all, nature had done the mining and exposed rich ore in the veins on the present summits of these worn-down peaks, and that if we staked claims down in the gulch on the same veins, when we gained depth on them, we had a fair chance of getting rich ore there too, and so we staked them, and they have not deceived our expectations.

The existence of such a thing as gossan, iron hat, or the altered outcrop of lodes does not seem to have occurred to the prospector of that time. A lode bore just such ore as he was able to knock off the top; and whether the top then existing was the original apex of the lode, he didn't stop to think, either.

These lodes (with the exception of the Gertrude) dip toward the north. The ores have white crystalline quartz as the matrix of the metals, and, with galena as their base, include highly argentiferous gray copper or silver fahlerz, polybasite, silver glance, native silver, red and "rosin" blende, iron pyrites, erubescite, copper pyrites and the results of its decomposition, malachite and azurite, and cerusite in small quantities. Calc-spar occurs also occasionally, both massive and in the forms known as "dog-tooth" and "nail-head" spar, and in one of the veins large quantities of rhodonite. These ores are, when the vein is "in shape," generally of a combed or banded texture, the layers being parallel to the fissure. The quartz and ore is generally on the hanging-wall and from one to two feet in width (except the Gertrude outcrop, which shows thirteen feet of ore), with a clay selvage between it and the wall; from the ore to the foot-wall is soft gray and light brown colored porphyry, the walls being, as before stated, trachyte.

From the width of these veins and their contents, it will be readily seen what very pretty ground it is to break in driving levels, as you can run ahead in the porphyry six to ten feet, and then putting a shot behind the quartz, throw the ore. In fact, I once made fourteen feet in fourteen days single-handed, in one of our tunnels, and did my own cooking, and wheeling. My partner and I located the Emily, Norma, Crusader, Talisman, and Gertrude, and purchased two thirds of the Yellow Rose. Of course, up to March, 1880, the only development done has been what we were able to do with our own hands (with the exception of the Gertrude cross-cut tunnel, 148 feet in length), and we have over 600 feet of rock-work done in them, all the tunnels showing splendid bodies of ore in roof, floor, and breast. We worked them the year round, winter and summer, without any difficulty.

In my next I will describe the ore-bodies and their changes in drifting on them.

OURAY, COLO., June 25.

W. W.

DEMAND FOR LABOR IN THE WEST.—As an evidence of the extraordinary demand for labor now existing in the West, and also of the rapid development of the railway lines stretching south and southwest from St. Louis, the *Globe-Democrat* of that city notes the fact that its advertising columns, Tuesday, contained calls for 4450 workmen at wages running from \$1.50 to \$3 per day.

ORE-DEPOSITS.

By A. C. Campbell, E.M.

I notice an article in the *ENGINEERING AND MINING JOURNAL* on ore-deposits, by Professor Newberry. It calls to mind some observations and experiments which I made some twelve or more years ago. I had spent the summer in coasting around Lake Superior, and noted the copper deposits in their many phases. I studied the formations as they were developed at that time along the south shore, the north shore, also Isle Royale.

It was our duty at the School of Mines, New York, to prepare a journal of travels during our summer vacation, and it was my choice to write up the Lake Superior region to the best of my humble capacity. My subject, generally, was the formation of veins. I endeavored to work up the subject theoretically, practically, and experimentally.

I conceived what I supposed to be the origin of the native copper of Lake Superior, as based from observation, and then in turn made numerous experiments in support of the suppositions. I could not give in detail my arguments and experiments. It was, and remains yet, my belief, that the water from the clouds falling to the earth penetrates the strata, as a natural consequence of the force of gravity and the force of capillary attraction, to great depths. If there be large or roomy passages for the water, gravity holds sway entirely; but if the passages are very small, then capillary attraction is predominant.

Water, in its rapid movements, whether in streams over or under the surface of the earth, wears and dissolves away the rocks, and seldom if ever makes any chemical deposit. Water under the controlling influence of gravity must generally be in large volumes, as compared with the available mineral matter that may be taken into solution, and there can be no deposition until there has been over-saturation, unless it be electro-deposition or chemical precipitation.

Large unoccupied fissures in the rocks could receive no deposits of mineral, since gravity would be the controlling force, and there would be an overabundance of water in rapid circulation, and consequently holding very little mineral matter. It is the seepings of caves that form stalactites and stalagmites, and seeping is the effect of capillary action. The running water, which is under the influence of gravity, dissolves away the rock, thus forming the great caverns, and the limestone held in solution is carried hurriedly to the sea. Water under the influence of gravity flows from the smaller streams to the larger. Water under the influence of capillary action flows from the larger spaces to the smaller, it being a well-known law of capillary action that, the smaller the tube, the stronger the attraction. When a porous substance becomes saturated, then the capillary force is satisfied. If the porous substance has any thing in its composition that is soluble in water, it is readily taken up, since the ultimate molecules of water are brought into lingering contact with the soluble matter; and when saturation is complete, there is an equilibrium of all the forces. This equilibrium may be disturbed in many ways: by chemical precipitation or reaction from adjoining incompatibles; by electro-deposition from the effect of local or general action. We will suppose capillary water of a given series of strata to hold in solution a given substance, and in another series of strata to hold a solution of a different substance. If these two series of strata are in juxtaposition, there must be some point at which the two solutions encounter. Knowing the character of the two solutions, we could easily predict what chemical change would take place.

The following experiment will convey the idea: I drilled two holes on one side of a brick near the ends. In one I kept a constant supply of chloride of barium; in the other, sulphuric acid. After several weeks, I broke the brick in several places. There were numerous little capillary veins of sulphate of baryta throughout that portion of the brick past the center from the sulphuric acid.

In all such cases of chemical reaction taking place within the substance of rocks, the supply and demand of the precipitants regulate the position or locality of the precipitate or deposit. The laws controlling would hold true for every case, whether on the small scale, as in the laboratory, or grand scale, as in nature. Now, if there should happen to be a fissure at the juncture of these two chemical substances, it would be occupied by the products of the reaction. The chances are, that there would not happen to be one there; but the process would go on all the same, regardless of the opposing resistance of the rock. All power is measured by foot-pounds; and in this case of the rupture of rock by chemical precipitation, we may suppose the time to be very great for the formation of mineral veins. Besides, if the crevice chose to be vertical, then there would be no resistance of gravity of the mass moved; the cohesive force of the rock would be all.

The moment a vein begins to form, it acts as a barrier to prevent the flow of the two contending chemical substances, and they "would have it out on that line." With regard to the Lake Superior copper veins, I am of the opinion they are of electro-deposition. I will mention a little experiment I made some years ago in the School of Mines. I secured a glass tube of about one half-inch bore and three feet long, closed at one end. I placed a few bits of iron wire at the bottom; then I filled it with sand and enough water to fill the interstices; then I placed a crystal of sulphate of copper in the tube at the top. After some time, copper began to form at the bottom of the tube, regardless of the weight of sand. Then I added a crystal of silver sulphate at the top. In a very short time, streaks of metallic silver shot up along the sides of the tube and through the sand to the top. Very little silver was deposited at the bottom, while all of the copper was deposited there in one mass, in immediate contact with the iron wire. It was a very simple and beautiful experiment. Professor Sterry Hunt happened to be in the laboratory at the time, and thought it wonderful that the silver should climb up so rapidly and the copper remain so contentedly at the bottom.

In some of the mines of Lake Superior, the process of the deposition of copper is yet going on. In an old and dilapidated portion of the National mine, I found quantities of "brick-copper," and discovered that it was forming from the seepings of the vein-rock.

We may not be able to discover satisfactorily the cause of the precipitation of metallic copper, since, in every case of electro-deposition, the agents are not at hand.

The silver that was being crystallized from solution was by electro-deposition. Knowing nothing of the bits of wire at the bottom of the

tube, we could not possibly discover any immediate reducing agent at the point where the silver was forming.

Chemical action at any distant locality will produce an equivalent chemical change at hand, provided there is the proper medium for the conveyance of the active cause.

Thermo-electricity, from the effect of heat upon adjoining and differently-constituted substances, may cause electro-deposition. We have large masses of copper between the trap-rock and the conglomerate or sandstone of Lake Superior. I examined portions of compact trap-rock for traces of copper or metallic iron, but found none. There was an abundance of magnetic oxide of iron, but I could not discover that it would precipitate metallic copper from its solutions.

In support of the argument that mineral veins may expand the rock in which they grow, I cite a case in point. Near the end of the lake on the south shore, there is an island called Lone Rock. This rock is filled with veins of quartz and calc-spar, separately and combined, and particularly there were veins of calc-spar that were subsequently enlarged by the deposition of silica, and the most striking feature is the silica occupying space between the natural cleavage-planes of the calc-spar. Each little rhombohedron is encompassed by silica in a manner similar to a mass of wall-rock called a horse. Because the veins are small it is none the less one of nature's processes, and we have only to magnify the process, and we can account most readily for some of the strange phenomena of vein-formations.

In my study of the formation of the agate, I made the following very interesting experiment. I placed liquid soluble glass in a large test-tube, then I carefully added sulphuric acid, so that it would rest upon the surface of the soluble glass. A ring or disk of silica was formed at once. After the lapse of some time, the lower part of the tube was filled with what appeared to be banded agate. I showed the result to Professor Newberry, and he thought it "a perfect exemplification of the formation of the agate." I made a great number of these experiments, using a variety of acids and oxides in conjunction with soluble glass.

I wrote an article on this subject (chemistry of the formation of the agate) for the *American Chemist* about the time of its demise, and it was not published.

MAINE MINING NEWS.

Special Correspondence of the Engineering and Mining Journal.

The Bradford concentrating-mill, at the Douglass, has started up, but has not been running long enough to get matters in shape for running smoothly. The machinery is all from the Shoener & Allen Works. The engine is a 20-inch cylinder, with 30-inch stroke, and appears to be a very solid, smooth-running, and powerful machine. A new hoisting-engine from the same works will be set up soon. A small amount of work is done in the mine now, as there is an immense amount of ore on the dump.

At the Blue Hill, both Burleigh drills are used in Shaft No. 2 (incline), which is down 70 or 80 feet, and in good ore.

The Granger shaft is down over 70 feet, and timbered for about 50 feet.
BLUE HILL, ME., July 12. DIRIGO.

ROBERTS DRY PLACER AND ORE-CONCENTRATING CO.

EDITOR ENGINEERING AND MINING JOURNAL:

SIR: In your issue of June 19th, an article headed "Wild-Cat Processes," from your correspondent at Georgetown, Colorado, classes the Roberts Concentrator among the "wild-cats." As this not only does an injustice to the JOURNAL as well as to your otherwise astute correspondent at Georgetown, inasmuch as the gentleman is writing down a machine that he can possibly have no knowledge of, we beg leave to say that this process rests entirely on its merits, no solicitation ever having been used to any mining company to adopt the same until a full and fair trial has been had on the ores from its mines, and the original concentrations and tailings been tested by the best assayers in Chicago.

As the principle, "specific gravity," is one that has stood the test of time—according to the Jewish calendar, some 5784 years; and the separation made by atmospheric air, which contains the same proportion of oxygen and nitrogen that it did when Colorado was covered by water, with possibly Noah's ark resting on top of the Mount of the Holy Cross; and the power, steam, which, with a well-regulated governor, is generally considered to be under control, the essentials for the dry concentration of ores are hardly "wild-cats."

Given a proper sizing of mineral-bearing quartz, an air-suction gauged for lifting the gangue out of the same, with a proper distributing feed, and you have the essence of the Roberts Concentrator.

Inasmuch as the ENGINEERING AND MINING JOURNAL has seen proper to publish the article mentioned, we think it but fair that the same paper should, at an early moment, investigate this concentrator by actual tests, which, on our part, we shall be glad to aid in every possible way, furnishing for the purpose a 20-ton machine, power, etc.

CHICAGO, July 1. Very respectfully, D. C. ROBERTS.

A TUNNEL UNDER THE ST. LAWRENCE.—QUEBEC, July 15.—In the Legislative Assembly last night, the bill to incorporate the St. Lawrence River Tunnel Company was read a third time and passed.

DAMAGING FLOODS IN COLORADO.—DENVER, July 13.—This evening, Cherry Creek, usually a very small stream, rose five feet. The water came down with a rush, rising a foot in ten minutes. No damage was done in the city, except the weakening of the bridge. It is thought the track of the California Central will be washed away before morning. The rise was probably caused by a water-spout in the mountain. A dispatch from Pueblo, dated Monday, says that there is a worse flood in the Fountain to-day than since 1863. The torrent of water came down with a rush, carrying every thing before it. Of thirty persons camping in the river-bottom all escaped but one. The railroad twenty miles from this place is washed out. The river rose eight feet in less than an hour, and the emigrants camping along its bottom lost almost every thing. The flood was caused by a cloud bursting.

PROGRESS IN SCIENCE AND THE ARTS.

Technology.

Physical Notes.—We glean from London *Nature* the following facts concerning recent novelties in physical science. At the Physical Society, the experiment was shown that by the mingling of a solution of blue litmus with the red solution of bichromate of potassa, a yellow liquid will result. A more curious experiment than this is the production of a white by mixture of crimson and green. This is accomplished by taking an aqueous solution of cuprous chloride and a solution of rose-aniline acetate in amylic alcohol. The crimson aniline floats on the surface of the green solution; but on shaking the two together, the colors disappear, and the mixture is simply a turbid grayish-white.—The following magnetic experiment was shown before the French Academy: Two magnetic needles are hung vertically by fine threads, their unlike poles being opposite to one another. Below them is a vessel containing water, its surface not quite touching the needles. They are hung so far apart as not to move toward each other. The level of the water is now quietly raised by letting a further quantity flow into the vessel. As soon as the water covers the lower ends of the needles, they begin to approach one another, and, when they are nearly immersed, they rush together. The effect is described to be due to the fact that, when the gravitating force downward is partly counteracted by the upward hydrostatic force due to immersion, the magnetic force, being relatively greater, is enabled to assert itself.

Dr. Crookes has obtained some remarkable results respecting the phosphorescence of gems by the action of the electric current upon them in high vacua.

M. Cailleret, a French telegrapher, is reported to have discovered a new method of rotating the electro-magnetic gyroscope with any induction coil. He employs the thin wire as an inductor, and the thick one for sending the induction current to the coil.

Technical Brevities.—Capt. Charles E. Bridge, of New York, has proposed a modification of the U. S. Signal Service Code, employing the sounds of a whistle in the place of the sight signals by flags or lights. The suggestion appears to be a very practical one, and its adoption would enable *conversation at sea by sound* to be carried on, the ordinary alphabet being transmitted and received letter by letter. The plan proposed is much simpler than flag signals, at present used, and is capable of far greater usefulness.—The Stevens Institute professors conclude an elaborate paper in *Van Nostrand's Magazine* for July on "Measurements of an Incandescent Paper Carbon Horse-shoe Lamp, constructed by Mr. T. A. Edison," with the following not very encouraging sentence: "When we remember that with the arc-light there has been obtained from 1200 to 1800 candle-power per horse-power of mechanical energy applied to the generator, it is evident that *Mr. Edison's lamp*, as now made, does not escape the enormous loss which has heretofore been encountered by all forms of incandescent lamps." The economic results obtained in their experiments show that the lamp developed 120 candle-power per horse-power of electric energy, which would be equivalent to about 72 candle-power to each horse-power of mechanical energy applied to the driving-pulley of the electric generator.—An earnest effort will be made to induce the next Legislature of Pennsylvania to adopt a uniform and rational system governing the vexatious subject of *expert testimony*, the need of which we referred to some weeks ago. The plan proposed is in brief something like this: In cases where the aid of medical experts is necessary, the counsel on each side of the case shall each select the names of six or more prominent physicians, from whom the presiding judge shall select two names by chance. The two thus chosen shall sit with the judges as *amici curiæ* throughout the trial, and shall enlighten the court and the jury by their professional interpretation of the technical aspects of the case. The plan is by no means free from objections, but is a step in the right direction.—Professor Fort lately called the attention of the French Academy to the vital importance of perseverance in efforts to *resuscitate the apparently drowned*. He asserted that he had restored to life a child, by persisting in artificial respiration for four hours, commencing three hours and a half after apparent death. Another case is mentioned, where an apparently drowned person was restored to life after four hours of artificial respiration, begun an hour after the patient was taken from the water. Such experiences are surprising, and their presentation especially timely at this season, when drowning accidents are most liable to occur.—*Stanley* is at present on the Congo, with the view of opening up to commerce the heart of the African continent. His expedition is very strong, comprising twenty white men of different nationalities, and about one hundred negroes of Zanzibar, Sierra Leone, and the Congo. He has five small steamers and a number of smaller boats, with which he has taken his party and supplies up the river as far as the first of the series of thirty-two falls on the river. From this point, the task of cutting a road through the wild coast range of mountains has been begun, when the boats and supplies will be transported overland past these obstructions to navigation, and then the great river and its tributaries will be navigable to the very heart of Africa. This expedition promises to be the most important undertaking in its practical results that has ever been attempted in African exploration.—Railroad extension is still going briskly forward. The *Railroad Gazette* for the week ending July 9th reported the building of 2190 miles of new railroad during the present year. This is a gain of 100 per cent on the figures of the same period of 1879, and of about 200 per cent on the figures of the years 1878 and 1877.—Chicago is proposing to effectually rid herself of the *smoke nuisance*. Her authorities have under consideration an ordinance which treats the subject very radically. It is to the effect that any owner or engineer of any locomotive or steamboat, or chimney not connected with a private residence, who shall be found guilty of causing or maintaining a nuisance by discharging unconsumed smoke into the atmosphere, shall be fined not less than five nor more than fifty dollars for each offense. Should this ordinance pass, Chicago will become an American Mecca, to which the several thousand patentees of smoke-consuming devices will make their pilgrimage.—The project is mooted to hold an *International Exhibition in Rome* during the winter of 1885-6.—Assurances were given at a late banquet of the Franco-American Union in Paris, that Bartholdi's *Great Statue of Liberty*, which is intended to commemorate the services of France to America in revolutionary days, will be finished

and inaugurated in 1883, the year of New York's World's Fair.—*The Latest Concession of the State of Nicaragua* to an American "Inter-oceanic Canal Co." (meaning Admiral Ammen, Mr. Menocal & Co.) has been published. It gives to the company the exclusive right to construct and operate a ship-canal across the State, the same to be of sufficient size to accommodate steamships of the largest size. The company is to hold possession of the canal for ninety-nine years after its opening, when it shall become the property of the State of Nicaragua.—The report of the commissioners appointed to inquire into the *cause of the Tay Bridge disaster* promises, when it finally appears, to make interesting reading. It has been testified before their meetings on the best authority that the design and construction of the bridge were good, and "in accordance with the best principles of modern engineering construction." And what is still more interesting, the testimony of Mr. Kirkaldy is advanced, who, at the instance of the court, made a number of tests of the quality of the iron used in the structure, and who reports that he found it to be exceptionally good.—M. Debray, at the last meeting of the French Academy, exhibited an alloy which, when heated, will explode. "A five-franc piece made of it, and held near a gas-flame, will detonate, to the astonishment and alarm of the holder." It is composed of one part of rhodium and two or three of lead, heated in a crucible to a high temperature.—*The great States of Ohio and Illinois* are, for the time being, figuratively speaking, on "the anxious bench" to learn which is to take the third place in the rôle of populous States of the Union. The census of 1870 gave Ohio the second place by a majority of 122,892 inhabitants (the total figures then being, Ohio, 2,652,302, and Illinois, 2,529,401). Illinois is sanguine that the present census will show that she leads her prosperous rival by a couple of laps.—The last monthly report of the United States Bureau of Statistics enables us to learn the quantity and value of the imports of iron and steel from July 1st, 1879, when the effect of the late boom was just beginning to be felt, up to June 1st, 1880, a period of eleven months. The figures show that we imported during that period iron and steel products, not including tin plate, amounting to 1,280,697 gross tons, having a value of over \$27,000,000. This does not include a number of manufactured goods of iron and steel, the value of which increases the figures above named by \$10,000,000. These figures show a total increase in our importations of iron and steel products (excluding tin plate) during the ten months of the present fiscal year, as compared with the ten months of the last, of about \$28,000,000.

The Steel Industry of the World.—Unless steel shall in the not remote future replace iron very generally for the current uses of the last-named metal, it will puzzle most people to know what is to become of the continually increasing output of steel. The capacity of the steel-works of the world at the present time is figured at about 3,000,000 tons per year. The Bessemer works of the United Kingdom, with 120 converters, contribute to this total from 750,000 to 800,000 tons; the United States, with probably half as many converters, but much superior plant and management, produce 750,000 tons more. Germany has lately greatly increased her capacity for steel production, and at present can produce about 500,000 tons; France produces 275,000; Belgium, 150,000; Austria, 250,000; and Sweden and Russia, about 150,000 tons.

For Separating Brass and Copper Turnings from those of iron and steel, two German inventors, named Breuer and Schumacher, are reported to have invented an ingenious magnetic apparatus, of which the principal features are as follows: The mixed filings or turnings fall on a revolving dome or cylinder, which is magnetized, and to which, therefore, the iron and steel particles adhere, while the copper and brass particles fall into a special reservoir provided for the purpose. To make sure that no iron shall escape, two magnetized cylinders are provided, rotating in the same direction, so that the iron which escapes the first shall be retained by the second. The surface of the cylinder is formed with flat bands of iron alternating with strips of copper, and each of the iron bands is in contact with a row of horseshoe magnets. The adhering iron and steel are automatically removed by the use of revolving brushes.

Interesting Facts Respecting the Last Great Tunnel.—M. Colladon lately read a paper "On the Meeting of the Two Advance Galleries of the Great St.-Gothard Tunnel," which contained many hitherto unpublished details of interest and importance to the engineering profession. He stated, among other things, that the difference of level between the two headings at meeting was not above 10 m. (3.94 inches), the lateral deviation of alignment less than 20 m. (7.87 inches). The total length of the tunnel-line, as measured in the tunnel, proved to be nearly 8 m. (about 26 1/4 feet) less than that calculated geometrically. The total amount expended on the work from its commencement up to March 1st, 1880, was 45,600,000 francs (\$8,937,600). The work of finishing the tunnel will still take considerable time and money, and the estimate is made that, by the time the completed work is handed over ready for traffic, it will have cost altogether about 50,000,000 francs (\$9,800,000), which will bring up the cost of the work to about 1000 francs (\$195) per foot.

Condition of the Iron Furnaces of the United States.—The quarterly report of the *Iron Age* on the condition of the iron furnaces of the United States on July 1st, 1880, is just to hand. Its contents condensed make the following showing:

CONDITION OF FURNACES JULY 1, 1880:

	In Blast.	Out of Blast.
Charcoal.....	131	136
Anthracite.....	167	68
Bituminous.....	115	109
Total.....	413	313

These figures show a decrease of the total number of stacks in blast since the report for the preceding quarter of 18, the total of stacks in blast at that time having been reported at 431; and is a smaller decrease than the late unsatisfactory state of the iron trade would seem to have warranted. The percentage of stacks in and out of blast for a series of years is appended, on the same authority.

	Percentage of Furnaces in blast July 1.				Percentage of Furnaces out of blast July 1.			
	1877.	1878.	1879.	1880.	1877.	1878.	1879.	1880.
Charcoal.....	32	24	34	49	68	76	66	57
Anthracite.....	38	42	44	70	62	58	56	30
Bituminous.....	41	40	47	52	59	60	53	48

ALLEGED GOLD DISCOVERY IN NEW YORK.—ALBANY, July 14.—M. K. Waite & Co., of Northville, have filed notice with the Secretary of State that they have discovered a mine of gold ore in the town of Northampton, Fulton County.

DISAPPEARANCE OF DIAMOND REEF.—The demolition of Diamond Reef, between the Battery and Governor's Island, is at last accomplished, and there are now 26 feet of water on it. The work was begun twenty-six years ago, but did not progress much till steam-drilling was employed. The cost was over \$300,000.

FIRE AT A COLLIERY.—POTTSVILLE, PA., July 15.—The Margie Franklin Colliery, owned and operated by the Enterprise Coal Company at Excelsior, was burned this morning. Loss, \$25,000; insurance, \$17,000. Three hundred men and boys are thus thrown out of employment. The origin of the fire is unknown.

STRIKING AGAINST A REDUCTION OF PAY.—READING, PA., July 12.—The heaters, rollers, and squeezers, numbering fifty men, employed at the sheet mill, a department of the Reading Iron Works, struck this morning against a reduction of 10 per cent. Two hundred and fifty men are thrown out of work by the strike, and the mill is stopped.

LEADVILLE RAILROAD FACILITIES.—The *Herald* of July 3d says: The Rio Grande Railway Company announces that, beginning to-day, it will be prepared to receive ore and bullion for shipment, and on Monday next it will begin to deliver freight for this point. The accumulation at Buena Vista amounts to three or four hundred cars, and great efforts will be used to relieve the pressure.

IMPORTANT COAL MINERS' MOVEMENT IN OHIO.—A dispatch from Columbus, Ohio, dated July 15th, says that the miners adopted a resolution to-day to demand pay for all salable coal, and a general strike is probable. Quite a number of coal operators held a meeting here to-day and resolved to reduce the pay of miners to 60 cents per ton.

Twenty-five delegates, representing over 500 miners in Ohio, also met, and adopted resolutions favoring the eight-hour system and semi-monthly payments.

FRIGHTFUL COLLIERY EXPLOSION.—LONDON, July 15, 1880.—An explosion, attended with fearful loss of life, occurred this morning at Risca Colliery, six miles from Newport, in Monmouthshire, Wales. The colliery is the property of the London & South Wales Colliery Company. The explosion took place at twenty minutes past one o'clock. At about eight o'clock, the bodies of three unfortunate miners were found near the bottom of the shaft, but they have not yet been brought up.

The force of the explosion was terrific, blowing to atoms the ventilating fan in the upcast air-blast. There is no hope that the men below can exist. Ventilation is being restored with the view of exploring in search of the unfortunate miners. While the men were at work yesterday evening, the atmosphere was noticed to be heavy and overcharged. At midnight, it was as dull as a November day.

Every thing possible is being done to expedite the rescue of the men, but scarcely any one hopes to find one of the miners alive. The disaster is attributed by mining experts to unskillful management. The coal-field is supposed to have been sunk below the shaft, causing defective ventilation. The pit in which the explosion occurred is 1440 feet in depth. The machinery in it was all new, and had only recently been placed in position. The Black Vein seam, which was being worked, is an old one, and is well-known as the scene of many explosions. An event similar to that already recorded occurred in it in 1860, and 145 persons lost their lives. The government has sent the Chief Inspector of Mines to report on the cause of the accident. It is now certain that 119 persons have perished in the Risca Colliery. It is impossible to say when the bodies can be safely reached.

MACHINE FOR WASHING AND SORTING COAL.*

By Max Evrard.

This machine is employed for the double purpose of washing the finer portions of the raw coal charged into it, and at the same time of sorting the entire charge according to the size and relative densities of its constituent bits. These are sorted ordinarily by the machine into three layers, of which the uppermost comprises the slimes and the smallest sizes of coal sufficiently cleaned; the middle layer is stuff to be washed over again; while the bottom is refuse shale. The apparatus consists of a deep kieve or open tank, in which works a loosely-fitting table or sieve, raised and lowered by an hydraulic cylinder beneath. While the table is down, water is admitted into the bottom of the kieve from a large closed reservoir under steam pressure; and as soon as it rises about 3 feet above the table, the charge of stuff is dropped into it from the top of the kieve; after which, the steam pressure is made to act intermittently in the reservoir, so as to deliver the further supply of water into the kieve with a series of jerks, whereby the charge is held in suspension in the water until the water reaches the top of the kieve. The admission of water is then stopped; and the stuff, after having thus encountered a succession of checks to its descent, now falls freely through the still water, and settles down upon the table. After a few minutes' rest, the table is raised; the water above flows off at the top of the kieve, and the charge as it emerges is struck off in successive layers by means of a scraper worked horizontally by an hydraulic cylinder. The pressure water for working the two hydraulic cylinders is supplied from a closed vessel under full steam pressure; and the exhaust steam from this smaller vessel is afterward expanded into the larger closed reservoir that supplies water to the kieve. The consumption of steam is 6 per cent of the weight of stuff washed, or about 13 1/2 lbs. per ton of stuff. About seven tons of stuff can be treated in ten hours per square foot of table area; very large charges can thus be worked in a machine of moderate size. Owing to the great range of lift allowed to the table, the machine serves either for washing in the foregoing manner by an upward jerky current of water, or for washing in still

* Abstract of a paper in *Revue Industrielle*, 1880, p. 105. From the Proceedings of the Institution of Civil Engineers of London, edited by James Forrest, Secretary. † See also *Bulletin de la Société d'Encouragement pour l'Industrie nationale*, 1875, p. 30.

water by filling the kieve full of water to the top beforehand; either dropping the charge to the bottom, in the case of stuff too fine to separate easily without falling into the water from some height; or else delivering it into the water at the top of the kieve without drop, in the case of riddled slack so tender as to break with any fall.

By this machine, badly-riddled stuff is sorted according to size and density in a manner that is good enough for many commercial purposes. Thus at the Roche-la-Molière and Firminy Company's collieries (in the department of the Loire, France), coke containing not more than 12 to 14 per cent of ash is readily obtained by this means, without loss in slimes and without washing any portion of the charge a second time over, from raw coal containing 17 per cent of ash; while by re-washing in a piston-jigger the whole of the middle layer in each charge from the Evrard washer, the percentage of ash in the coke is reduced from 14 to only 8 per cent. The jigger employed for the re-washing at Roche-la-Molière is a horizontal annular table or grid of 13 feet outside diameter and 86 square feet area, with central jiggering piston; it has a slow rotation of one turn in three minutes, and the stuff to be re-washed is fed upon it in a layer of about 3 inches thickness, being at the rate of about 10 tons per hour. With the attendance of only two men, from 200 to 300 tons of riddled slack are treated per day in the washer and re-washer at the above works. M. Evrard's machines are also in operation at Montcel-Sorbiers colliery (Loire); at Givors coke works in the same district; and at Barruelo colliery in Spain, belonging to the Northern Railway of Spain.

GENERAL MINING NEWS.

ARIZONA.

BY-AND-BY.—The *Citizen* says that it is informed by the superintendent of this company that work has been renewed on the Commonwealth and Elliott, two very promising properties belonging to this company. Recent developments in the first-mentioned claim reveal a ledge six feet wide, which gives an average from twelve assays of \$80 silver and \$23.50 gold. The Elliott has a 4-foot vein, an average of seven assays showing \$73.25 silver and \$27 gold. Work will be pushed on these claims as rapidly as possible, as the company is anxious to have a quantity of the ore milled, and the practical value of the property demonstrated.

GLOBE DISTRICT.

The following notes are taken from the correspondence of the Arizona *Citizen* of the 3d inst.: The Mexican has a double-compartment working-shaft, 130 feet deep, with hoisting-works. A cross-cut shows 62 feet of vein-matter, with 40 feet of ore at bottom of shaft. About 700 tons of ore are on the dump, and crushing has begun at their ten-stamp mill at Wheatfields. It is an Eastern company.

The Independence is opened by shaft 150 feet deep, width of vein unknown. Supposed to be an extension of the Mexican. Ore taken from the croppings, I am told, sold for from \$4 to \$8 per pound.

The McCormick mine, about two miles from Globe, is opened by a shaft 250 feet deep, with drifts 40 and 50 feet. Eastern company; not working at present.

The Alice is opened by a shaft 175 feet deep, with a contact of limestone for a hanging-wall, and granite foot-walls. It is about a mile and a half from Globe.

The Southwest Alice is the southwest extension of the Alice, and has a shaft 100 feet deep, showing good ore from top to bottom, carrying both gold and silver.

The Chamberlin, or Stonewall No. 1, two miles from Globe, has a shaft 100 feet deep, and is now drifting. The peculiarity of this vein is, that it carries no metal but horn-silver, and is in porphyry.

The Golden Gate and Golden Star have a combination tunnel on the dividing line, 193 feet long, tapping the ledge 115 feet deep. The Star is owned by a New York company, and the Gate by citizens of Globe. Shipments of ore worked at the Isabella mill worked over \$100 gold.

At McMillenville, the Stonewall mine, opened by shaft 330 feet deep, with drifts at both ends, has hoisting-works and a ten-stamp mill, and makes continued shipments of bullion, and is the finest "specimen" mine ever discovered. Owners, a California company.

The Silver Era, on Quartzite Hill, six miles from Globe, has a shaft 120 feet deep, on vein all the way; has about \$100,000 in ore on dump. Recently purchased by a New York company.

The Etna is opened by shaft 90 feet, owned by the same company, which is working vigorously.

The Irene has a tunnel 330 feet, cutting the vein 250 feet deep, having cut 11 feet of ore, and ore still in face of tunnel. The shaft is 130 feet deep in solid ore, still working; a ten-stamp mill is building at Globe, which is expected to be the finest in the district.

Among the mines in the Gold District, at Lost Gulch, is the Gold Hill, owned by a New York company, with shaft 30 feet deep, showing pay-streak over 3 feet wide.

RICHMOND BASIN.—In Richmond Basin, the Mack Morris mine, with a double-compartment working-shaft 185 feet deep, and steam hoisting-works, has an ore-shaft on the vein over 100 feet deep, all in ore, and has contracted for 2000 tons of ore to the Mexican mill, half of which is now on hand; character of ore, chlorides, silver glance and native silver; owned by a New York company. Cross-cutting will be commenced at the 200-foot level.

The La Plata, the eastern extension of the Mack Morris, has a shaft 85 feet deep, all in ore; same characteristics as the Mack Morris, 35 feet of water in the shaft; 20 tons of ore on the dump. This mine has a tunnel started which will follow the ledge 225 feet and strike the bottom of the shaft. Work is now suspended.

The Defiance, on the same ledge, has a tunnel 66 feet in length; but the ledge is not yet tapped. It also has a shaft 50 feet deep; work suspended.

The East Richmond, which is the west extension of the Mack Morris, has a shaft on the vein 80 feet deep, with 250 tons of ore on the dump; work suspended.

The West Richmond has a shaft 50 feet deep; owned by a New York company; still working.

The Silver Nugget is opened by a main shaft, two compartments, well timbered, 80 feet deep, and still sinking in a good vein. Steam hoisting-works are being erected in the north shaft. A good ledge from two and a half to three feet in width has been encountered, with ore assaying \$150 to the ton. Six hundred tons of high-grade ore are said to be on the surface. A five-stamp mill has just been completed, which, it is expected, will turn out a large amount of bullion monthly. From 40 to 50 men are employed at the mine and mill.

HARSHAW DISTRICT.

Work has been steadily prosecuted on the Julia, which lies about a mile and a half from the town of Harshaw. The shaft is down 25 feet, and discloses a six-foot ledge of chloride ore. A pay-streak four feet wide carries ore that it is believed will average \$60, as the rock is of a most uniform character, and assays as high as \$115 have been obtained. The shaft will be sent to a depth of 100 feet as fast as possible.

The Delaware has a 30-foot tunnel, all in ore, and the Brick Top, which joins the Delaware, has a 30-foot shaft in the vein, which shows ore all the way across. Assays run as high as \$175.

CALIFORNIA.

SANTA CLARA MINING ASSOCIATION.—A dispatch from San José to the *Stock Report*, dated June 30th, states that all the property of the Santa Clara Mining Association, of Baltimore, better known as the Guadalupe Quicksilver Mining Company, was attached by the Bank of California for \$128,775.59. No sooner was the fact made public than other attachments were at once filed, as follows: E. C. Singletary, on a note for \$10,000; Santa Clara Valley Mill and Lumber Company, supplies, \$10,000; Auzeais & Pomeroy, supplies, \$5000. Other suits by employes, commenced in the justices' courts, swell the aggregate to about \$155,000. It is reported that the company is endeavoring to have the suits dismissed, as it claims to have property available for a settlement, or security to the amount of four times the claims on which the attachments are issued. It is asserted by friends of the company that the whole thing is a scheme to enable certain persons to get possession of the property on account of its great value. It is asserted that the alleged scheme will fail, and the company remain with unimpaired credit to conduct the business. Much excitement has been caused among the small creditors on account of the attachments.

A later dispatch says that additional attachments to the amount of \$25,000 were levied upon the property of the Guadalupe Mining Company. This swells the amount to nearly \$200,000. There are recorded here mortgages against the property of Robert McCalmont, of London, for \$100,000, a first lien; and to certain persons in trust, to secure bonds aggregating \$400,000, a second mortgage. The former mortgage has been assigned to other parties. The bonds on the second mortgage mature in 1892. Less confidence is expressed, as the claims multiply, as to the final result of the proceedings proving favorable to unsecured creditors.

BODIE DISTRICT.

The Bodie *News* of the 3d inst. has the following notes:
BODIE BLUFF.—The north drift on the 200 level is making good headway progress for the week, 10 feet. The ledge is widening out strong and regular, and shows good ore. The south drift has been advanced 10 feet during the week. The ledge is narrow in the face, and carries a fine clay selvage on the foot-wall.

BOOKER.—The east cross-cut at the 500 level is pressed rapidly forward, and is in 213 feet. The formation in the face is of a much more favorable character than at last report, having cut through what appears like the top of a hard Boulder into the vein-formation.

MCCLINTON.—The three-compartment shaft is now down 215 feet below the 300-foot level, timbered with 8 x 8 sets in a substantial manner. During the week, a ledge of fine-looking quartz came in from the west and is dipping to the east much faster than any other ledge in the mine, except the large ledge of good ore on the 675-foot level (incline). Connection has been made from the new shaft with the 500-foot level of the old incline, and work has been resumed on the west cross-cut No. 2 of that level, which is in 336 feet. The ground is porphyry mixed with bunches of quartz and pyrites of iron, and looks very favorable for striking the ledge.

SOUTH BODIE.—The work of development is pressed with all possible dispatch. The east cross-cut is pushed rapidly forward, and all indications go to show the near approach to the east ledge. The formation is of the most favorable character of vein porphyry, filled with seams of good-looking ore and clay. At the surface, the machinery is in perfect order.

SOUTH BULWER.—The north 550 level is in 55 feet. The ledge continues strong, and is 5 feet wide of good ore. The south drift, same level, is now in 48 feet, with 2 feet of ore in the face. The winze from this drift is down 20 feet; the ledge fills the entire bottom of the winze and shows steady improvement as depth is gained. There are opened in this level 103 feet of drifts, 20 feet of winze, and 200 feet of backs, showing a body of milling-ore of large extent. Sinking and drifting on this ledge are pressed vigorously forward.

LAKE DISTRICT.

MANMOTH.—The Mammoth City *Herald* of July 3d says that in tunnel No. 2 38 feet have been driven during the past week, making a total of 890 feet. The main tunnel in No. 3 has been advanced 45 feet, making a total of 1074 feet. The upraise from this level has extended 20 feet, making the total high about 60 feet. In consequence of the continued flow of water in tunnel No. 4, no work has been done during the week past, but will be resumed in a few days. The mill started up to its full capacity on the 1st instant, with forty stamps; the whole machinery being run by water-power alone, with supply sufficient to run the forty stamps, 16 pans, and 8 settlers, with quite a stream flowing through the waste ditch. The mill is crushing from 75 to 80 tons daily, and is a model of perfection and cleanliness. There are about 400 tons of ore at the mill from tunnel No. 3.

H. L. AND M. C. JOINT TUNNEL.—The hard character of the rock encountered during the past few weeks in this tunnel has given place within a day or two to a softer formation; and henceforward it is expected that better headway will be made. The ground is drilling and breaking much better. A distance of 26 feet has been made during the week; total length, 881 feet.

COLORADO.

CLEAR CREEK COUNTY.

We extract the following notes from the Georgetown *Miner* of the 3d inst.:

ALBRO.—In the main shaft there is a large quantity of water, which prevents working. The owners are therefore engaged in driving a tunnel to cut this shaft and thus drain it. In the bottom of this shaft there is a large body of high-grade ore. The tunnel is 360 feet in, and there yet remain 125 to run. There is in connection with this lode a 12-stamp mill, and accordingly they treat their own ore.

BIG HORN.—The developments consist of 100-foot tunnel and a 140-foot shaft. The lode was struck at 80 feet from the surface, and sinking at once began. A small streak of ore came in which assayed 1128 ounces first-class and 402 ounces second-class. The crevice is 4 feet wide. On the hanging-wall is a 6-inch streak of ore. A company is now being incorporated, and the mine will be stocked.

FRED ROGERS.—The main shaft is 290 feet deep, from the bottom of which a drift was run some 30 feet, but had to be abandoned on account of the water, which came in in large quantities. On the 230-foot level, a drift has been run 160 feet on a splendid body of ore. The ground from here to the surface is unbroken; it has never been prospected, and good judges say that a large body of mineral lies concealed there. The engine is inadequate for hoisting at the present depth of the shaft, and preparations are making for the putting in of heavier machinery.

MANSFIELD.—The cross-cut tunnel which is running to intersect the Milton lode has now reached the depth of 50 feet. It will take 150 feet more before the lode is struck. This mine is the property of the Mansfield Mining and Milling Co. This company is also the owner of twelve other mines, which it intends to develop this summer.

BURLEIGH.—The *Courier* says that work in the Burleigh tunnel was resumed this week, after a suspension of a couple of weeks, which was caused by the machinery breaking. It is the intention of the company to cross-cut to the south wall of the Phillips lode the large lode near the breast of the tunnel that it has been developing for some time past.

IDAHO.—The Idaho tunnel is in 540 feet, and within ten feet of the breast it is expected that the Argo, the second important lode on the line of the tunnel, will be cut. Developments on the Inter-Ocean are steadily progressing with good results, stoping having been commenced.

CUSTER COUNTY.

The Silver Cliff *Miner* of the 8th reports a rich stroke of horn-silver on the Hecla claim, situated on Racine Boy Hill. The trench is about 25 or 30 feet

long, and the deepest place, near the upper end, about five feet. It presents much the same appearance all through, and the same character of rock is excavated.

The Plata Piedra and the Dollar mines are stocked for \$2,000,000, and are now working a force of thirty men. The mines are situated half a mile east of the now famous Hecla mine.

On the Newsboy No. 2, property of the Colorado Co-operative Prospecting and Mining Company, workmen passed through heavy spar and struck a glass-looking quartz, which assays five ounces of gold and two ounces of silver. It is in the lead, and is about 35 feet down.

Twelve inches of gouge-matter was struck on the hanging-wall of the Sun lode, at Galena. It assays six ounces of gold and thirty of silver to the ton.

GILPIN COUNTY.

Late issues of the *Register-Call* have the following:

ARCTIC.—Connection for air through the workings east of the main shaft will be accomplished during the week, and after that time a larger force of miners will be employed in exploiting this mine.

BOBTAIL.—The company is running the full capacity of its steam and water mill, that of 125 stamps. The two new 25-stamp sections are doing splendid work. The mill is treating about 125 tons of ore per day.

HASELTINE.—The *Register-Call* says that the superintendent and general manager of the Haseltine Company brought over last evening a fine specimen of smelting-ore, which was taken out of the winze now sinking from the 100-foot west level to connect with the level below. A strong force of workmen is employed in placing in position the new machinery recently received.

HIDDEN TREASURE.—The company has begun sinking in the main shaft of the Hidden Treasure lode, and will sink 100 feet, when levels will be started east and west. This will give the shaft a depth of 1100 feet. The mill-ore from the mine is yielding over 8 ounces gold per cord.

RJLLINS.—Col. J. Q. A. Rollins is driving the work of developing several fine properties in Independence District, owned by the corporation of which he is president and general manager. The stamp-mill erecting at Gold Dirt by that company is hurrying to completion as rapidly as men and means will permit.

WYANDOTTE.—The Wyandotte Company is down 350 feet. The superintendent has commenced driving levels at this point. The shaft on the Crawford County lode just now is in pinched ground, but a body of ore 80 feet in depth has been passed through, which will be removed at some future time.

MILL NOTES.—The Whitcomb mill has a good supply of custom ore. Five stamps are employed on ore from the American Flag, one battery of five stamps on Kansas ore and on ore from the West Flack, and ten on miscellaneous lots of ore.

The Consolidated Kansas 52-stamp mill will start up again the first of the coming week, having been temporarily shut down awaiting the completion of the new hoisting-rig.

The stamp-mill and concentration-works building near the Dallas mine will soon be in readiness for treating ore. Work is also progressing rapidly in the tunnel which is intended to intersect the Dallas vein.

On the 7th, there were 617 stamps in motion, treating ore from the different mines now worked in the Golden Queen. Before snow flies next fall, there will be fully 1000 stamps in motion throughout the county.

LAKE COUNTY.

We condense as follows from our latest Leadville exchanges:

ADLAIDE.—This mine is working, but with a small force of men. The ore output is proportionately limited.

AMIE.—This mine has increased its shipments to the old standard, and is now shipping about thirty tons of good-grade ore per day. The claim is nearly a full location, and consists of almost ten acres of surface measurement, the bulk of the claim being in the heart of Fryer Hill. Substantial surface improvements, both in buildings and machinery, have been put up and five shafts have been sunk. Four of these shafts are down to the ore-body, and all are connected by underground drifts and cross-cuts. The No. 5 shaft is sinking on the northern part of the claim, and is eighty feet deep. This has not yet reached mineral. The company has just completed the purchase of the Deer Lodge claim, an adjoining claim to the north. The main working-levels are at a depth of 165 feet from the surface, and the levels and cross-cuts are run at regular intervals, thus blocking out the ore in columns a hundred feet square. Levels extend to the Little Pittsburg line and to the Climax boundary in several places. The ore-body is above this depth from the surface an average distance of twenty to forty feet, and ore-chutes are cut down to the levels below, through which the ore is passed. Above, levels extend on the ore-bodies similar to those run below. On the regular level, the drifts and cross-cuts amount to over a thousand feet of openings, while the drifts on the ore-bodies amount to fully as much, or over 2000 feet of underground development.

BIG PITTSBURG.—Work has been suspended on all the shafts except the Pierson. Mr. George Daly, who is temporary manager, has given orders to push the drift in the direction of the Bates shaft with all possible vigor, and the workmen are making good headway. It is expected that they will strike the Bates workings in the course of ten days or two weeks.

BLACK PRINCE.—The vein was encountered on the 5th inst. in No. 3 shaft at a depth of 186 feet, and has a pay-streak something over a foot, and is opening out. Two assays have been made; the first of the yellow iron-ore, which gave 2½ ounces in silver, and 2½ ounces in gold; the second, made on the oxide of iron, returned four ounces in silver and four ounces in gold.

BREECE IRON.—There is but little demand for the Breece iron-ore at present, and consequently, but little is doing. A large number of the smelters have been closed-down for some weeks past, and others that are running have quite a supply of this kind of ore. At the Grant Smelting Works, sufficient iron is obtained from the Little Chief, which has the additional advantage of carrying a fair amount of silver, so that no Breece iron-product has been purchased by these works for a long time.

CLIMAX.—The rich ore-body developed in the No. 3 shaft pitches toward the west at about fifteen degrees, and with the facilities heretofore afforded, great difficulty has been experienced in getting out the ore. About a hundred feet east from the No. 3 shaft, some time ago a new shaft was started. For 145 feet, it was sunk perfectly perpendicular, was heavily timbered, and is lined inside with two-inch planks. At the bottom of the shaft, a large station or room has been cut out, some fifteen feet square. From here, a fine, large level is being run due north, to connect with the workings of the No. 2 shaft. Another large level is running northwest toward the ore-bodies described above. This last-mentioned level has been run 135 feet, and in fifteen feet more a raise will be made of some thirty feet, to the upper workings, an ore-chute will be put in, and the Climax will be heard from again with heavy ore-shipments.

CHRYSOLITE.—The *Leadville Herald* of the 7th says that a report was current yesterday that created some alarm in regard to the Chrysolite mine. As it reached the *Herald* reporter, the purport of it was, that over a hundred men had been discharged from the employ of the company; that the force was about to be cut down to almost nothing, and one statement to the effect that ore-bodies were being timbered up. In an interview with Mr. J. W. Marden, the financial agent and acting manager, during the absence of Mr. Keyes, the full particulars of the reports were stated. Mr. Marden states that they are entirely without foundation. He is taking out ore as fast as he possibly can, and for several days past the output has averaged nearly, if not fully, one hundred tons daily. In regard to covering up ore with timbers, it is absolutely false. He has, within a few days, discharged a number of men, probably a hundred, but it was because there were too many. He has just finished paying off for June, and was obliged to draw 890 checks to settle with the different men on the pay-roll. A small portion of these were guards; but the difficulty he states is, that after the strike so many applications were made for work that, before it was known, too many men were en-

gaged. There are to-day fully five hundred men on the pay-rolls, and that is as many as were employed before the strike, and as many as can be employed to advantage. Immediately after the strike, the work could not be systematized back into the old grooves at once, and this is now being done. Instead of a movement being made in New York to bear the stock, on the contrary the orders are to turn out ore as rapidly as possible.

The *Democrat* says that the prospect-work about the Chrysolite mine lately has been quite successful, and some fine-looking bodies of ore have been exposed.

COLORADO PRINCE.—Great development has, been made in the mine. A body of very high-grade gold-ore has been struck, and a large amount is stored on the ore-platform. The quartz stamp-mill has not been running for a few days, but will soon be started up. The vein opened by the lower tunnel, run in near the mill-site, promises to prove a very rich strike. The vein-matter is a siliceous grit, resembling sand carbonates, and contains a large percentage of lead. Manager Daly exhibited a certificate which gave the following gratifying results: No. 1. Silver, 48 ounces; gold, 5¼ ounces; lead, 55 per cent. No. 2. Silver, 59 ounces; gold, 15 ounces; lead, 41 per cent. No. 3. Silver, 81 ounces; gold, trace; lead, 61 per cent. The ore will be run through the mill in the same manner as the quartz ores of this mine, and the gold and a large part of the silver obtained by amalgamating; the lead and the rest of the silver will be deposited on blankets. Whenever these deposits accumulate, they will be sent to the smelter and converted into base bullion.

HIGHLAND CHIEF.—The tunnel, which has been the principal avenue to this mine, is being made to a regular grade and enlarged in places. In direct mining, but a small force is at present employed, as the lower workings of the mine are filled with water. Regular shipments of ore are, however, made, the ore going principally to the Ohio & Missouri smelter, in Evans Gulch. About twenty tons of ore were in the ore-house on the 9th inst. The shaft is three by six feet in size, divided into two compartments. The shaft cuts the tunnel at 125 feet in depth, and at about 120 feet from the mouth of the tunnel. When the pump is in operation, the mine will be drained, and work be prosecuted in the present lower level, as well as sinking to a greater depth be carried out. It is proposed to put a full force of miners at work as soon as the machinery is in operation. The water and ore will then be raised to the level of the tunnel, and conveyed out through this channel to the surface.

LOWLAND CHIEF.—The shaft is in a large body of hard carbonates, upon which drifts are running. Assays in places show large results, but as yet the generality of ore does not justify smelting. In the drifts running south and southwest, however, the product is rapidly increasing in value. The present ore is good for the works now being put up to treat ores of low grade in Galena. On the 7th, a force of men was also put at work on the No. 1 shaft, which is located directly east from the mouth of the tunnel on the Highland Chief. Some weeks ago, a cave occurred near the bottom of this shaft, and the *débris* is being removed and the shaft newly timbered.

ROBERT E. LEE.—The new machinery was set in operation on the 9th, and works very smoothly. It consists of right and left engines and hoisters. The engines are of 20 horse-power each, and the spools of the hoisters 3 by 4 feet. The hoisters are of the improved, grooved friction-wheel pattern, and work independently of one another. The Lee, like a great many mines in this camp, is taking out very little ore, but is pushing development-work. Another two-foot vein of ore that will run 5000 to 7000 ounces to the ton, was opened up on the 9th. These ores are so diffused with chloride of silver as to make them almost sectile. During the past two weeks, numerous developments have been made in the Lee mine, which add greatly to its value.

PARK COUNTY.

DOLLY VARDEN.—The *Fair-Play Flume* says that the pushing of the Hiawatha tunnel is the most important work going on within the limits of the Dolly Varden property, although the usual force of men is employed in developing, and the usual amount of ore is daily sent down to the sampling-works. The Hiawatha is to be the main working-tunnel of the entire property, and will prove a great saving of expense in mining when connected with the levels of the mine, as every thing can be run down ore-chutes instead of being hoisted in winzes and wheeled along inclines. This important end can not be secured in less than sixty days, as there remain 120 feet to run. The tunnel is seven to eight feet high and six feet wide, and a double shift of miners only push it about two feet per day. It is believed that ore will be struck before the working-levels of the mine are reached. As the largest ore-bodies opened in the past few months have been untouched, it is hard to say what will be the limit of the ore-production during the coming fall, but it will be very great.

SAN JUAN COUNTRY.

RICO.—A correspondent of the *Denver Tribune*, writing from this place, says that the camp, being but twelve months old, we expected to see little more than prospects, and but little development, and were very pleasantly surprised to find the Newman, on Dolores Mountain, with four tunnels, one 150 feet and another 60, shipping ore every day to Silverton, returning 200 and 300 ounces per ton. The Grand View, on Negro Baby Hill, has a shaft 70 feet deep, 6-foot pay-vein of carbonates (300-ounce mill-runs), and working 12 men. The Phoenix 40-foot tunnel, 8-foot vein of carbonates, assaying as high as 140 ounces per ton, ten men retimbering and preparing dumps for extensive operations. The two latter properties, together with three others, belong to the Grand View Company, composed of Senator Jones, Mr. J. B. Bailey, of Denver, and Mr. Jentries. The Grand View shaft is in excellent condition, as is also the dump. Seats are being prepared for boilers and hoisting-apparatus, and a chute is in course of construction, to extend from the shaft to mill-site, 1260 feet below. The Phoenix is to be developed by a tunnel, and is being timbered and otherwise prepared for extensive development. Ore being so plenty, it is used for constructing an extensive dump. The Aztec, another property of the company near Horse Gulch, is developing by a tunnel, and has hundreds of tons of galena on the dump awaiting the smelter. This company is shipping no ores at present. Then there is the Hope & Cross, the owners of which have a standing offer of \$140,000; the Eureka tunnel, belonging to the Rico Mining Company; and various others well worth mentioning. In all, there are at least 12 to 15 mines in the camp taking out pay-ore, and several are shipping to Silverton and Lake City for treatment, and receiving good profits after packing on burros. The *Dolores News* says that ore from the Newman has been shipped for some time past, and we last night learned that mill-runs from the last lot of six and a half tons were sent to the San Juan & New York Company, at Silverton. The ore was carefully sorted, and the result is a very good ore for such a large body of ore as is in sight in the mine. The first-class ore ran 308 ounces in silver and 2 ounces in gold; second-class, 263 ounces in silver and 2 ounces in gold; and the ore of the third class ran 168 ounces in silver and 2 ounces in gold.

MOUNT SNEFFELS M. AND R. CO.—The superintendent has let a contract for a 50-foot drift on the Potosi, which, when completed, will make the tunnel 254 feet. He is working three shifts in the shaft and sinking on one foot of good mineral. The surface-water that compelled a suspension of shafting some time since has disappeared, and miners encounter nothing in the shape of water or foul air to impede their progress.

HAVERLY'S GOLDEN GROUP.—The *Lake City Mining Register* says that there are 13 lodes in this group, situated on Bear Creek, near San Miguel City. A force of 25 men—miners, laborers, etc.—is actively engaged on this valuable property. All the lodes will receive attention this year. The Savage, in the group, has been developing amazingly, \$103,000 in gold being the product of a late assay.

CHICAGO ENTERPRISE GOLD AND SILVER MINING COMPANY.—The *La Plata Miner* says that the superintendent of the Chicago Enterprise Gold and Silver

Mining Company has had a force of men at work on the White lode for the past three weeks. The company will double its working force in a few days. A blind lode, which was discovered on the White surface-ground, is looking splendidly, showing a fine streak of pay-mineral from which some very flattering assays have been obtained.

IDAHO.

The *Avalanche* of the 3d inst. itemizes as follows:

BLACK JACK.—Work is progressing under favorable auspices at the the Black Jack mine, on Florida Mountain. As yet, operations have not fairly commenced for the season in that quarter; but the probabilities are, that much work will yet be accomplished during the summer and fall months. There are some 13 men working at the mine, and about 150 tons of ore are now ready for shipment. The superintendent informs us that the outlook for the mine is quite favorable, and that there is a good supply of rock in sight, which will average from thirty to forty dollars to the ton. There are still some heavy snow-banks on the road between the mine and the mill, but hauling will probably begin next week.

CROWN PRINCE.—At this mine, near Wagontown, a new shaft is sinking, and much good ore has been taken out recently. After sinking about twenty feet farther, a connection will be opened below between the two shafts.

ENTERPRISE.—There is a force of men at work on the Enterprise mine, in the vicinity of the old Mahogany. A tunnel has been run in 300 feet, and the indications are very favorable for striking an unusually rich ore-body soon.

OWYHEE.—The mine is looking well, and is making favorable progress under contract work. There are eighteen men at work in the mine, and at that point of the ledge where ore is now extracted, it presents a very favorable appearance.

TREMONT.—The recent rich strike grows still more promising. The ledge looks better now than ever it did before, and some of the rock recently taken out will go as high as \$4000 to the ton.

ELMIRA.—This company has encountered a very rich vein of black sulphurets of silver in the Crown Point mine, at Banner, while sinking near the main ledge. The new find is six inches in width, and assays \$700 per ton. The indications are, that it unites with the main mine at a depth of a few feet below the present works.

MONTANA.

The *Butte Miner* of the 8th inst. has the following mining notes:

ANSELMO.—The mine having been emptied of water, drifting has been resumed east and west on the vein, each drift now being in 40 feet. Some excellent ore is being produced of a character very similar to that from the lower levels of the Alice. In the west shaft, down about 35 feet, the ore, as stated in our last report, has undergone a marked improvement, assaying from \$300 as high as \$1000 per ton. This quality of ore seems to be crowding out the other, as the streak as developed on top is almost pinched out.

BELL.—The east shaft is expected to be emptied of water to-day. In the middle shaft, the east drift on the hanging-wall side of the ledge is pushed vigorously ahead, and is producing some very high-grade ore, of which perhaps 75 tons are on the dump.

BURNETT.—There is nothing new to report from this property. Operations are principally confined to the stopes in the east level, which are producing about 30 tons of free ore each 24 hours.

GAGNON.—The east drift from the bottom of the 225-foot shaft has attained a length of 175 feet, and is pushed ahead at the rate of two feet per day. The ore-body is about ten feet wide, but is not all first-class, though the bulk of it is of excellent grade. The east drift has reached the Original claim, and has been stopped. Fifty men are employed. The daily output is from 35 to 50 tons.

GRAY ROCK.—In the bottom of the west shaft, the east and west drifts are in each 60 feet. At the time of our last report, the ore in the face of the west level had become of somewhat low grade, being mixed with some worthless matter. Since that, however, a great improvement is noticeable, the rock between the walls having become once more a clear and compact quartz. In the east level, the increase in the assay-value of the ore noticed in our last report has continued, and the vein has opened out to about 18 feet in width. The yield is now thirty tons per diem, assays averaging \$40 per ton.

HIGH ORE.—From the bottom of the east shaft, recently sunk to water-level, a depth of 75 feet, and on a vein of ore the full width of the shaft from the surface to the bottom, a drift west was started several days ago, which will connect with the main level of the mine. The stopes in the east drift of the main shaft are yielding daily from 12 to 15 tons of very free ore. Only a small force is at present employed, on account of the great ease with which the ore can be extracted.

MAGNA CHARTA.—The shaft, double compartment, is down 18 feet, and will be sunk, without any further delay, 300 feet. It will probably connect with the main level, or, more properly, tunnel, and will likely strike the ledge at a depth of 40 feet.

MOOSE.—On the dump there are 100 tons of 70-ounce ore, which will be shipped to the smelter for reduction this week. The west shaft is down about 25 feet, following a well-defined vein of base ore, between 3 and 4 feet wide.

STEVENS.—A cross cut started south from the face of the east drift in the west shaft, and at a point where a horse cut off the ledge and discouraged the man who was then working the mine, has been run about 18 feet, and has recovered the ledge, the direction of which seems to be changed. In the face of the cross-cut, the ore-body is two feet wide, and is still enlarging. Assays within the past three days showed 88 and 135 ounces. In the west level, the vein pinched temporarily, but is now coming in larger and better than ever. On the dump there are 70 tons of ore which will sample \$125 per ton in silver and gold. It will be shipped this week to the Dexter mill.

NEVADA.

THE COMSTOCK LODE.

The summary of the *Gold Hill Daily News* for the week ending July 7th is as follows:

The situation along the lode is to-day practically unchanged, except as general advances are made toward objective points.

All eyes are turned just now toward the 2500 level of Union, as its opening up will give a hint as to the future of the north end. The work progresses well, but hardly keeps pace with the desires of the people. The drifts south and northeast from the Union shaft are running well; still, nothing can be expected of either, since neither is in the line or trend of the ore-body. Although the drift from winze No. 1 for winze No. 2 was thought to be too far east of the make of the ore-body to show any thing, it is getting quartz, portions of which are of milling grade—a good development. The drift from winze No. 1 toward the 2500 station of the Sierra Nevada incline is so near its objective point that connection can be made easily when the incline is drained.

Sierra Nevada can soon make interesting explorations east on the 2400 level. In Ophir, the immense reach of heavy vein material on the 2500 level continues, and is liable to surprise people agreeably one of these days.

Norcross has quit stoping until the Chollar finishes repairs on the 2400 level and in the drift west.

In Chollar, the flow of water shows no appreciable diminution, and it begins to look as though the hydraulics must be placed and operated before relief can come. Jacket is pumping, and has laid aside its bailing-tank for another double cage. It is beginning to relieve its neighbors of difficult and costly work, and will continue to do so increasingly in the future.

Alta has hot water in its east cross-cut, 1950 level, the drill-holes being full of it. The mine is waiting for a draining off of the flood.

Silver Hill has water in its winze too, but handles it easily.

SUTRO TUNNEL.—Following is the report of progress in the North Lateral Branch, for the week ending July 1st, 1880—the header being 8x10 feet:

Number of feet driven at last report 3,435
Number of feet driven since..... 118

Total number of feet in Branch..... 3,553

Following is the report of progress in the South Lateral Branch, for the three days ending June 25th:

Number of feet driven at last report..... 1,335
Number of feet driven since..... 28

Total number of feet in Branch..... 1,363

EUREKA DISTRICT.

The *Ruby Hill Mining News* notes the following:

DUNDERBERG.—The ore taken from the Dunderberg of late has given an average assay of \$100, and within the past week a large quantity running to twice that amount has been extracted. About 30 tons are taken out daily, and the outlook in this mine is good.

EUREKA CONSOLIDATED.—Work is progressing steadily in the new shaft of the Eureka Consolidated, and it is now down 135 feet. The Ingersoll drills work smoothly. Mr. Al. Burt has now entire charge of the work.

HAMBURG.—Work still continues in the drifts running north and south from the 800-foot level of the Hamburg. The south drift is in low-grade ore, with streaks of rich, all showing both gold and silver. The indications in this mine have never before been so favorable.

RICHMOND.—There is sufficient ore extracted in six days to keep the three furnaces running continually, and never in its history has it shown such indications of permanency as at present. The ore is not confined to one level or particular spot, but is scattered plentifully from the second to the eighth level. The method adopted by the management in thoroughly prospecting and cutting up the mine into sections has proved successful, and has enabled them for a long time to discover and open up a new body of ore before the old one had been exhausted. A large force is constantly employed in running drifts, and doing other dead-work, and about twenty men are working on tribute in the old abandoned portions of the mine, all of whom are making fair wages.

WALES CONSOLIDATED.—Three shifts are to be run in this mine, and the main shaft will be sunk as rapidly as possible.

PROPOSALS.

For the benefit of many of our readers, we compile weekly such proposals and solicitations for contracts, etc., as may be of interest. The table indicates the character of proposals wanted, the full name and address of parties soliciting, and the latest date at which they will be received:

Constructing and Dredging a Ditch or Canal; Wellington Ellis, Drain Commissioner, No. 12 City Hall, Detroit, Mich.	July 17, 1880.
Construction of Life-Saving Stations; Treasury Department, United States Saving Service, Office of the General Superintendent, Washington, D. C.	" 17, "
Improvement of the Harbor at Charleston, S. C.; Q. A. Gillmore, United States Engineer's Office, Army Building, New York City.	" 19, "
Building a Superstructure for a Bridge across the Zumbro River; City Recorder, Rochester, Minn.	" 19, "
Pumping-Engine and Boiler; Office of the Board of Water Commissioners, Yonkers, N. Y.	" 19, "
Remodeling Engine-House; Johnson & Kremer, Architects, 64 North High street, Columbus, O.	" 19, "
Construction of a Steam-Heating Apparatus; C. F. Fraser, Department of Public Works, Toronto, Ont., Canada.	" 19, "
Rebuilding a portion of Chelsea Bridge; George A. Hall, Office of City Engineers, City Hall, Chelsea, Mass.	" 20, "
Two thousand five hundred and thirty (2530) Cubic Yards of Fine Sharp Gravel; John S. Cunningham, 425 Chestnut street, Philadelphia, Pa.	" 20, "
Military Supplies; Depot Quartermaster's Office, 1139 Girard street, Philadelphia, Pa.	" 20, "
Improvement and Enlargement of the Water-Works of the City of Allentown; Edwin G. Martin, Mayor, Allentown, Lehigh County, Pa.	" 20, "
Furniture for the Executive Chamber, etc.; James W. Eaton, Superintendent New Capitol, Albany, N. Y.	" 22, "
Carving the Wood-Work of the Ceiling of the Senate Chamber; James W. Eaton, Superintendent New Capitol, Albany, N. Y.	" 22, "
Gas Fixtures for the Executive Chamber, etc.; James W. Eaton, Superintendent New Capitol, Albany, N. Y.	" 22, "
Building Two Side-Wheel Steamers; John Rodgers, Office of the Light-House Board, Washington, D. C.	" 22, "
Materials and Labor for Building a Grammar School-House; Office of Architect, Boston, Mass.	" 22, "
Improvements in and adjoining the First Ward of Long Island City; Office of the First Ward of Long Island City, on Vernon avenue, Brooklyn, N. Y.	" 22, "
Pumping-Engine and Boiler; Office of the Board of Water Commissioners, Yonkers, N. Y.	" 23, "
Alterations, Additions, etc., at the Lunatic Asylum, Blackwell's Island; Townsend Cox, Department of Public Charities, No. 66 Third avenue, New York City.	" 23, "
Construction of a Low-Truss Iron Swing-Bridge; Board of Supervisors of Nansemond County, Va.	" 24, "
Material and Labor for the Erection of One Brick School-House; Board Education of Madison Township, Franklin County, O.	" 24, "
Fire-Proof Roof; James Eveleth, Government Buildings, corner of Seventeenth and F streets, Washington, D. C.	" 25, "
Brick School-House; H. W. Hartwell, Architect, 18 Post-Office Square, Boston, Mass.	" 26, "
Printed Wooden Tags and Cord Clamps for Tie Mail Sacks; D. M. Key, Postmaster-General, Washington, D. C.	" 27, "
Construction of Building at Fort Snelling; Charles H. Tompkins, Office of the Chief Quartermaster, St. Paul, Minn.	" 29, "
Building a Cell-House, Indiana State Prison South; Warden's Office, Jeffersonville, Ind.	" 30, "
Lighting the City of Guayaquil; R. & C. Degener, No. 50 Wall street, New York City.	" 31, "
Veterinary Instruments, etc.; Depot Quartermaster's Office, Houston corner of Greene street, New York City.	" 31, "
Competitive Designs for the Provincial Parliament and Departmental Buildings; Department of Public Works, Toronto, Ontario.	August 1, "
Locks and Keys; D. M. Key, Postmaster, Washington, D. C.	" 2, "
One Hundred Walnut Cases for "Farmer's Weather Indicator;" H. W. Howgate, War Department, Washington, D. C.	" 2, "
Building a Reservoir; Allan Campbell, Department of Public Works, Room 19, City Hall, New York City.	" 4, "
Delivering and Laying 48-inch Cast-Iron Conduit-Pipe; Allan Campbell, Department of Public Works, Room 19 City Hall, New York City.	" 4, "
Coke and Coal; J. G. Pendergast, Office of Chief Fire Engineer, Indianapolis, Ind.	" 5, "
Construction of a Hospital; Alexander J. Perry, Office of the Chief Quartermaster, Department of the East, Governor's Island, New York Harbor.	" 7, "
Quartermaster's Stores; Depot Quartermaster's Office, Houston street, corner of Greene, New York City.	" 9, "
Five Thousand Tons Australian Coal; Secretary of the Bombay Gas Company (Limited), 8 Draper's Gardens, Throgmorton avenue, E. C., London, Eng.	" 31, "
Fire-Engines; Den Burgermeisteramt, Colmar, Germany.	Sept. 5, "
System of Water-Supply; T. P. Newell, City Clerk's Office, Joplin, Mo. See advertisement in another column.	

FINANCIAL.

Gold and Silver Stocks.

NEW YORK, Friday Evening, July 16.

The mining stock market has been rather a discouraging one during the past week. There has, however, been considerable buying on the part of cliques and insiders, with the expectation of an advance a little later on. Some of our mines are doing very well, and the prospects of others are certainly very encouraging. There is considerable dishonest manipulation on the part of some of the managements that is worthy of the attention of the stockholders. But little activity can be expected during the warm weather, many of the operators and brokers being absent.

The Comstock shares show a slight improvement in business at slightly weaker prices. Consolidated Virginia shows a decline from \$3.45@2.90, with a business of 3850 shares. California has been steady with a moderate business, with sales of 485 shares at \$2.10@1.90. Consolidated Imperial shows a fair business at declining prices, with sales of 1200 shares at 26@21c. The sales of Union Consolidated amount to 130 shares at \$21.75@20.25, and of Leviathan, 700 shares at 16c.

The Bodie stocks have been quiet and weak. The sales of Bodie amount to but 200 at \$5. Standard has had a fair business at stronger prices. The sales amount to 1005 shares at \$26@27½. Bechtel has been very quiet and weak, the sales amounting to 500 shares at \$1.10@1.05. Bulwer has had a fair business, but continues to grow weaker. The sales amount to 885 shares at \$2.75@2.25. Goodshaw has had a good business, with prices stronger in the earlier part of the week, but weaker at the close. The sales aggregate 8000 shares at \$2.@1.50@1. South Bodie has been very quiet with prices still weaker. The sales amount to 600 shares at 12@9c. May Belle, with a fair business, was strong and steady in the fore part of the week, but has fallen off since. The sales aggregate 4090 shares at 47@21c. The sales of Tioga amount to 100 shares at \$1.

The Tuscarora stocks have been quiet and without particular feature. Tuscarora, with a moderate business, has grown a little stronger. The sales amount to 2700 shares at 12c.@8c. Belle Isle is quoted at 57c.@60c., with sales of 600 shares. The sales of Independence amount to 200 shares at 46c., and of Navajo, 700 shares at 50c.@35c.

The miscellaneous San Francisco stocks have been very quiet, with no particular feature. The sales of Eureka amount to 100 shares at \$17.13@16.50, and of Caledonia, B. H., 500 shares at \$2.30@2.45.

The dealings in the stocks on the regular lists of the New York Stock Exchange and the New York Mining Stock Exchange have been as follows: Amie has been active and steady, with sales of 47,400 shares at 72@88c. Chrysolite still continues to grow weaker, and gives no signs of a reaction, so far as we can learn. The sales this week have been the largest for some time past, and this no doubt has considerable to do with the falling off in price. The sales aggregate 27,312 shares at \$11@9½. Climax has had a fair business at fairly steady prices. The sales amount to 3850 shares at \$3.45@2.90. Deadwood is quoted at \$16, with sales of 100 shares. Excelsior, with sales of 200 shares, is quoted at \$17. Findley has been very quiet, with sales of 1600 shares at 18@17c. Great Eastern has been quiet and weak, with sales of 6600 shares at 59@55c. Green Mountain has had a fair business at better prices. The sales aggregate 4000 shares at \$3.10@3.50. Homestake has had a business of 200 shares at \$35@34½. Horn-Silver was quoted at \$17@17½, with a business of 1250 shares. Hukill has had a fair business, but has grown weaker. The sales amount to 21,050 shares at \$1.55@1.10. Leadville has had a moderate business at declining prices. The sales amount to 3029 shares at 72@65@78c. Little Chief has been quiet, but steady, with sales of 3960 shares at \$7.19@8. Little Pittsburg has been quite active, but has declined in price. The sales aggregate 7290 shares at \$6@3¾. Moose has been active but steady, with sales of 16,850 shares at 70@78c. Calaveras has been quiet and steady, with sales of 6000 shares at 56@51c. The sales of Central Arizona amount to 600 shares at \$6@5½. Durango, with a good business has been weak, the sales amounting to 21600 shares at 56@40c. The Quicksilver stocks have been more

active than of late; in Preferred the sales aggregating 2000 shares at \$58@62½, while Common has been quiet and steady, with sales of 550 shares at \$11@10½. Rappahannock has had a fair business, at steady prices, the sales aggregating 9000 shares at 40@36c. Silver Cliff, with a fair business, was quite strong early in the week and steady at the close. The sales amount to 3100 shares at \$4.90@4.65@4.40. South Hite has been quiet and steady, the sales amounting to 4300 shares at \$1.55@1.45. Sutro Tunnel has had a fair business at steady prices. The sales amount to 12,100 shares at \$1¼@1¼.

The dealings in the fancies have been as follows: Buckeye, 71,200 shares at 27@33c.; Dahlonega, 1500 shares at 8@7c.; Gold Placer, 5200 shares at 60@68c.; Granville, 4950 shares at 10@15c.; Lacrosse, 3200 shares at 28@30c.; Lucerne, 500 shares at 12c.

The dealings at the American Mining Stock Exchange show more activity, and, as a rule, better prices. The following table gives the transactions for the week:

AMERICAN MINING STOCK EXCHANGE.					
STOCKS.	Open- ing.	High- est.	Low- est.	Final.	Sales— shares.
Amie.....	.85	.86	.76	.86	10,900
Auburn & Rock Creek.....	1.15	1.30	1.15	1.25	6,200
Battle Creek.....	4.50	4.75	4.50	4.62½	7,600
Barbee & Walker.....	5.50	5.50	5.00	5.25	13,400
Best & Belcher.....	8.25	8.62½	8.00	8.50	550
Bodie.....	5.37½	5.37½	5.12½	4.50	300
Boston.....	1.00	1.00	.....	1.00	100
Bulwer.....	3.00	3.00	2.90	2.90	200
By-and-By.....	1.05	1.10	.90	1.05	2,400
California.....	2.05	2.05	2.00	2.00	1,100
Con. Pacific.....	.....	.....	.....	.....	.....
Con. Virginia.....	.....	.....	.....	.....	.....
Climax.....	2.60	2.60	1.45	2.45	2,600
Columbia.....	3.37	4.37½	3.37	4.00	600
Cosette.....	.....	.....	.....	.....	.....
Crowell.....	.17	.17	.14	.14	700
Chrysolite.....	10.75	10.75	8.87½	9.50	2,200
Copper Knob.....	.45	.45	.....	.45	100
Durango.....	.60	.60	.42	.48	10,700
Glynn Dale.....	.35	.35	.30	.32	400
Girard.....	1.40	1.50	1.40	1.45	1,105
Hukill.....	1.40	1.40	1.20	1.40	3,100
Iron-Silver.....	4.50	4.50	3.50	4.00	1,500
Leadstone.....	.60	.60	.....	.60	100
Little Chief.....	7.50	7.50	7.12½	7.50	600
Mexican.....	8.00	8.50	8.00	8.12½	620
Mayflower.....	.90	1.00	.90	1.00	200
Mineral Creek.....	1.85	1.85	.....	1.85	100
Mono.....	3.90	3.90	.....	3.90	1,105
Ophir.....	7.37½	7.37½	.....	7.37½	100
Silver Nugget.....	1.50	1.65	1.45	1.65	42,500
Standby.....	4.25	4.25	.....	4.25	100
Standard.....	.....	.....	.....	.....	.....
Sutro Tunnel.....	1.85	1.85	.....	1.85	100
South Bulwer.....	.75	.75	.....	.75	100
Sierra Nevada.....	11.25	11.25	10.75	10.75	200
Tombstone.....	5.00	5.00	4.75	4.75	200
Vandewater.....	.50	.50	.....	.50	500
Union Con.....	20.50	20.50	.....	20.50	100
Total sales.....	.....	.....	.....	.....	112,805

UNLISTED STOCKS.

Messrs. Trask & Francis, under date of July 16th, 3 P.M., report the current quotations of unlisted stocks as under:

	Bid.	Off'd.	Bid.	Off'd.
Bassick.....	.....	\$10	May Flower.....	.....
Breece.....	.55	.70	Native Silver.....	\$1.00
Bull-Domingo.....	\$.55	\$.66	New Philadel-.....	.70
Bald Mountain.....	.30	.35	phia.....	.50
Carbonate Hill.....	.30	.40	O K & Winneb'o.....	\$.75
Dunderberg.....	\$.25	\$.25	Penobscot.....	\$1.00
Empire Utah.....	.....	\$.65	Red Elephant.....	\$1.50
Father de Smet.....	\$.15	\$.16	Sir Rod'k Dhu.....	.50
Freeland.....	\$.35	\$.40	Stormont.....	\$.30
Horn-Silver.....	\$.17	\$.17½	Silver Nugget.....	\$1.50
Telegraph Con.....	\$.4	\$.45	Trinity.....	.....
Iron Silver.....	.....	\$.55	Van de Water G.....	\$1.00
Belmont.....	\$.2	\$.25	Sacramento.....	¾
Hortense.....	.....	.50	Bonanza Chief.....	.35
Little Chief.....	\$.8	\$.8.25	.....	.....

OFFICIAL LETTERS.

Amie.—A recent letter from the manager reports that the workings are very promising. He expects to pay a dividend of 10 cents per share by August 15th. A private letter, dated July 9th, received in this city, says in regard to Amie: "I regard it as one of the best in camp, and would sooner have its stock than that of either the Little Pittsburg or Iron mine. I see the stock quoted at 90, and would advise your friends to hold on and not sell at this low figure."

Alice.—Recent advices from this mine state that the main shaft has passed the 600-foot station and will soon be at the 700 foot. A breast of ore twelve feet wide and twenty high has been carried west about 300 feet on the 400 level, and a similar one on the 500, leaving ore on the side standing 40 feet thick. The new mill is being put up as fast as possible, the old one running meanwhile. This company's property is at Butte, Montana.

Barbee & Walker.—A letter from the superintendent, dated the 3d inst., says the total shipments for the month of June amounted to \$26,330. The mill started up last night, and is now running well. We put in new wings in the fans and new shoes in the settlers, repaired the brick-work under the mill boiler, put in new shoes and die in the rock-breaker, tightened up all the belts, and, in short, put every thing in "ship-shape," and, unless something unforeseen occurs, will be pounding away constantly for another thirty days without cessation.

Bulwer Consolidated.—The superintendent, writing under date of June 5th, says:

During the week ending July 31, we employed 71 miners, 10 carmen, 4 timbermen, and 2 blacksmiths at \$4; 1 blacksmith helper at \$3.50; 1 shift boss at \$5 and 1 foreman at \$6 per day; 1 clerk at \$50 per month. We extracted and shipped to the mill 445 tons of ore from the 200, 300, and 400 foot levels; the average pulp-assay for the week is \$10.97. The south drift on Ralston vein, 300-foot level, has been run 15 feet, showing a ledge 3 feet wide. The south drift, Stonewall vein, 400-foot level, has been run 24 feet; the ledge is 2½ feet. There is no change to report in the appearance of the stopes. The Ralston stopes show from 2 to 3 feet of ore.

Chrysolite.—A dispatch dated the 12th inst. states that 62 tons of ore were shipped by this company to the smelters. The prospect-work about the mine lately has been quite successful, and some fine-looking bodies of ore have been exposed. About from sixty to eighty men and boys employed at the mine have been discharged during the past two days, and the force, numerically, is now just about where it stood before the strike.

Dunderberg.—The usual progress is making in the workings of this mine. The south branch in the first level is yielding rich ore, and shows from six to eight inches of quartz, spotted with mineral. The stope 30 feet behind the drift carries from 6 inches to 1 foot of solid mineral. The ore sold from the mine during the week amounted to \$1306.94, and \$1804.89 from the jigs.

Empress.—This mine is located in Central City, Colo.; its shaft is down over 290 feet. The character of the vein is changed. It is in white flint quartz, sprinkled throughout with fine-grained white iron pyrites and blue and yellow copper. There is every indication of reaching rich ore as depth is attained, and the shaft is to be sunk 500 feet, when levels will be run on the vein, which is about five feet wide.

Hite Mine.—This company is running forty stamps with a twenty-six-inch turbine wheel, and six hundred inches of water. W. A. Grove is assistant manager. At the mine on the 900-foot level, which is 500 feet above the south fork of the Merced River, they have recently opened a 15-foot ledge and drifted on the pay-chute, and have a continuous chimney from the 660-foot to the 900-foot level. At present, this company employs 80 men.

Little Chief.—The general manager, writing under date of the 8th inst., says that there is now an improvement both in the west workings from Daly shaft, and in the winze we are starting below the south drift from No. 4 shaft, some 60 feet south from the shaft. In the latter place, we have some spots of very rich ore, with indications of a good body making. Ore-shipments are over 100 tons per day, the grade is high, and by July 15th the usual dividend will be clearly earned. The following telegrams were received:

July 13th.—Mine looking better than at last report; rushing prospecting-work ahead rapidly.

July 14th.—Shipments Monday and Tuesday, 234 tons; ore high-grade.

Little Pittsburg.—A committee appointed to examine into the financial condition of this mine, reported on Saturday last as follows:

Cash in New York.....	\$24,781.65
Tools and chattels at mine.....	9,311.60
Surplus on hand at mine.....	2,194.26
Timber and fuel.....	883.00
Feed and hay in barn.....	71.00
Furniture in New York office.....	1,614.64
LIABILITIES.	\$38,856.15
Due Bank of Leadville.....	\$267.45
Balance.....	\$38,588.70

In addition, the committee report on the property, comprising 30 acres of mining land.

Robinson Consolidated.—The general manager, writing on the 9th inst., says:

Following is the mine report for eight days ending July 8th: Main incline continued 7½ feet, total length, 387½ feet; lower level continued 27 feet, total length, 593 feet; No. 1 north cross-cut continued 24 feet, total length, 114 feet; No. 2 north cross-cut winze continued 6½ feet, total length, 36½ feet; No. 4 south cross-cut continued 12 feet, total length, 62 feet; No. 5 north cross-cut continued 8 feet, total length, 8 feet; average number of men employed daily, 80; average number of teams employed, 4. No. 1 north carries ore in face; No. 2 north cross-cut winze

is through the ore and into limestone very much broken; I think it will catch ore again. No. 4 south cross-cut carries fine ore in face, roof, and floor. No. 5 south cross-cut carries fine ore in face. No. 5 is 66 feet down the incline from No. 4 north cross-cut. Face of main incline gives much water, keeping the pump going steadily; the ore-body is gradually working to south of main incline. Tunnel shows no change. Large quantities of wood are being stored up, preparing to sink tunnel-shaft. The ore being shipped is from rich body struck in No. 2 north cross-cut. First-class ore shipped to Leadville, 4 1/4 tons.

A special dispatch to the *Daily Mining News*, dated the 14th inst., states that recent developments are of the most encouraging nature.

Standard Consolidated.—The superintendent, in his official letter for the week ending July 5th, says:

During the week ending July 5th, we employed 89 miners, 21 carmen, 4 skippers, 3 tramwaymen, 3 station-tenders, 2 watchmen, 3 firemen, 3 blacksmith helpers, 7 laborers, 1 woodman, and 1 time-keeper at \$4; 2 shift-bosses, 7 engineers, 3 blacksmiths, 3 carpenters, and 2 pumppmen at \$5; 7 ore-sorters and 1 woodman at \$3.50; 1 chief engineer, 1 carpenter, and 1 blacksmith at \$6; 9 shaft miners at \$4.25, and 3 at \$5 per day; 1 foreman at \$250, and 1 clerk at \$150 per month. We extracted and shipped to the mills 1015 tons of ore from the 300, 400, 450, and 550 foot levels. The average pulp assay for the week is \$36.60. The amount of crude bullion received is \$3705 ounces, and the amount shipped to the company \$22,824. Since my last report, the new shaft has been sunk 11 feet, making a total depth of 865 feet; the rock remains unchanged. The north drift from the west cross-cut, 700-foot level, is in 78 feet; progress for the week, 18 feet. The north drift from the west cross-cut, 500-foot level, has been extended during the week 13 feet; total length, 73 feet; the ledge at this point is 6 feet wide. This upraise from the north drift, 550-foot level, is up 80 feet; progress since last report, 13 feet; the ledge is 8 feet wide. The upraise from the south drift, 385-foot level, has been advanced during the week 15 feet, showing a vein 7 feet wide; upraise from the north drift (same level) is up 55 feet; progress for the week, 15 feet; the ledge is 5 feet wide. The south drift from the west cross-cut, 300-foot level incline, has been extended 15 feet, with a ledge in the face 3 feet wide. The stopes are all looking well. In the north drift, 385-foot level, the vein is about 25 feet wide; in the south drift it is 6 feet wide. The stopes on the 550-foot level, south drift, show a ledge from 6 to 10 feet wide.

Spring Valley.—We append the following dispatches received for the dates annexed:

CHEROKEE, CAL., July 13, 1880.—Spring Valley will clean up about the 15th; indications big. Spring Valley is looking splendid. The new tunnel should be pushed more vigorously. Power-drills are of vital importance for large results. Tunnel completed would double yield—more too. Tunnel can be completed in nine months if money is spent. Washing can be carried on in old Spring Valley ground for twenty years if the tunnel is completed.

SAN FRANCISCO, July 15.—Telegraphed Robinson fully. Spring Valley will clean up about \$100,000, I think.

Seven-Thirty.—This property is located in the Poughkeepsie Gulch, San Juan County, Colo. A letter from the Consulting Engineer of the Company, Mr. John M. Stuart, says:

The vein has an average width of 120 feet, dipping a few degrees from the perpendicular, and continues in an unbroken course a great distance. The vein consists of a body of quartz, showing minerals in large quantities, consisting of lead, copper, bismuth, silver, and gold.

DIVIDENDS.

The trustees of the Green Mountain Gold Mining Company, of California, have declared monthly dividend No. 13 of 5 cents per share on the capital stock, payable July 26th to stockholders of record July 17th.

The trustees of the Rising Sun Gold Mining Company, of California, declared to day a dividend for June of 5 cents per share on the capital stock of the company, payable July 22d to stockholders of record July 20th.

The Father de Smet Consolidated Gold Mining Company has declared a dividend, No. 7, of 30 cents per share, payable on July 24th, on all stock issued from the New York agency. Transfer-books will close to-day and reopen on July 26th.

The Deadwood Mining Company has declared its monthly dividend of 25 cents per share, payable on July 20th.

Barbee & Walker has declared a dividend of \$10,000, or 1 per cent, payable July 25th. After the dividend is paid, it is said there will be \$25,000 in the treasury and no debts against the company.

The trustees of the Little Chief Mining Company declared a dividend to-day of 1 per cent on the capital stock amounting to \$100,000, or 50 cents per share, out of the sixth months' net earnings, payable at the Mining Trust Company July 24th, to stockholders of record July 20th.

The Homestake has declared a dividend of 30 cents per share (No. 19), payable on the 26th instant. Transfer-books close on the 20th.

The Northern Belle Mining Company has declared a dividend of 50 cents per share.

The Western Mining Company, otherwise known as the Contention, of Tombstone District, Arizona, has declared a dividend of 75 cents per share.

The Tombstone Mill and Mining Company has declared its regular monthly dividend of ten cents per

share, amounting to \$50,000, payable on the 15th inst.

The Eureka Consolidated Mining Company has declared a dividend of 50 cents per share, payable on the 20th.

The Idaho Mining Company, of Grass Valley, California, has declared its regular monthly dividend of \$5 per share on its capital of 3000 shares.

The manager of the Amie writes that developments are much more promising, and he thinks a dividend of \$50,000 can be paid August 15th.

Dunderberg has been earning money rapidly of late. The funds advanced to complete the equipment have been repaid, or nearly so; and a dividend can scarcely be delayed later than August.

The result of the Spring Valley clean-up will be announced in about ten days, and a dividend probably be given therefrom to the stockholders.

The July dividend list will show a decided improvement over that of preceding months. The list is growing in length.

The *Bulletin* says: "The Bodie dividend has been again passed. It is a little singular that such a promising district should be able to show only one mine that can pay dividends for any considerable period. It can hardly be that all the gold and silver of Mono County is centered in the Standard mine. There has been enough said about other mines in that district being on the eve of remembering stockholders. We imagine said stockholders would like to see even one of the many promises fulfilled."

The annual meeting of the Orford Nickel and Copper Company was held July 2d, at Capelton, Quebec. A dividend amounting to \$15,000 was declared. The new shaft is 700 feet deep; 100 tons of copper ore are smelted daily in the new furnaces, and 500 men are employed in the various works.

The Reading Railroad announces a dividend of \$1.50 per share on East Pennsylvania Railroad stock, payable July 20th.

The East Mahanoy Railroad announces a dividend of \$1.50 per share, payable on demand.

REVIEW OF THE SAN FRANCISCO MARKET.

At one period during the week, the San Francisco market showed signs of some improvement, but this has since been lost, and we again record the usual depressed condition of affairs. The following statement, taken from an evening contemporary, is significant in this connection:

"In San Francisco, the leading banks have refused to make advances to mining corporations in the shape of overdrafts or in any other way than on undoubted security. The Bank of California has withdrawn the greater part of its funds from mining investments and loans on mining and milling securities. The report of the Bank Commissioner shows its loans on all kinds of stocks and bonds—bank, railroad, gas, water, manufacturing and mining—to be only \$1,553,747, while its loans on real and personal property amount to \$3,933,381. The cash on hand and at the Virginia City and New York agencies amounts to \$6,942,723, and the entire assets are given at \$12,385,808. The bank has entirely recovered from the effects of its suspension in 1875, and is again the richest and best conducted banking corporation on the Pacific coast."

Referring to the present condition of the mining interest in San Francisco, the *Eureka (Nev.) Leader* says:

"Three fifths of the brokers are, plainly speaking, 'busted.' The bottom of the Comstock has entirely slipped out, and the operators are without hopes. Eureka is a paradise compared to Virginia. Times there are distressingly dull. Real estate that was worth \$10,000 a year ago can be purchased for \$1000 now, and there is nothing to indicate a change for the better. If the San Francisco stock-sharps and capitalists had abandoned the Comstock years ago and turned their attention to Eureka, they would have still had a booming market, and it is probable that in time they may be convinced of this fact."

Bullion closed yesterday at \$1 1/4. The *Bulletin* of the 2d inst. says:

"Pending the delinquency of the Bullion assessment of \$1 per share in the board to-morrow, the stock has fallen to \$1 per share, the lowest in three years. The obligation entered into by the trustees in the purchase of the Ward shaft, in connection with Julia, is the cause for the depression in this stock. It is unnecessary to say that some of the stockholders are disgusted with that arrangement. The consideration was \$400,000, of which the Bullion is pledged for \$300,000, and the Julia for \$100,000."

Consolidated Virginia is lower, closing yesterday at \$2 1/4. This company is now extracting about 1200 tons of ore per week of the usual grade. There is nothing of special interest regarding the developments in this mine.

California is sending out about 500 tons of ore per week of the usual grade. This stock has been steady during the week at \$2 per share.

Eureka Consolidated is lower, closing yesterday at \$16. It is said that the mine is looking well, with sufficient ore being extracted to supply the two furnaces,

SAN FRANCISCO MINING STOCK QUOTATIONS.
Daily Range of Prices for the Week.

NAME OF COMPANY	CLOSING QUOTATIONS.						Open- ing, July 16.
	July 9.	July 10.	July 12.	July 13.	July 14.	July 15.	
Alpha.....	5	4 1/4	4 1/4	4 1/4	4 1/4	4	
Alta.....	1.85	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	
Argenta.....	.....	.....	.....	.....	.....	.....	.....
Bechtel.....	.....	95c.	27-32	1 1/4	7-10	13-32	.....
Belcher.....	2	1.80	1 1/4	1 1/4	1 1/4	1 1/4	.....
Belle Isle.....	.....	.....	19-32	19-32	19-32	19-32	.....
Belvidere.....	.....	.....	.....	.....	.....	.....	.....
Best & Bel.....	8 1/4	8 1/4	8 1/4	8 1/4	8 1/4	7 1/4	.....
Black Hawk.....	.....	.....	.....	.....	.....	.....	.....
Bodie.....	5 1/4	5 1/4	5 1/4	5 1/4	5 1/4	5	.....
Boston Con.....	.....	.....	.....	.....	.....	.....	.....
Bullion.....	.....	.....	.....	.....	.....	.....	.....
Bulwer.....	2.80	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	.....
Caledonia.....	.....	.....	.....	.....	.....	.....	.....
California.....	2	2	2	2	2	2	.....
Cal. B. H.....	.....	.....	.....	.....	.....	.....	.....
Chollar.....	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	.....
Con Imp.....	.....	.....	.....	.....	.....	.....	.....
Con Pacific.....	.....	.....	.....	.....	.....	.....	.....
Con Va.....	3.45	3.35	3 1/4	3 1/4	3 1/4	3 1/4	.....
Crown Pint.....	1.45	1.30	1 1/4	1 1/4	1 1/4	1 1/4	.....
Dudley.....	.....	.....	.....	.....	.....	.....	.....
Eureka Con.....	18	17 1/2	17 1/2	17	15 1/2	16	.....
Exchequer.....	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	.....
Goodshaw.....	.....	.....	.....	.....	.....	.....	.....
Gould & Cur.....	3.10	3	3	3	3 1/4	2 1/4	.....
Grand Prize.....	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	.....
Hale & Nor.....	3 1/4	3 1/4	3	3 1/4	3	2 1/4	.....
Hillside.....	.....	.....	.....	.....	.....	.....	.....
Independence.....	.....	.....	.....	.....	.....	.....	.....
Jackson.....	.....	.....	.....	.....	.....	.....	.....
Julia Con.....	45c.	45c.	1/2	7-12	13-32	7-10	.....
Justice.....	65c.	60c.	21-32	19-32	21-32	19-32	.....
Kentuck.....	.....	.....	.....	.....	.....	.....	.....
Lady Wash.....	.....	.....	.....	.....	.....	.....	.....
Leeds.....	.....	.....	.....	.....	.....	.....	.....
Leopard.....	.....	.....	.....	.....	.....	.....	.....
Leviathan.....	.....	.....	.....	.....	.....	.....	.....
Mammoth.....	.....	.....	.....	.....	.....	.....	.....
Manhattan.....	.....	.....	.....	.....	.....	.....	.....
May Belle.....	.....	.....	.....	.....	.....	.....	.....
Mar. White.....	.....	.....	.....	.....	.....	.....	.....
McClinton.....	.....	.....	.....	.....	.....	.....	.....
Mexican.....	8 1/4	8	8	8 1/4	8	7 1/4	.....
Mono.....	3.90	3.90	3 1/4	3 1/4	3 1/4	3 1/4	.....
Navajo.....	.....	.....	.....	.....	.....	.....	.....
North Belle.....	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2	.....
N. Bonanza.....	.....	.....	.....	.....	.....	.....	.....
N. Standard.....	.....	.....	.....	.....	.....	.....	.....
Noonday.....	.....	.....	.....	.....	.....	.....	.....
Ophir.....	7 1/4	7 1/4	7 1/4	7 1/4	7 1/4	7	.....
Orig. Kys'e.....	.....	.....	.....	.....	.....	.....	.....
Overman.....	.....	.....	.....	.....	.....	.....	.....
Potosi.....	.....	.....	.....	.....	.....	.....	.....
Ray & Ely.....	.....	.....	.....	.....	.....	.....	.....
R. de Monte.....	.....	.....	.....	.....	.....	.....	.....
Savage.....	1.60	1.65	1 1/4	1 1/4	1 1/4	1 1/4	.....
Scorpion.....	1 1/4	1.45	.....	.....	.....	.....	.....
Seg. Belcher.....	.....	.....	.....	.....	.....	.....	.....
Sierra Nev.....	11 1/2	11 1/2	10 1/2	11	10 1/2	10 1/2	.....
Silver Hill.....	30c.	35c.	5-16	11-32	5-16	11-32	.....
Silver King.....	.....	.....	.....	.....	.....	.....	.....
So. Bulwer.....	.....	.....	.....	.....	.....	.....	.....
Summit.....	.....	.....	.....	.....	.....	.....	.....
Syndicate.....	.....	.....	.....	.....	.....	.....	.....
Tioga.....	1 1/4	1 1/4	1	13-32	19-32	19-32	.....
Tip Top.....	.....	.....	.....	.....	.....	.....	.....
Trojan.....	.....	.....	.....	.....	.....	.....	.....
Tuscarora.....	.....	.....	.....	.....	.....	.....	.....
Union Con.....	20 1/2	20 1/2	20 1/4	20 1/2	20 1/2	20 1/4	.....
Utah.....	9 1/4	8 1/4	.....	.....	.....	.....	.....
Wales.....	.....	.....	.....	.....	.....	.....	.....
Yel. Jacket.....	5	4.60	4 1/4	4 1/4	4 1/4	3 1/4	.....

A recent letter from the superintendent states that the progress with the new shaft shows considerable improvement over previous weeks. On the 31 inst., it had attained a depth of 136 feet.

Gould & Curry closed yesterday at \$2 1/4, which is quite a decline. On the 12th inst., a fire, which is supposed to have been the work of an incendiary, destroyed property to the amount of \$10,000, which included the carpenter and blacksmith shops, tramway to ore-dump, and ore-dump proper.

Hale & Norcross is extracting about 150 tons of ore per week, the average of which amounts to nearly \$37 per ton. This stock is a little lower, closing yesterday at \$2 1/4.

It is stated that the developments on the 2500 level of the Ophir mine are very flattering. This stock has been fairly steady during the week at \$7 @ \$7 1/2, closing yesterday at \$7 per share.

It is also stated that the 2400 level of the Sierra Nevada mine is looking very well. This stock, however, is weaker.

Active work is going forward in the Yellow Jacket mine; but from the published statements regarding the operations of the same, we should judge that such work is very expensive. The following from one of our contemporaries, will serve as an example:

At the Yellow Jacket shaft, the 3000 feet of pump-rod, pump-column, etc., are connected with the surface, and yesterday the engine was started sufficiently to put a strain of 25,000 pounds on the rod, to take the natural stretch out of it and to test the connection. The rod will give several inches, of course, before settling down to work. The strain was greater than will be required to run the pump after the rod shall have been ballasted. As the wood is put in dry, it naturally swells and binds at some places, but it can be eased at these points. The pump will probably be started in a few days, and as soon as it works smoothly and handles the water easily, work will be pushed rapidly

GENERAL MINING STOCKS.

Dividend Paying Mines.

Table with columns: NAME AND LOCATION OF COMPANY, Feet on Vein, Capital Stock, SHARES (No., Par Val), ASSESSMENTS (Total levied to date, Date and amount per share of last), DIVIDENDS (Total paid to date, Last Dividend), HIGHEST AND LOWEST PRICES PER SHARE AT WHICH SALES WERE MADE (July 10, July 12, July 13, July 14, July 15, July 16), SALES.

Non-Dividend Mines.

Table with columns: NAME AND LOCATION OF COMPANY, Feet on Vein, Capital Stock, SHARES (No., Par Val), ASSESSMENTS (Total levied to date, Date and amount per share of last), DIVIDENDS (Total paid to date, Last Dividend), HIGHEST AND LOWEST PRICES PER SHARE AT WHICH SALES WERE MADE (July 10, July 12, July 13, July 14, July 15, July 16), SALES.

G. Gold. S. Silver. L. Lead. C. Copper. * Non-Assessable. † Assessment paid. ‡ Ex Dividend. Total shares sold during the week, 348,770.

on the lower levels. The 3000 station is being opened, and a drift will soon be started east toward the ledge, which is about 250 feet from the shaft at this level. An east drift will soon be run from the 2828 level. The south drift on this level to connect with the Crown Point will be completed in three or four days. On the 2700 level, the ledge will be prospected east with the diamond drill.

This stock closed yesterday at \$3 1/2 per share, a marked decline from previous prices.

Leopard has nearly gone out of sight. The only quotation we have is on the 14th inst.; 1-16 was reported.

A Tuscarora (Nev.) dispatch reports that the Leopard Mining Company's mill, was destroyed by fire last night. It was insured by the company's creditors for \$15,000.

PHILADELPHIA MINING STOCKS.

The subjoined table shows the opening, highest, lowest, and final sales of all the mining stocks dealt in at the Philadelphia Stock Exchange, and at the Philadelphia Mining Exchange, for the week ending the 15th inst.:

Table with columns: Stocks, Opening, High, Low, Final, Sales Shares. Lists various mining stocks like Argenta, Amie, Buena, etc.

Number of sales..... 70,245

Gas Stocks.

NEW YORK, Friday Evening, July 16.

The market for gas stocks continues dull and steady, with the New York stocks very strong, and the Brooklyn weak. The N. Y. Mutual has declared a dividend of one and a half per cent and the Brooklyn Metropolitan one of two and one half per cent.

Following list of companies in New York and vicinity is corrected weekly by GEORGE H. PRENTISS, Broker and Dealer in Gas Stocks, No. 19 Broad street, New York. Quotations are based on the equivalent of \$100.

Table with columns: COMPANIES IN NEW YORK AND VICINITY, Capital Stock, Par, Dividends, Quotations. Lists companies like Mutual, N. Y., N. York, etc.

* Changed from certificates to bonds, of \$1000 each; 6 per cent per annum.

Copper and Silver Stocks.

Reported by C. H. SMITH, Commission Stock Broker, No. 15 Congress street, Room 3.

Boston, July 15. The market for mining stocks has shown but little activity the past week, especially in copper stocks. Sales have been small, but prices continue to rule quite firm, and in some instances an advance is noted. In silver stocks, Silver Islet has taken the lead, and shows a large advance over the closing prices of last week. Reports from the mine are of a very encouraging nature, and indicate that another of the "big bonanzas" for which this mine is famous has been encountered.

Calumet & Hecla continues steady at \$22 3/4 @ \$24 1/2. A dividend of \$5, payable August 16th, is announced, and there is but little stock in the market.

Central sold at \$39 1/2, only a lot of 10 shares, however, none being offered under \$40.

Copper Falls, steady at \$10 1/2 @ \$10 5/8.

Franklin advanced from \$13 1/4 to \$14, and is in good demand.

Quincy declined on the 9th to \$27, advanced to \$27 1/2, and closes \$28 asked.

Osceola also advanced from \$37 to \$39, and is strong at quotation.

COAL STOCKS.

Table with columns: NAME OF COMPANY, Capital Stock, Shares, Quotations of New York stocks are based on the equivalent of \$100. Philadelphia prices are quoted so much per share. Lists companies like Am. Coal Co., Buck Mt. Coal, etc.

* Of the sales of this stock, 16,708 shares were sold at the Philadelphia Stock Exchange, and 11,360 at the New York Stock Exchange.

Total Sales..... \$53,338

BOSTON MINING STOCKS.

Table with columns: NAME OF COMPANY, Shares, Par, July 9, July 10, July 12, July 13, July 14, July 15, Sales. Lists companies like Allouez, Atlantic, Atlas, etc.

c Copper. s. Silver. * 2,000,000.

Pewabic advanced from \$16 1/2 to \$18 1/2, but closed a little heavy, at \$18 asked.

Allouez sold at \$47.16 @ \$41, and is offered at the latter figure.

Huron sold up to \$45, but closed weak at \$41 1/4 asked.

National sold at \$2, but was stronger to-day at \$2 1/2.

Ridge advanced to \$4 1/2 on sale 50 shares, and closed \$5 bid.

Brunswick Antimony declined to \$15, but to-day was in good demand, with sales at \$17 1/2, and this afternoon at \$19, closing \$18 1/2 bid.

SILVER STOCKS.

Silver Islet opened on the 9th at \$14 1/2 @ \$15. On the 12th, it opened at \$25, declined to \$22, again advanced to \$32 1/2 this forenoon, and closed \$31 bid—none offered.

Duncan Silver also advanced from \$2 to \$2 1/4 on the improved outlook at the mine.

Catalpa, dull at \$1 1/2 @ \$1 1/4.

Harshaw advanced from \$30 1/4 to \$31 1/2.

Contentment steady at \$1 1/2 @ \$2.

Sullivan, a small lot sold at \$6.

International, 40 @ 50c.

The New Silver Islet Bonanza.—The Toronto Globe has the following from Prince Arthur's Landing, dated July 5th, 1880: "After long and patient months of working without success, on Wednesday last the proprietors of Silver Islet were rewarded by striking silver on the vein on the Islet at a depth of 960 feet from the surface.

"The managers at the Islet expect that an additional force of men will be put on there at once."

The following letter received to-day will explain itself: CUSTOMS HOUSE, SILVER ISLET, ONTARIO, July 8, 1880.

T. C. Newburn, Esq., Inspector H. M. Customs, Hamilton: DEAR SIR: Believing it will be a pleasure for you to hear and know, as it is for me to inform you, of a new and rich discovery of silver made last week in the bottom of Silver Islet mine; and yesterday more discovery of silver was made in another part of the mine, both places 250 feet apart and at a depth of nearly 1000 feet below the surface. The latter place produces very rich silver. I was on the islet at different times, and saw the pure native silver in ounces and pounds coming out of the bottom, as well as sparkling silver ore, rich for barrelling, and a large quantity of good stamp-rock. It is grand news for the people here as well as the whole of our great Dominion. I believe this district is one of the richest portions of our Dominion, and the day is not far distant when it will be developed and prove a source of great mineral wealth to our government and country, as well as to the free and happy people dwelling in it.

Coal Stocks.

NEW YORK, Friday Evening, July 16.

These stocks have been extremely dull during the current week, although prices have steadily advanced, and show considerable strength as compared with those of a week ago. The principal dealings have been in Delaware, Lackawanna & Western and New Jersey Central, the sales of the former amounting to 86,528 shares at \$77 @ \$81. And of the latter 73,700 shares at \$66 1/2 @ \$70 1/2. Delaware & Hudson has sold to the extent of 10,700 shares at \$74 1/2 @ \$77 1/2. Of Reading, but 11,360 shares have changed hands at \$15 1/2 @ \$18.

Miscellaneous Stocks and Quotations.

Sales and quotations of the stocks and bonds dealt in at New York, Philadelphia, and Baltimore, for the week ending the 15th inst., are given in the following tables. The Philadelphia quotations will have a * affixed. The Baltimore quotations are indicated thus †

Table with columns: Stocks, Par Value, High'st, Lowest, Closing, Sales: Shares. Includes entries for St. L., I.M. & S.R. Co., Cambria Iron Co., Penn. Salt Mfg. Co., etc.

Table with columns: BONDS, Princ'l. When Due, Int' est. When Due, High'st, Lowest, Amount. Includes entries for D., L. & W., 7s, conv, M. & E., 1st con., 7s, etc.

‡ Assented.

THE BULLION MARKET.

NEW YORK, Friday Evening, July 16,

The market has continued weak since our last report, and is slightly lower, without any feature from which to form an opinion of its probable tendency.

DAILY RANGE OF SILVER IN LONDON AND NEW YORK, PER OZ

Table with columns: DATE, London Pence, N. Y. Cents, DATE, London Pence, N. Y. Cents. Shows price ranges for July 10-13.

BULLION SHIPMENTS.

We give below a statement showing the latest published bullion shipments, in addition to those announced in our issue of July 10th:

Table with columns: DATE, Shipper, Location, Amount. Lists shipments from June 20 to July 2, including Northern Belle, Bodie, Standard, etc.

Table with columns: July, Shipper, Location, Amount. Lists shipments from July 3 to July 14, including Cosette, Horn-Silver, Ontario, etc.

(a) Received at Salt Lake City. (b) Shipped from Salt Lake City. (c) Received in this city.

ARIZONA.

In a letter from Mohave County, printed in the Arizona Miner of June 28th, it is stated that the Mineral Park Mill had started up; about 150 tons of high-grade ore were piled up at the mill, and a shipment of \$50,000 or \$60,000 was expected.

Patagonia.—The Holland Company is pushing its furnaces at La Noria to completion. It is expected to fire up during the last of July.

The Harshaw mill machinery, in the same region, is on the ground.

CALIFORNIA.

Bodie.—Standard produced for the week ending July 10th, 846 tons of ore and 2570 ounces of crude bullion.

Pulver, for the same period, shipped 385 tons, assaying pulp \$20.24 per ton.

Julian.—The Julian mine, Placer County, reports shipments of bullion from June 1st to 19th of \$6,818.

Idaho.—The Idaho mine produced \$11,500 bullion in June.

Derbec.—The Nevada City Transcript reports a large shipment to San Francisco from the Derbec gravel mine. Its June product is put down at \$15,000.

COLORADO.

Chrysolite.—Acting Manager Marden, of the Chrysolite, reports their shipments at from seventy-five to one hundred tons per day.

Sacramento.—The manager of the Sacramento mine, Park County, Colorado, has remitted here \$11,000, settlement for June.

Leadville Output.—The Leadville Herald, in a very thorough review of the operations of the Leadville smelters for the past six months, places the output as follows:

Table listing smelters and their output for June, including The Grant Smelting Company, Eddy, James & Company, Pa Plata Mining and Smelting Company, etc.

Total. To this should be added, to obtain the production of the camp for the first half of the year 1880:

Summary table showing increase in value of bullion and ore, and total production for the first half of 1880.

TABLE BY WEEKS.

Table with columns: Date, Amount. Shows weekly bullion output from January 6th to June 29th, 1880, totaling \$7,813,866.

The following table, taken from the Leadville Circular, gives the approximate daily output of the leading mines of the camp at the present time:

Table with columns: Mine Name, Tons. Lists output for Little Pittsburg, Chrysolite, Little Chief, Iron Mine, Morning Star, etc.

Little Pittsburg.—Little Pittsburg, from June 14th (when work was resumed after the strike) to June 30th, shipped 292 tons, netting the company \$24,000.

DAKOTA.

Messrs. Lounsbury & Haggin have received \$124,800 from their Black Hills mines—Homestake, Deadwood, and Golden Terra. The Deadwood has declared a dividend of 25 cents per share, payable on the 20th.

Durango.—From the Durango mine, Black Hills, the office here received a gold brick this week, weighing over 125 ounces and valued at \$2,200.50.

Standby.—Standby, of Rochford, cleaned up on the 9th \$17,000—a profit of \$6000 for thirty days' run.

MONTANA.

The Montana Copper Company on the 7th inst. shipped East for reduction 100 tons of ore. The Butte Miner says they have on hand over 2000 tons of copper ore, for which no means of transportation are at present available.

During the week ending the 30th ult., 51,100 lbs. of bullion were shipped from the Glendale smelter.

NEVADA.

Constock.—The California mine produced 468 tons of ore during the week ending July 3d; the Consolidated Virginia produced 1188 tons, and the Hale & Norcross 146 tons.

Richmond.—The Leader says: The lead pile at the Richmond is increasing rapidly in size, since shipment has ceased, and has now reached \$970,000 pounds, or 4485 tons. At the present rate of lead, this lot would amount to no small fortune—nearly half a million dollars.

Northern Belle.—The Northern Belle mine shipped during the month of June \$105,000 bullion.

Alexander.—The bullion product of the Alexander mill for the two weeks ended June 29th was \$13,481.

Star.—The Star mine produced \$24,274 bullion in June.

July Bullion.—A dispatch from San Francisco, dated July 14th, says: Bullion shipments on July amount to date; Standard, \$94,000; Northern Belle, \$30,900; Eureka, \$4,300; Noonday, \$11,400.

NEW MEXICO.

The owners of the Cosette mine are ruing the Lesinsky mill upon their own ore entirely, and are well satisfied with the results, so far.

UTAH.

Our regular Salt Lake correspondent, writing from Salt Lake under date of July 10th, says: Utah's bullion shipments for the week ending July 10th, inclusive, were as follows:

Table listing Utah bullion shipments by shipper and amount, including Horn-Silver, Morgan, Hillside, etc., totaling \$175,867.43.

Ontario.—Bullion shipments from the Ontario for the week ending July 2d, 1880:

Table showing Ontario bullion shipments by day of the week from June 26 to July 2, 1880.

Total. The total shipments for the month of June amounted to \$185,536.92.

Barbee & Walker.—The total bullion shipments of Barbee & Walker for the month of June amounted to \$185,536.92.

bee & Walker for the month of June were \$26,233. The mill started July 2d, after pans, settlers, and rock-breaker had been put in thorough order, ready for another thirty days' run.

Horn-Silver.—The Horn-Silver mine has 1210 tons of silver-lead bullion ready for shipment to the company's reduction-works.

MISCELLANEOUS.

Bullion Receipts from the Mines to New York.—The bullion received from the mines at the various offices in this city during the week ending with yesterday, as compiled from various sources, amounts to \$318,950.08, as against \$335,064.00 reported in our last.

Silver in Germany.—BERLIN, July 14.—The Federal Council has rejected the proposition to reintroduce silver currency in Germany, and the government will, it is reported, adopt means to expedite the melting of what remains of the old silver coin.

The U. S. Treasury Department at Washington purchased 400,000 ounces of fine silver on the 15th inst., for delivery at the Philadelphia and San Francisco mints.

The Coin Reserve.—WASHINGTON, D. C., July 13.—Returns received at the office of the Comptroller of the Currency show that the national banks are in a better condition as to coin reserve than they have ever been. The amount of gold and silver now held by them is more than \$99,000,000. The average hitherto has been about \$87,000,000. The United States Sub-Treasurer has received orders from Washington to ship \$200,000 in standard silver dollars to New York, in order to relieve the Sub-Treasury vaults here.

The Treasure Receipts at San Francisco.—The Bulletin says: "Wells, Fargo & Co.'s Express handles most of the coin and bullion brought to San Francisco from the interior. The deliveries for the first two quarters of the year compare as follows:

Table with 3 columns: Item, First, Second, Total. Rows include Silver, Gold Bullion, Coin, and Totals for 1879 and 1878.

The receipts for the first half of 1878 were the largest for any similar period in the history of this city. The California and Consolidated Virginia mines were then doing liberally. The returns for the past six months are only a little over one half of the amount for 1878, and are even 30 per cent less than the reduced figures for 1879.

Exports of Gold and Silver from New York.

Table with 2 columns: Item, Amount. Rows include Week ending July 10th, Corresponding week last year, and Since Jan 1st.

Gold Interest paid out by the Treasury.

Table with 2 columns: Item, Amount. Rows include Week ending July 10th, Corresponding week last year, and Since Jan. 1st this year.

METALS.

NEW YORK, Friday Evening, July 16.

There appears to be no new feature of note to disturb the exceptionally quiet condition of the metal market. It is true there has been somewhat of a spurt in tin, but at very unsettled prices. On the other side the Atlantic, some of the metals seem by our advices to be making an attempt to improve, but it may be simply to renew the of late usual return to what has now become proverbial inactivity in this important branch of the world's industry.

Tin.—The market is somewhat unsettled after its activity during the past two or three days. Sales have been made during the past week from 500 to 600 tons, some "on spot" and some to arrive, prices ranging for "spot" at from 20 1/4 to 20 3/4 c. to arrive. London quotes by cable £88 10s. for "spot" and futures at £89 10s.; closing prices being £87 10s. spot; futures £89 10s. Singapore shipments first half July were 200 tons to Great Britain; 100 tons to America. Prices at Singapore \$28 per picul with short supplies; Penang \$27 1/2. The market closes here rather easy at 20 1/4 c. asked, but doubtful if 20c. could be obtained.

English advices of the 8d inst say:

"A good trade has been done in Australian and Straits at 83 1/4 @ 84s. cash and open prompts; but Billiton was sold to a small extent at 82s., and could have been pur-

chased in quantity at 81 1/4s. ex ship in the Thames. This latter description serves as a useful lever to bring down values of other sorts, the demand for Billiton in this country being limited, the tin plate-makers not considering it suitable for their purposes."

Table with columns: Location, Tons, Imports, Deliveries. Rows include Australian and Straits, Banca, Billiton, Australian, In transit—Straits, and Approximate quantity afloat.

Table with columns: Location, Tons, Imports, Deliveries. Rows include Australian and Straits, Banca, Billiton, Australian, and Approximate quantity afloat.

Table with columns: Location, Tons, Imports, Deliveries. Rows include Sales of Banca by Trading Co., Imports—Billiton, Straits, Australian, and Total brought to market.

Table with columns: Location, Tons, Imports, Deliveries. Rows include Actual deliveries of foreign, In transit—Straits and Australian.

Table with columns: Location, Tons, Imports, Deliveries. Rows include Australian, Straits, and Tons.

Copper.—This metal has ruled dull throughout the week, with sales amounting to from 300,000 to 400,000 lbs., ranging from 18 1/2 to 18 3/4 c. per lb., sales for September and October delivery having been made at 18 3/4 c.

Our English advices to July 3d show for Chili Bars sellers scarce, G. O. B.'s fetching £60 to £60 1/4 cash, mostly net. Australian quiet, £70 @ £71 for Burra; £72 @ £74 for Wallaroo Cake. English firm at £63 @ £65 for Tough; £65 @ £67 for Select; £63 @ £70 for India Sheets. Yellow Metal Sheets, 5 1/2 @ 6c. per lb. By cable to-day Chili Bars are quoted at £60.

STATISTICS OF COPPER, LONDON, LIVERPOOL, SWANSEA, AND FRANCE.

Table with columns: Location, Tons, Imports, Deliveries. Rows include Fine foreign, chiefly Australian, Chili, In Ores and Regulus, and Totals, England.

Table with columns: Location, Tons, Imports, Deliveries. Rows include Fine foreign, chiefly American, Chili Bars, Ingots, and Barilla, and Tons.

Table with columns: Location, Tons, Imports, Deliveries. Rows include Fine foreign, chiefly Australian, Chili, In Ores and Regulus, and Totals, England.

Table with columns: Location, Tons, Imports, Deliveries. Rows include Fine foreign, chiefly American, Chili Bars, Ingots, and Barilla, and Tons.

Table with columns: Location, Tons, Imports, Deliveries. Rows include Chili, G. O. Bs., Wallaroo Cake, and Imports.

Table with columns: Location, Tons, Imports, Deliveries. Rows include Imports, Deliveries, and Tons.

Tin Plates.—The active demand and upward tendency mentioned in our last has ceased, at least as far as the former is concerned, and now we have to report the market quiet with little doing. Prices nomi-

nally the same as last week. Charcoal ternes, third cross, Melyn grade, \$6.62 1/2 @ \$6.75; Allaway, \$6.12 1/2 @ \$6.25; Ternes, Allaway grade, \$5.50 @ \$5.62 1/2; Dean grade, \$5.75 @ \$5.87 1/2; Coke tin, B. V. grade, \$5.25 @ \$5.37 1/2; and Ternes, \$5.12 1/2 @ \$5.25.

Messrs. Robert Crooks & Co., of Liverpool, under date of July 1st, says of Tin and Terne Plates:

"Fluctuations during the month have been extremely small. Considerable buying has quite counteracted the effect of heavy stocks, and at the close, prices are firm at highest point touched during the month. As in Finished Iron, the increased firmness of material is an item that should not be overlooked in estimating outlook."

Lead.—This metal is very dull, with sales of about 150 tons in small lots at 4.75c. reported.

The shipments of lead by the St. Louis & San Francisco Railway for the week ending July 7th, 1880, amounted to 99 tons.

Spelter.—This is quiet at 5c. @ 5 1/4 c. Antimony quiet at 16 1/4 c. @ 17 1/2 c.

Quicksilver.—The San Francisco Commercial Herald of July 8th says:

"The exports to China per City of Tokio aggregated 2950 flasks, and the Newbern, for Mexican ports, carried 363 flasks. The City of Panama for Valparaiso had 50 flasks; the City of Sydney for Melbourne, 15 flasks. The price may be quoted nominally at 36 1/4 c. Overland shipments from January to June, 2475 flasks.

"The quicksilver exports by sea from July 3d are as follows:

Table with columns: Location, Flasks, Value. Rows include Redington & Co., To China per City of Tokio, Wau Yune Lung Kee, Bron Anmon, Degener & Co., Wing Chong Wo & Co., Fook Lung, Yick Kee, Tie Sing Tang, To Mexican ports per Newbern, Thannhauser & Co., W. Loaiza, To Mexican ports per City of Panama, Macondray & Co., and Totals.

Totals since January 1st, 1880... 21,310 \$645,613
Totals same period, 1879... 30,143 \$76,510
Decrease in 1880... 8,833 \$230,897
Receipts for the past week, 423 flasks."

IRON MARKET REVIEW.

NEW YORK, Friday Evening, July 16.

The indications of an improvement in the iron market, which we noticed in our last, have developed to a considerable extent since, and prices all around are higher. There have not, however, been very extensive purchases made. The consumption continues large, and the prospects of an active demand are very encouraging.

American Pig.—There has been some business during the past week, although it is not quoted. Prime brands of No. 1 Foundry iron are scarce and in good demand at \$25 per ton. There is said to be a very active inquiry for large lots. Forge is in better supply. Makers are all very much firmer, and looking for better prices. Sales of No. 1 Foundry, in small lots, are said to have been made at as high a price as \$26 per ton. We think, however, that the following are fair quotations for average quantities: No. Foundry, \$25; No. 2, \$23; and Forge, \$21.

Scotch Pig.—Sales of about 2000 tons of various brands on private terms are reported. In addition to this we learn of 300 tons of Glengarnock, from ship, at \$23. The foreign quotations show an improvement. We quote, Eglinton, at \$21 @ \$22; Gartsherrie, from dock, \$22 1/2; Summerlee, \$22 1/2 @ \$23; Glengarnock, \$23; and Coltness \$24 @ \$24 1/2.

Messrs. John E. Swan & Co., of Glasgow, under date of July 2d, report 116 furnaces, against 90 at the same time last year. The quantity of iron in Connal & Co.'s stores was 443,494 tons, an increase of 411 tons for the week. The shipments show an increase of 119,570 tons since Christmas, as compared with the shipments to the same date last year. The imports of Middlesbrough pig-iron for the same period show a decrease of 8546 tons. The following are the quotations of the leading brands of No. 1 pig-iron: Gartsherrie, 53s.; Coltness, 55s. 6d.; Langloan, 55s.; Summerlee, 53s.; Carnbroe, 53s. 6d.; Glengarnock, 52s. 6d.; Eglinton, 50s. Middlesbrough pig-iron was quoted as follows, f. o. b.: No. 1 Foundry, 43s. 6d.; No. 2, 41s.; No. 3, 38s. 6d.; No. 4 Forge, 38s.

Rails.—These are quoted firmer, with some business and considerable inquiry. English steel rails are

quoted at \$60@61, while some of the American mills are asking \$65. It is said, however, that the Troy works have sold 5000 tons of steel rails, for delivery in the fall, at \$56. Iron rails are quoted at \$46@48.

Old Rails.—There is considerable difference in opinion as to the value of these. Some quote at \$23.50@24, while others are quoting as high as \$26@28.

Wrought Scrap.—From ship is quoted at \$25@26, and from yard at \$28.

We publish the following letters from our regular correspondents:

"There is a decidedly firmer feeling in the iron market than we have had for some time, and prices have a tendency upward, with fair demand."

"There is a better demand for all grades of pig-iron. Prices are firm. We quote as follows:

Table with 2 columns: Item description and Price range. Includes Foundry Irons, Mill Irons, and Gray neutral.

Gray neutral. Mottled and white neutral. Gray cold short. Mottled and white cold short.

"The market is without animation. Considerable sales might be made if either buyers or sellers would make slight concessions; but there is a difference of about \$1 per ton between them, and both parties are firm."

Table with 3 columns: Item description, No. 1 price, and No. 2 price. Includes Foundry Irons and Mill Irons.

"Pig-iron.—The market continues to improve and the cheap lots offered for the last week or two have entirely disappeared from the market."

"Manufactured Iron.—The Philadelphia mills are out to-day with a notice to their men that no Union men will be employed in their mills from this time on."

"Steel Rails.—The mills continue to get all the orders they want at \$60@62.50."

"Our metal market has been very active during the past week, and the amount sold was probably greater than the aggregate for several months past."

"Missouri. Southern. Hanging Rock. None offering. 22.00@24.00. 22.00@24.00."

"There is considerable inquiry for iron for delivery monthly during the coming season. Very few makers seem willing to sell upon those conditions."

"HOT BLAST CHARCOAL. Missouri. Southern. Hanging Rock. \$25.00@28.00. 24.00@25.00. 26.00@30.00."

"COKE AND COAL. Missouri. Southern. Ohio River. None offering. 22.00@24.00. 22.00@24.00."

Table: MILL IRONS. Cold short. Red short.

Table: CAR-WHEEL IRONS. Missouri. Southern. Ohio.

Table: IRON ORE. For fix. Furnace. Brown hematite.

"There is a decided upward tendency in the market, and prospect of a brisk trade during the remainder of the year."

Table: Va. Cold Blast Charcoal Pig-Iron. Wrought Scrap No. 1. Cast Machinery Scrap.

FREIGHTS.

Coastwise Freights. Per ton of 2240 lbs. Representing the latest actual charters to July 15th, 1880.

Large table with columns: PORTS, From Philadelphia, From Baltimore, From Elizabethport, Port Johnson, South Amboj, Hoboken and Weehawken.

* And discharging. † And discharging and towing. ‡ C. per bridge extra. § Alongside. ¶ And towing up and down. ** Below bridge.

COAL TRADE REVIEW.

Anthracite.

NEW YORK, Friday Evening, July 16.

The anthracite trade is struggling with the nineties, and, so far as the demand from domestic consumers is concerned, it is hard to persuade any one, when the thermometer stands at ninety-five degrees, that they shall ever want coal again.

The mines generally are working only three days in the week; but the Pennsylvania Railroad Co. seems to be acting independently; for its Nanticoke mines have been working steadily six days in the week, while their neighbors of the Lehigh & Wilkes-Barre Company have been idle one half the time.

Of course, wages are high and can not be reduced; for the men must earn enough in three days to maintain them seven; and as the mines are unrestricted in their output the days they work, their owners naturally force the production and secure by high wages a force of men capable to produce in three days what should be the work of six.

The production of anthracite coal last week was 392,360 tons, as compared with 410,301 tons the previous week and 527,808 tons the corresponding week of 1879.

Bituminous.

The Cumberland trade is extremely dull; the Clearfield region, being fostered by the more enlightened policy of the Pennsylvania Railroad Company, is able to put coal in Boston much cheaper than the Cumberland companies, notwithstanding the superior natural advantages the Maryland district enjoys in shortrail transportation and large coal-veins.

To the Officers of the several Mining Coal Companies of George's Creek Valley:

We, your employes, have duly and carefully taken your appeal into consideration, and after calm deliberation and reasoning each and every point in your appeal, we have come to the conclusion under the circumstances laid before us, we, as your respective employes, can not see the grounds upon which that we, as a branch of that industry, should give way any part of the price of our labor, while others, as directly interested as we are, should maintain their over-share, such as railroad and canal corporations.

Another thing: We see no just reason why we should be requested to give away any thing, seeing that our market price is higher now than when we received the advance.

any just ground for us to retrograde into the dark ages of heathendom. Our aim is to progress forward into an enlightened age. Therefore, we are not disposed to give away any of the hours. We also know that some of the employes have infringed upon these just laws, but by giving us time we shall correct their abuses, knowing that we are dealing with intelligent beings that they will not expect us to be perfectionists. We ask you to bear in mind that all abuses shall be attended to that shall be brought before us.

Should the above resolutions not meet your approval, we are willing to have the case laid before a Board of Arbitration, and have it fairly discussed and a just decision rendered according to the findings of the arbiter, whose decision shall be final.

Accompanying this curious communication was a copy of the following "Resolutions:"

RESOLUTIONS.

1. Resolved, That we, your employes, shall not maintain any driver or laborer in not performing their duty faithfully.

2. Resolved, That we shall not sustain any in recklessness or carelessness to the destruction of life and property; for should any one be guilty he shall throw himself liable to the discretion of the boss, and must suffer the consequence.

3. Resolved, That should any person or persons cease labor without instructions from the men of the mine, he shall throw himself liable to consequences from his boss.

4. Resolved, That we shall not maintain any laborer who shall cease labor before his time is up; and with respect to the drivers, we shall not maintain any one pulling up at half-past four if he should be required to make another trip, if it should take him to quarter-past five, or, in other words, give one day and take the other.

5. Resolved, That should any one be discharged, it shall be the duty of any one who is able to take his place until the case is investigated.

Of course, the operators have no answer to make, but simply hang their heads in shame at the reproach their childish action brought down upon them. The miner lords it grandly in the Cumberland region; but it would almost seem as if, with the aid of the traditional policy of the B. & O. RR., he would soon, like Macaulay's New Zealander, be able to sit in majestic and hungry solitude on the ruins of some abandoned mine and contemplate the mischief his own folly and that of the railroad company brought about. Indeed, if the Cumberland region were to be limited to the Baltimore & Ohio Railroad, and if its mines were to continue under the absolute control of the miners' unions, it would not be difficult to predict its fate. Fortunately, better times seem to be in store, when the several items of cost included in mining and transportation will be regulated in accordance with those of rival regions, and enable the Cumberland to hold the place its natural advantages entitle it to.

The Clearfield region is marketing a large quantity of coal, and easily takes the Eastern market from the Cumberland companies. For example, we hear of a sale of some 15,000 tons to the Boston & Maine RR. at a figure which is supposed to represent about \$4.75 in Boston.

New York.

Wholesale Prices of Anthracite Coal Delivered f. o. b. at Tide-Water Shipping Ports, per ton of 2240 lbs.

Table with columns for coal types (Lump, Steamer, Grate, Egg, Stove, Chestnut) and prices for various regions like Wyoming, Lehigh, Schuylkill, and Lykens.

* Fifty cents per ton additional for delivery at New York.

Wholesale Prices of Bituminous Coal, DOMESTIC GAS-COALS.

Table listing prices for bituminous coal and domestic gas-coals from various locations like Westmoreland and Pennsylvania.

Table titled 'MANUFACTURING AND STEAM COALS.' listing prices for Cumberland, Cl'r'd 'Eureka' and 'Franklin', and F. o. b. prices.

Table titled 'FOREIGN GAS-COALS.' listing prices for Newcastle, Liv. House Orrel, Ince Hall Cannel, Gas Cannel, Scotch Gas Cannel, Bl'k House, Cal-donia, Glace Bay, Ligan, Intern'l Mines, and Pictou, Vale Mines.

Table titled 'Retail Prices.' listing prices for Anthracite, G. & Egg, Stove, and Chest. coal delivered.

STATISTICS OF COAL PRODUCTION.

This is the only Report published that gives full and accurate returns of the production of our Anthracite mines. Comparative statement for the week ending July 10th, and years from January 1st:

Large table showing coal production statistics for 1880 and 1879, categorized by region (Wyoming, Lehigh, Schuylkill, Sullivan) and week/year.

Table showing total same time in 1875, 1876, 1877, 1878, and 1879, along with increase and decrease.

The above table does not include the amount of coal consumed and sold at the mines, which is about six per cent of the whole production.

Belvidere Delaware Railroad Report for the week, and years ending July 10th:

Table showing coal shipment statistics for Belvidere Delaware Railroad, including Coal for shipment at Coal Port (Trenton), Coal for shipment at South Amboy, Coal for distribution, and Coal for company's use.

Coals Cleared on the Canals of the State of New York for the week ending July 7th, and year from the opening of navigation:

Table showing tons of 2000 lbs. of Anthracite and Bituminous coal cleared on the canals for 1880 and 1879.

The increase in shipments of Cumberland Coal over the Cumberland Branch and Cumberland and Pennsylvania railroads amounts to 269,837 tons, as compared with the corresponding period in 1879.

The Production of Bituminous Coal for the week ending July 10th was as follows:

Table showing production of bituminous coal for various regions like Cumberland, Barclay, Broad Top, Huntington, East Broad Top, Clearfield, Snow Shoe, Tyrone and Clearfield, Alleghany, Pennsylvania RR, and Pittsburg RR.

The Production of Coke for the week ending July 7th:

Table showing production of coke for various regions like West Penn, Southwest Penn, Penn. & Westmoreland, Pennsylvania RR, and Pittsburg, Penn. RR.

E. N. RIOTTE, M.E. GUIDO KUSTEL, M.E. H. MATHEY, M.E.

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