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LEVER AND SCREW PRESSES.

The accompanying engravings represent presses suitable for cutting and stamping sheet iron, sheet brass and tin ware Fig. 1 shows a Lever Press of a new pattern, patented by Messrs. Mays & Bliss, Jan. 28, 1868. It will be observed that the purchase or strain is equalized or distributed by four V bearings, fitted with brass boxes, in such a manner that when cutting the largest size blank, there can be no variation of movement, which is so destructive to the dies whenever it occurs. The mechanism of the presses represented, prevents most effectnally, variatious of any kind. The iron boxes, containing the V braces, are cast with the body of the frame, and therefore do not require any loose caps and bolts. The braces are adjusted by set screws. The fulcrum of the treadle, or foot lever, the length of the connecting rod, between the treadle and punching lever, and also the fulcrum of the latter are all adjustable, so that the length of stroke can be regulated at will, and the power increased or diminished as required. Of this description of press there are three different sizes, which have dies for cutting plates 10 inches square, 14x16 inches, and 16x21 inches. The dies are forged from the best wrought iron with steel pieces, welded on at the edges of the opening. The gibs in the punching bar for the end of the lever are also made of steel.

Fig. 2 represents a neat and compact Screw Press. The Screw is triple threaded, and the pitch gives a stroke of 2½ inches, with one revolution of the weighted hand bar. The boxes and dies are similar in construction to those used on the Lever Presses. The merits of this press consist in the bed being much heavier and the whole Press more compact than those usually made. The dies are made to punch and stamp circular or oblong shaped forms, such as paint and oil-can covers, and require to be made in the most thorough manner. All further information may be obtained from the manufacturers, Mays & Bliss, Plymouth street, Brooklyn, N. Y., who build screw, lever and drop presses, cutting and stamping dies, tinners' tools, and general machinery.

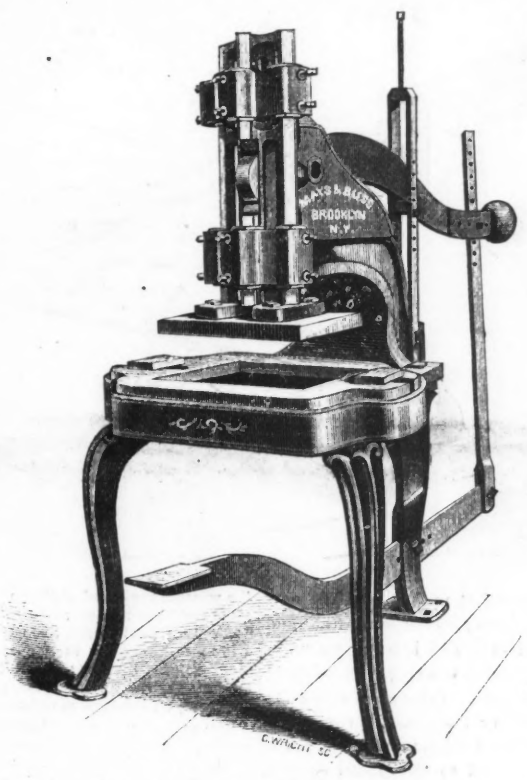


Fig. 1.—LEVER PRESS.

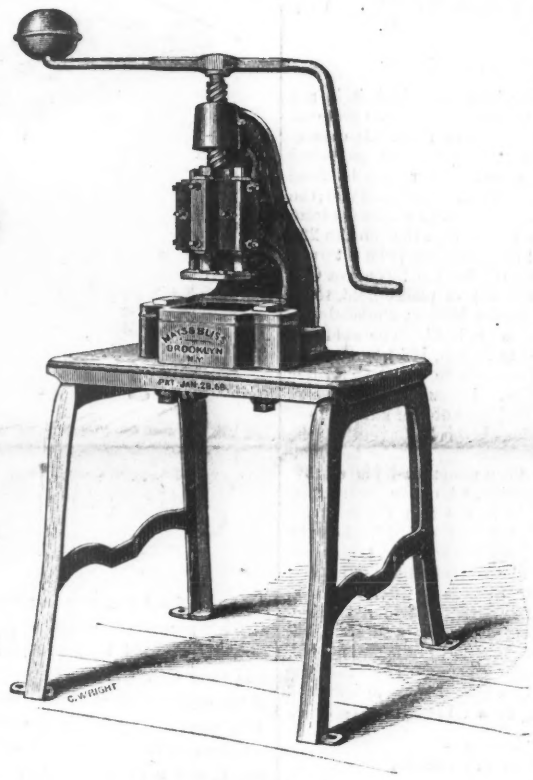


Fig. 2.—SCREW PRESS.

IMPROVED BURGLAR-PROOF SAFE.

During more than a quarter of a century, there have been few persons, if any, who have shown so much enterprise in the manufacture of fire and burglar-proof safes as Messrs. Marvin & Co. The best materials, the most experienced workmen, in addition to thorough and careful experiments, have been brought to bear for the manufacture of really reliable safes. In No. 3, Vol. 5, of the Journal of Mining, we illustrated and described the safes as generally made by this company. We now present our readers with engravings of a Spherical Burglar-Proof Safe, invented and patented by the same firm. Fig. 1 represents the exterior and Fig. 2 shows the interior, by a sectional view of the safe. The spherical shape gives immense resisting strength and the very strongest form for rendering the safe secure from sledge hammers. The material from which these spherical safes are constructed, is called chrome iron. All the compounds of chromium are obtained from chrome iron ore. Cromium and its alloy with iron are infusible, and have probably never been completely melted. The only ore of cromium that occurs in sufficient abundance for the purposes of art, is the octohedral chromo ore, commonly called cromate of iron, though it is rather a compound of the oxydes of cromium and iron. The chrome iron is impervious to drills or acids, and is by far the hardest alloy ever discovered. There are, therefore, in this safe, two most valuable properties, viz.: a strong form and a hard material. The safe is made with a circular door, which also contains the lock. The door is fitted on a series of tapers and shoulders as seen in the sectional view. It is made of wrought iron and hardened steel and cannot be chipped or drilled. The lock spindle is also made of hardened steel, and of tapering form, so that it cannot be driven in. Each safe is furnished with one or more shelves, and a patent combination lock. These Spherical Safes are especially adapted for the use of banks, Safe Deposit Companies, Insurance and Mining Companies, and can be used in any public or private building for the reception of coin, valuables and papers. The thickness of metal varies according to the diameter of the safe, being in some instances four inches thick. This description of safe is claimed to be superior to anything yet manufactured for strength and safety, as a number of them can be secured in the Patent Alum and Dry Plaster Fire-Proof Safes, and when thus combined, they afford the most perfect protection against fire and burglars now known. The safes may be seen at Messrs. Marvin & Co.'s establishment, 256 Broadway, New York City.

Fig. 1.

IMPROVED BURGLAR-PROOF SAFE.

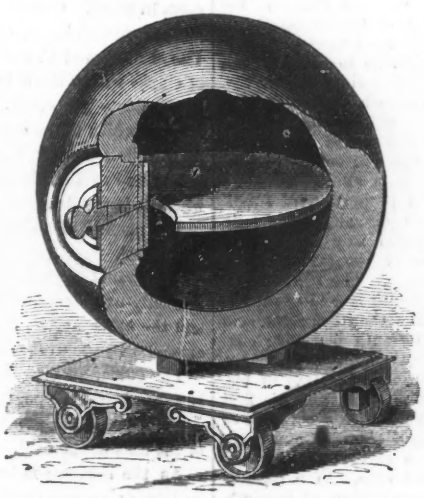


Fig. 2.

The Elasticity of Gold.

An additional reason lately suggested for the apparently unconquerable indisposition of the public to invest in ordinary railway stocks, seems to deserve consideration. At the time of the gold discoveries in California and Australia, eighteen years ago, it was pointed out that while the depreciation that must inevitably ensue in the purchasing power of gold, would proportionably affect the value of the income to be derived from all fixed forms of securities, it would not affect those investments of an elastic character, such as land, houses, &c., where the possessor would have the power of increasing his demands for rent. Railways, it was urged, came into the same category, since, although the cost of labor and materials must steadily advance, while the value of the money in which fares were to be paid must become less, the companies would always have the power to meet these processes by readjusting their charges accordingly. There is no doubt that on the faith of this reasoning many persons embarked their means, and it is now contended that if any such readjustment be forbidden, a time may come when it would be absolutely impossible for these concerns to yield not merely a moderate dividend, but even to meet their working expenses. Of course this supposition is an extreme one, but it is logically correct, whether the time required for the result might be twenty or two hundred years, and the prospect would be more serious but for the constant tendency toward the discovery, under pressure of necessity, of more economical methods of management. The only remedy for the difficulty that could be satisfactory to the public would appear to lie in some agreement being come to that at certain periods, such as once in every seven years, the entire question of tolls should be subject to Parliamentary revision.—*London Times.*

How to Save Quicksilver.

G. H. Munn proposes to save the mercury wasted in the process of amalgamation; he entertains the opinion that 300,000 tons of that metal has been lost by that process. It escapes in the form of a chloride, or calomel, as it is called. He advises the treating of the insoluble residne with nitrate of soda and hydrochloric acid, in order to convert the insoluble sub-chloride of mercury into the soluble bichloride, or corrosive sublimate. This solution is to be treated with sulphide of calcium, which is formed as a winter product by the final reduction process. The mercury will be changed thereby into a black sulphide. After drying the sulphide is to be placed in retorts, with the proper amount of slacked lime. The mercury is then obtained by distillation, and is caught in a receptiele containing water, connected with

the retorts. The sulphide of calcium residue in the retort is then used for changing the sublimate into the black chloride.

New Process for the Manufacture of Sulphuric Acid.

M. Lardani has devised a new method of manufacturing sulphuric acid. The plan may be sketched as follows: Sulphurous acid, in the presence of excess of air, is passed into dilute nitric acid, which becoming itself reduced, oxidizes the sulphurous acid; the sulphuric acid, being very dense, sinks to the bottom of the reacting vessel; hyponitric acid escapes, and traversing the upper part of the apparatus, enters the regenerator, where, meeting with water and excess of oxygen, it produces nitric acid. The apparatus is composed of a furnace for burning sulphur, a washer or scrubber, a refrigerating apparatus, a reacting vessel, and a regenerator for nitric acid. The furnace in which the sulphur is burnt is traversed by a current of air obtained by a ventilator; this current, while furnishing oxygen, serves to chase out the sulphurous acid, the density of which hinders the rapid replacement of air, and thus the rapidity of combustion. Leaving the furnace, the warm sulphurous acid gas enters the scrubber, where it is freed from volatilized sulphur, and especially from arsenious acid when arsenical pyrites has been employed as the source. From this part of the apparatus the gas, passing through a pipe surrounded by cold water which condenses the water and cools the gas, becomes denser, and descends into a cascade apparatus, through which a current of weak sulphuric acid, still containing nitrous products, is made to flow. The reacting vessel into which the gas passes is composed of two parts; the lower portion contains weak sulphuric acid, upon which rests a thick stratum of nitric acid; the upper portion, separated by stoneware plates, or plates of lead or aluminium pierced with holes, contains pumice stone saturated with water. The sulphurous acid, mixed with a powerful current of air, plunges into the fuming nitric acid, and the escaping gaseous products traversing the layers of pumice stone, become exhausted by the time they reach the fifth receiving vessel destined to reoxidize the nitrous compounds.

The First Gold Mining in California.

Although the fact has heretofore been published, it is not generally known that gold placers were worked in California long before the discovery of Sutter's mill in 1848. Documentary evidence of this interesting fact has just been published by the San Francisco *Alta*, in a letter addressed by Abel Stearns, of Los Angeles, to Louis R. Lull, Secretary of the Society of Pioneers. Mr. Stearns, who went to California from Mexico in 1829—nearly forty years ago—says that on the 22d of November, 1842, he sent by Alfred Robinson (who returned from California to the States by way of Mexico), 20 ounces California weight (18¾ ounces Mint weight), of placer gold, to be forwarded by him to the United States Mint at Philadelphia. The Mint assay was returned August 6, 1843. The gold was taken from placers first discovered in March, 1842, by Francisco Lopez, a Californian, at San Francisquito, about thirty-five miles northwest from Los Angeles. Lopez, while resting in the shade with some companions, during a hunt for stray horses, dug up some wild onions with his sheath knife, and in the dirt discovered a piece of gold. Searching further he found more pieces and on returning to town announced his discovery. A few persons, mostly Sonorians, who were accustomed to placer mining in Mexico, worked in the San Francisquito placer from this time until the latter part of 1846, when the war with the United States disturbed the country, taking out $6,000 to $8,000 per annum. The United States Mint certificate for the assay made for Mr. Stearns in 1843 is now in the archives of the Society of Pioneers. There have been reports that gold was dug in this State as early as 1834, but these arose from the fact that shipments were made of bullion received from New Mexico and Sonora. The existence of gold in California had doubtless been known in a limited way, but the first known working of a mine is that recorded above.

Arsenic in Subnitrate of Bismuth.

Dr. Gunning calls attention to the fact, that the metallic bismuth of commerce nearly always contains arsenic. He found on testing six different samples of the subnitrate of bismuth, as sold by respectable chemists at Amsterdam, that each of these samples contained arsenic; he instituted some experiments to find a ready mode of getting rid of the arsenic, and states that if even the metallic bismuth applied for the making of the subnitrate were contaminated with arsenic, the latter can be eliminated if to the nitric acid solution of the metal, just so much water is added as will suffice to produce a slight precipitate; this will contain all the arseniate of bismuth with a comparatively small proportion of subnitrate; the fluid has to be left until the precipitate has fully subsided, and the clear supernatant liquid may then be decanted, and on further addition of water the subnitrate of bismuth precipitated free from all arsenic. The *rationale* of this process is that the arseniate of bismuth is far less soluble in somewhat dilute acid, while still more than sufficient acid is present to prevent the nitrate of bismuth becoming converted into sub or tris-nitrate, as it is called. It is true that by following this mode of manufacturing subnitrate of bismuth some loss is experienced of subnitrate; but the first sediments, if accumulated, may be boiled with a solution of caustic soda, whereby arseniate of soda is obtained, and oxide of bismuth, which latter, of course, can serve again for the preparation of the subnitrate with due care. In a medico-legal point of view, the fact that preparations of bismuth, as applied in medicine, may contain arsenic, is of great importance.—*Chemical News.*

Utilization of Bessemer Steel Scrap.

Mr. A. T. Becks, of London, has specified a patent relating to the utilization of Bessemer Steel Scrap. In treating Bessemer steel scrap, according to this invention, the said scrap is thrown into a lumping, or charcoal fire, and on the scrap is put charcoal or coke, or the small coke called breeze; the fire is urged by a blast, and as the scrap melts, or softens, and the fuel burns away, more scrap and fuel are added, until sufficient of the scrap has accumulated to form a ball; this is taken by the workmen to the forge-hammer, and is there hammered into a bloom, and afterwards rolled into a bar, or applied to any required purpose. The metal as produced may be welded in the same way as ordinary wrought iron. The yield is increased, and the quality of the metal improved, by the use of a little chalk, or lime, mixed with the fuel or scrap.

Practical Letters.

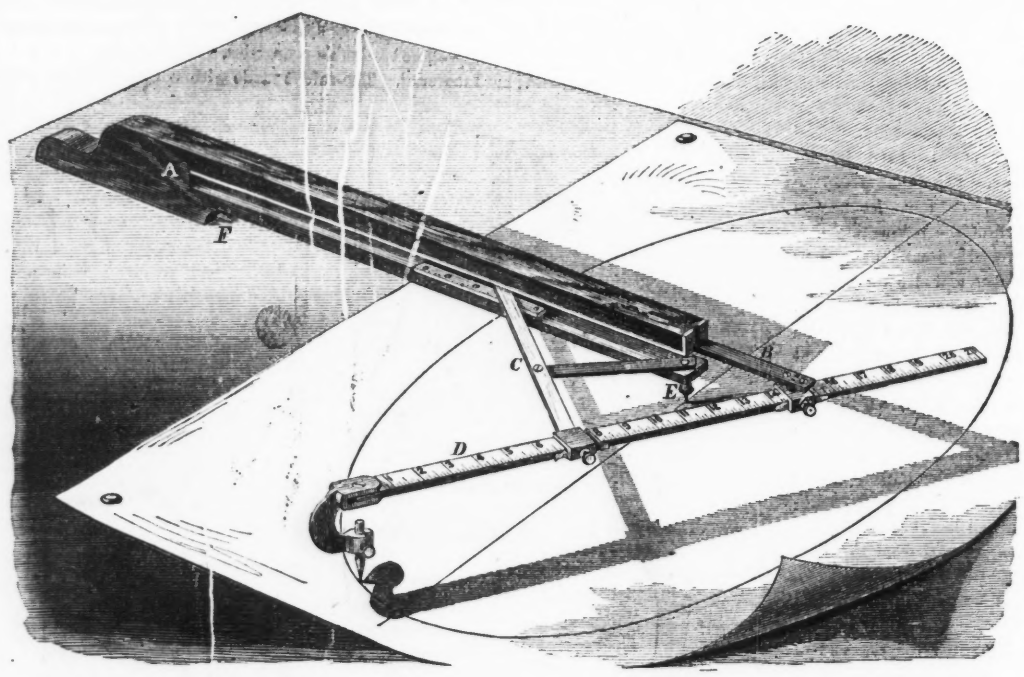
[WRITTEN FOR THE AMERICAN JOURNAL OF MINING.]

LESSONS IN MECHANICAL DRAWING.—No. VI.

BY T. P. PEMBERTON.

DRAWING TOOLS AND INSTRUMENTS.

It has become the practice of many engineers and manufacturers of machinery to introduce elliptical and parabolic curves in preference to circles, and arcs of a circle, in their designs. Messrs. Whitworth & Co., of Manchester, England, and Messrs. Sellers, of Philadelphia, were, we believe, among the first to abolish as many right angles and regular curves in their designs for tools, as is consistent with taste and workmanship. For instance, the irregular and graceful curves of their engine lathe, and planer beds, of slotting, shaping and drilling machines, show a great improvement on the old fashioned combination of straight lines, right, obtuse and acute angles, with Roman and plain circular mouldings. The ellipse is the most beautiful of all geometrical figures, and we shall have much to say concerning it, when we come to geometry and architectural mouldings. In our last lesson we stated that sets of curves, of different sizes, are now made of wood for draftsmen, so that ellipses and elliptical curves can be drawn without recourse to geometrical projection. We now give a representation of an apparatus for describing ovals, and ellipses, invented by Franklin Bowly, and known as a "Patent Oval Compass." The instrument is a simple one adapted to the drawing-board of the draftsman. It is a stock or handle, A, of metal, ivory, box, rosewood, or mahogany, having a slot cut through the greater part of its length, in which slides a bar, B, and a protractor, C, so united to the graded scriber, D, by adjustable sockets of metal, as to insure harmony of the parts in using. One end of the scriber has a swiveled holder for pen, pencil, blade, or diamond, to mark or cut the oval. The arms, B and C, can be set on the scriber to form any size of ellipse within the compass of the instrument, and with any relation to a true circle. At the small end of the handle is a stud, E, which is the centre on which the scriber and its parts turn, while a pointer, F, at the end of the slot, determines the line of one axis of the oval, so that it may be drawn exactly where it is wanted.



The manner of using the instrument will be easily comprehended.

The rod, D, is graduated to inches and parts of inches, and it is only necessary to set the two slides, the one at the width, and the other at the length desired, and to sweep the arm around, and the oval is completed.

The guides for drawing an oval in the precise place where it is wanted, are, the point, E, which is the centre of every oval described, and the point, F, which is placed on the line of one of the axis of the oval.

As the compass is here represented, the oval is drawn with its long axis across the direction of the body of the instrument; but it may easily be adjusted so that the long axis will be parallel with it, by passing the graduated rod first through the slide attached to the sliding bar, B, and then through that on the arm, C; the only advantage of the first position being, that by it a larger oval can be drawn; the instrument, then, having to reach only from the side of the oval to the centre, instead of from the end.

This instrument will prove a valuable addition to the draftsman's stock of drawing tools. Its advantages are obvious to all who have any knowledge of drafting machinery, buildings etc. The hitherto uncertain and tedious plans for obtaining ellipses will be abandoned, when the merits of this ingenious apparatus are known and appreciated by those who are competent judges of its value.

(TO BE CONTINUED.)

Mining Summary.

Gleanings from Ross Browne's Report.

Arizona.

[We confine our extracts this week, for the most part, to the general features of the country rather than to statements of particular mines, as we have hitherto given them quite fully in the columns of the JOURNAL OF MINING.—ED.]

MINERAL REGIONS.

The Territory is divided into many mining districts, but as these are liable to be changed at any time, the mineral regions will be defined under three grand natural divisions, viz: "Southern Arizona," "The Colorado River," and "Central Arizona," referring within these districts to the various streams upon which, or near which, the placers or lodes are located, as affording the most definite description for permanent reference that can be given.

SOUTHERN ARIZONA.

This part of Arizona, known as the Gadsden purchase, was the earliest occupied by the Americans, and is still the best known. Until the beginning of the war it was the favorite overland mail route to the Pacific, and it is still considered the easiest stage route across the continent. Its mountains are nearly all mineral-bearing, and silver lodes near to the Sonora line have been to some extent worked.

The principal towns of southern Arizona are Tucson, on the line of the overland mail route, and Tubac, 52 miles south. Both have long been in existence, and are situated upon the Santa Cruz river, which, rising in Sonora, runs nearly directly north until it reaches the Gila river, near the Maricopa wells. The distances from Tubac, which may be considered in the heart of the mineral region of southern Arizona are, by the usually-travelled roads, as follows: San Francisco, 1,074 miles, San Diego, 510 miles; Fort Yuma, 330 miles; El Paso, 389 miles; St. Louis, 1,770 miles. Towns in Sonora, Mexico—Santa Cruz, 54 miles; Magdalena, 51 miles; Altar, 95 miles; Hermosillo, capital of Sonora, 229 miles; Guaymas, port of entry of Sonora, 329 miles; Libertad, on the Gulf of California, 180 miles.

The ores of silver found in southern Arizona are argentiferous galena, native silver, auriferous sulphuret of silver, black sulphuret of silver, sulphate of iron combined. The gangue is usually quartz or feldspar. The ores of copper are usually the sulphurets, principally gray.

Nearly all the silver and copper lodes show traces of gold, and placers have been found at many points, but have not proved sufficiently extensive to attract much attention.

While, owing to Indian disturbances and the consequent high prices, and other serious impediments to mining operations, most of the lodes in southern Arizona are now temporarily abandoned, no one familiar with them doubts that some of them are valuable, and must be eventually worked with profit.

COLORADO RIVER.

The valley of this great river, "the Mississippi of the Pacific," may justly be considered one of the natural divisions of Arizona. Ascending the river from its mouth it is 150 miles to Fort Yuma, where the mineral district may be said to begin. Opposite to the fort, on the Arizona side, is the town of Arizona City. The Gila road to Tucson, and across the Territory to New Mexico, begins at this place, and the supplies for the military of southern Arizona are forwarded from here, coming from San Francisco via the Gulf of California.

Up the Gila, some 20 miles to the Colorado, gold placers were discovered in 1858, and caused some excitement. A traveller passing at that time says he saw $20 washed out of eight shovelsfull of dirt, and this in the rudest manner by an unpracticed hand. The diggings are in the sand-hills half a mile or more from the river, too far to carry water by hand; and as by dry washing only $1 or $2 a day can be made, they are now for the most part abandoned. Occasionally a strike is made by Indians or Mexicans, and $20 to $30 secured in a day. Old residents of the Colorado and Gila mining districts give it as their opinion that with water conducted to the placers they would pay well. A company organized in 1866 for this purpose sent machinery to Gila City, but subsequently gave up the enterprise.

The first mining district of note on the Colorado is some 40 miles above Arizona City by the river, and is known as the Enreka district. The ores are chiefly argentiferous galena, containing from 20 to 30 per cent. of silver. There is also a show of gold. The lodes are in the mountain ranges, and situated at from 1 to 20 miles east from the river banks. They may be reached by trails. Generally travel is difficult in that region, owing to the rugged nature of the country. But few of the lodes taken up in the first excitement (1862) have been developed. Of those upon which work has been performed, the Buena Vista promises well. The width of the lode in the main shaft (which is 60 feet deep) is about five feet. Some of the ore submitted to a working test gave a yield of $60 in silver to the ton. The Bronze, the Margarita, and Vernon lodes yield ores of the same class and value. The country rock is granite and slate; the silver veins are in pink and white quartz. Copper indications are

numerous, and it is supposed that deposits of that ore exist here as well as further up the river.

COPPER MINES OF THE PLANET COMPANY.

The Planet company was organized in California in 1864; the company owns five claims as follows: Planet, 2,700 feet; Ashley, 2,100 feet; Wash, 2,100 feet; Sentinel, 2,100 feet; and Mountain Chief, 1,800 feet. To this time no work has been done upon the Sentinel and Mountain Chief more than that required by the laws of the district, in order to hold them. The Ashley claim has been so far developed as to show evidences of a ledge of copper ore about 600 feet in length. Several cuts have been made developing indications of an average thickness in the ledge of about 10 feet. The character of the ore is malachite, assay 39 per cent. copper. Only about 25 tons have been mined from this claim. The Wash claim is the wash separating the Ashley and Planet claims. The Planet claim has been worked since the spring of 1865, and about 800 tons of ore have been taken out. The ore is of gray and red oxide, average assay 40 per cent. It has been sold in San Francisco at an average of $100 per ton.

The mines are located 12 miles from the Colorado, and within a quarter of a mile of Williams Fork. The cost of transporting ore to San Francisco was at first $60 per ton. It is now $28 per ton, and will probably soon be but $18 or $20. If the company could erect a warehouse at the mouth of the Colorado, and store the ore there until a cargo for a large vessel accumulated, it could be shipped from the mines to Boston or Swansea, at a total cost of not more than $25 per ton. Then 30 per cent. ore, of which there is a quantity in both the Ashley and Planet claims, could be profitably worked. Several other companies are engaged in working copper lodes at Williams Fork. Mr. Thompson, a practical and enterprising miner, superintendent of the Great Central Company, has erected furnaces for smelting the ore taken from the Eliza mine, and although he has had many obstacles to contend with, his experiment has not proved altogether unsuccessful. The Eliza is about 1,000 feet distant from the Planet. It is thought by some to be upon the same vein, but this has not yet been demonstrated. According to a late report the company have two small furnaces running, turning out copper from 91 to 96 per cent. fine, which is being shipped to San Francisco. A large lot of this copper has been sold for fifteen cents per pound, $300 per ton. The cost of delivering such copper is but a little over $100 per ton.

The ores of this mine are oxides and carbonates, very little or no iron or sulphur being present; hence the company is able to turn out at one smelting a very good article of copper. Some of this copper has been used by the brass foundries of San Francisco, who have pronounced it a very fair article for many commercial purposes, just as it comes from the furnace. Within less than two months they will have a larger furnace in operation, which they think will be able to turn out from three to five tons of copper per day.

The company own two parallel ledges of 3,000 feet each. Only one ledge has as yet been developed to any considerable extent. Upon this an incline has been sunk to the depth of 100 feet, at which point there are some indications of sulphurets coming in. At the depth of about 50 feet drifts have been run each way from the shaft about 100 feet, all the way in good ore; vein varying from five to seven feet thick. The shaft is also connected with the surface by a tunnel, through which the ore will be taken out. The outcrop of the vein has been stripped quite a distance, developing good ore all the way. The superintendent estimates that he has 5,000 tons opened to sight, which will average a yield of 25 per cent. He has lately taken out some ore yielding 74 per cent.

THE MOSS LODE IN SAN FRANCISCO DISTRICT.

The Moss lode was among the first discovered in this district, and is perhaps the best known. The vein is well defined for a distance of two miles. The rock is dark colored and iron stained, the country rock porphyry, the hanging wall smooth and hard. Some remarkable specimens of gold ore have been taken from this lode. In blasting, in some instances, pieces have been torn out yellow with gold, and the force of the lode has shown streaks of the precious metal. It is not surprising that the owners have held their claims as high as $300 per foot. The gold is of a bright color, and usually found in layers as thin as paper, which makes it more showy than abundant; the lode, however, promises well. There are several shafts, and recently a tunnel 300 feet in length has pierced the vein at the depth of 150 feet, where the vein is wide, and considerable gold was found, but fine and scattered. The tunnel enters the vein at right angles, and after reaching it follows it west for 300 feet, where a shaft descends from the surface. All the rock taken out bears gold, and the vein, from a width of five feet at the surface, increases at the greatest depth reached.

A 10 stamp mill was erected at Hardyville a few months since, and about 250 tons of ore have been worked, but the result is not announced. The cost of mining is $5 per ton; of hauling to the mill the same.

CENTRAL ARIZONA.

It was not until 1862 and 1863 that an attempt was made thoroughly to explore Central Arizona. Whipple and Beale had crossed by the 35th parallel; Aubry and Luroux had seen something of the Salt and Verde rivers, the chief northern tributaries of the Gila; but no one had attempted more than a hurried passage through the country, although all believed it to be rich in the precious ores. Late in 1862, or early in 1863, Powel or Pauline Weaver, a noted mountain man, who had crossed Arizona by the Gila as early as 1832, was attracted by the placers at La Paz to look for others in the interior of the country, and started with a party of men for exploration. He found what have since been known as the Weaver diggings, near Antelope Hill and the town of Weaver, some sixty miles south of the present town of Prescott. About the same time Joseph Walker, another well-known and veteran pioneer, arrived at Pima Villages with a party of gold hunters, and determined to go north to see what the unexplored country, from which the Indians had often brought fabulous reports, really contained in the way of precious metals. This party discovered and ascended the Hassayampa, one of the main streams of Central Arizona, which has its rise about ten miles southeast of the town of Prescott, and runs nearly south until it sinks in the desert some twelve miles below the town of Wickenburg. Part of the Walker party went to the Weaver diggings, where on the top of Antelope Hill, in a most remarkable position, Mr. Snelling discovered a large quantity of gold, much of it in pieces of unusual size. One nugget weighing a half pound was taken out. Much of the mineral was dug out with common jack-knives, and one man is said to have taken out $4,000 in a single day. It is the common impression that if water could be had at the top of the mountain much of the soil would pay very richly. A large amount of work has been done, and a great deal of money taken out along the creek at the foot of the mountain, where the mining town of Weaver is located. The Walker party gradually ascended the Hassayampa, finding gold at nearly every point, and in the winter of 1853 and 1864 taking possession of the Lynx or Walker Creek diggings, (ten miles east of Prescott,) from which it is estimated that little, if any, less than a half million of dollars have been taken. They also gathered much gold on Big Bug creek, four miles east of Lynx creek. As the placers were pretty well worked the miners began to look for quartz veins, and found no lack of them. All along the Hassayampa, upon the Agua Frio, a paralliel stream of considerable size, upon Lynx creek, Big Bug, Turkey creek, and indeed upon nearly all the streams of Central Arizona lodes of gold, silver, and copper were found. In the excitement a great many were named and recorded which have no value.

TRACES OF AN ANCIENT PEOPLE IN CENTRAL AMERICA.

In the Sierra Prieta range of mountains, one of the three main chains traversing this section, it is curious to observe along the placer grounds obscure traces of the former inhabitants. Circular mounds of stone occupy many of the little knolls along the streams, and everywhere they exist numberless fragments of earthenware and glazed pottery are thickly strewn over the surface. That these ruins are of considerable age is proved by large cedar trees whose roots penetrate and embrace the confused rock piles, and which, by examination of the rings of growth, are found to be, in some cases, not less than two hundred years old. It is firmly believed by many placer miners that the gold ground has formerly been washed over. This idea is based on the disturbed position of the boulders and gravel in the earth, and a frequent absence of that regular bedded structure which materials deposited by water generally have, and which the digging over and washing by miners must obliterate. It will not be long before this must be established or disproven, for it is impossible to suppose that no implements would be lost (and imbedded in the gravel) by these ancient miners. It will be an interesting piece of history if the proof is finally found, that the former inhabitants, whose origin and life and disappearance is so wrapped in mystery, were, like the present settlers, in quest of gold. Of the metallic contents of the Sierra Prieta little is yet known. Gold is known to exist in considerable amount, how richly and how widely distributed time only can tell; rich surface specimens and exaggerated ideas of prospectors are, of course, no more than an indication, not even amounting to a probability. That the rocks are remarkably rich in large quartz veins is true, but their characteristics are utterly unknown, and the rich surface distribution may not be continuous in depth.

Utah.

SALT LAKE.

Salt Lake is about 120 miles long, north and south, and forty miles wide, and contains several islands of considerable size, some of which are partially covered with timber. A steamer is now being built for the purpose of shipping the timber from these islands for the use of Salt Lake City.

The lake is subject to sudden storms, and boat navigation is sometimes dangerous. Until the present time no serious effort has been made to test its capabilities for navigation, but there is no doubt that the trade on this lake will, at some future period, be of considerable magnitude. The water is extremely salt. An analysis shows that it contains over 22 per cent. of solid matter, an indication that it has had no outlet to the sea for a great length of time, and that compared with other regions the fall of rain in this part of the country is less, and the evaporation greater, than elsewhere. The ocean represents the average impregnation of the world produced by rainfall and evaporation. By comparison with this standard solution we can judge which is in greatest excess, rainfall or evaporation. On the hills which surround Salt Lake are marks of an ancient beach about 300 feet above its present level. From the depth to which these shore-marks have worn into the rocky sides of the hills, and the large amounts of debris brought down by streams and deposited at that elevation, it is evident that this level of the lake must have remained for a long period. It is probable the lake once had an outlet to the ocean; and from the fresh water tertiary fossils found at Bear river, and at other points, it is almost certain that it then contained fresh water. Then, also, it doubtless contained many varieties of fish, but as the water grew salt they gradually perished; and, so far as has been observed, it has no animal life in it at present.

SALT LAKE CITY.

Salt Lake City has a population of about 19,000 inhabitants. It is a beautifully laid out town. The streets are wide, with streams of clear water running on each side. The carriage-ways are separated from the sidewalks by rows of trees, which present a refreshing appearance in summer to the way-worn traveller who has crossed the deserts. The private houses, built chiefly of wood, are perishable, but the public edifices are constructed of stone and wood, and are durable and highly creditable to the skill and enterprise of the inhabitants. The tabernacle, the principal place of worship, is capable of seating 10,000 people. The width of the streets, the umbrageous rows of trees, the great number of orchards and gardens in the heart of the city, and the incombustible nature of the houses, give a country appearance to the city, and render fires almost unknown. The small size of the farms is favorable to high cultivation. As a consequence, the greater part of Salt Lake valley is under better cultivation than any region west of the Rocky mountains, except, perhaps, around the bay of San Francisco.

The system of irrigation is excellent and extensive. Farmers in the eastern States might learn much here that would be valuable to them. From a report of the Deseret Agricultural Society of January 11, 1866, it appears that "there have been constructed 277 main canals, in length amounting to 1,043 miles, 102 rods, at a mean width of 5 feet 6 inches, and a mean depth of 2 feet 2 inches, which water 153,949 acres of land, at a cost of $1,766,939, and that there is in course of construction canals at an estimated cost of $900,000."

Ogden is a flourishing town on the east side of the lake, and ranks next to Salt Lake City in population and importance.

COAL.

The eastern part of the Territory contains large seams of coal. As it has been found as far south as Pahranagat and at San Pete, it is not improbable that it abounds in many parts of the Green River valley. That said to be from San Pete is a firm bituminous coal, considered by many superior to any found west of the Rocky mountains, but its quality must be thoroughly proved in large amounts before it can be pronounced equal to the bituminous coal of Pennsylvania.

The coal from Pahranagat is found about 300 miles southwest from Salt Lake City; that from San Pete 120 miles south. About eighty miles east from the city coal is found very abundantly. These discoveries tend to justify the conclusion that coal exists in large quantities in the Territory. As soon as a market is opened, the demand can be supplied from these coal fields. Owing to the scarcity of fuel in the mining regions of the eastern part of Nevada and the western part of Utah, where most of the silver, copper, and lead ores must be smelted, coal will in time be in great demand.

The most interesting discovery in this connection is anthracite coal. Scientific men have long been seeking in vain to find anthracite west of the Rocky Mountains. It has recently been found on Green river. An old iron worker from the anthracite regions of Pennsylvania says the deposit is identically the same. The coal is heavy and will not burn with a flame. When used in a blacksmith's forge it gives an intense heat. This article has been tried and found to answer all the purposes required of it.

The advantages to be derived from the construction of the Pacific railroad will be beyond computation. Branch railroads will follow, and these coal fields will eventually be opened up. The number of coal seams visible along the cañons in eastern Utah is remarkable. Many of them are of large size; some are said to be fifteen feet thick. Occasionally they can be traced four or five miles. They are so numerous and easily found that the inhabitants do not locate them. It would be difficult to imagine such an abundance of valuable coal deposits in Nevada or California as to preclude location. Utah appears to be nearly in its normal condition. The recent elevations and depressions are slight; consequently in mining for coal it is probable few faults will be found. The great number of veins near the surface will furnish that article for years to come without deep mining or the use of expensive machinery for hoisting or pumping. If the coal fields on Green river should prove as extensive and of as good quality as there is reason to expect, it will be a great advantage to the miners on the Colorado and at Pahranagat, as well as useful in the navigation of the Colorado river. A thorough exploration of the coal fields of Utah, Dakota, Colorado, and Montana is much needed. It would probably establish the fact that western coal fields, though inferior in quality, rival in extent the vast deposits east of the Mississippi river.

SILVER MINING.

Cottonwood cañon is about twenty-seven miles southeast from Salt Lake City, in the Wasatch mountains. It contains several mines. A Mr. Hirst is running two furnaces there at present. They are not on an extensive scale, but the results are satisfactory. Hirst thinks his ore will yield $200 to the ton. He has a German to manage his works who is reputed to be skilful. The veins occur in limestone, and ore exists at the surface in abundance. This is a valuable lead-mining district. The ore is remarkably free from antimony.

Washington.

MINERAL RESOURCES.

On the north side of the Columbia river from the Dalles the country is broken and hilly to the Klikitat river, which empties into the Columbia above the Dalles. In the Klikitat valley there is considerable farming, and a large amount of grazing land, with small patches of pines and fir. The Cascade range of mountains is well supplied with forests of pine and fir, except the highest peaks, as Mount Adams, St. Helens, and Ranier, which are covered with perpetual snow, and consequently are entirely barren.

Along the foot of the mountains from the Dalles to the Nachess, the whole country is volcanic, with no minerals of value. On the head of the South Fork of Yakima river a conglomerate is found, composed of pebbles and boulders of sandstone and granite, with small masses of quartz. When this has been disintegrated a trace of gold has been found. To the north of the Nachess quartz veins exist, but they are generally small and barren. Gold is rarely, though occasionally, found in them. Further north, near Lake Chelen, some diggings have been discovered, which, however, did not pay wages.

On the Columbia river, above Priest rapids, a number of the bars paid fair wages for a short time. The gold was very fine, and had evidently been moved a long distance by the action of the water. The eastern slope of the Cascade range in this Territory has been pretty thoroughly prospected for gold. Except in the instances before mentioned, none has been found. There is a large amount of good grazing and farming lands, but no mining. In the northeastern portions of the Territory, about Fort Colville, mines have been worked, though not profitably. In the regions adjacent to the Rocky mountains doubtless good mines will yet be found.

COAL.

The appearance of veins and outcroppings of coal in almost every section of the Territory west of the Cascade mountains, indicates its very general distribution and inexhaustive supply. It is found on the Columbia, as also upon streams emptying directly into the Pacific; it appears at Clallam bay, just within the Straits of Fuca; following round our inland sea, we find it in exhaustless fields back of Seattle, then upon the Sto-lu-auamah, and at Bellingham bay, in the extreme north. Its presence at intermediate sections within an area bounded by the above designated points upon the Cowlitz and Shookum Chuck, the Chehalis, and on the Dwamish, Black, and Green rivers attest its thorough and universal diffusing; the continuity of the strata through this whole region.

BELLINGHAM BAY COMPANY'S COAL MINE.

The mine of the Bellingham Bay company is the mine upon which the reputation of this whole region has heretofore depended. It is situated between the towns of Sehome and Whatcom, on the shore of the bay, about two miles north and east of Pattle's discovery. The vein had been laid bare by the blowing down of a large tree. Claims were at once taken by the discoverers, Messrs. Brown and Hewitt, in the fall of 1853. Late that fall several gentlemen of San Francisco formed the Bellingham Bay company, and sent Captain W. H. Fauntleroy and Calhoun Benham, Esq., to examine the mines. They purchased the two claims for $18,000. Colonel E. C. Fitzhugh, afterwards Judge of the Supreme Court of this Territory, was for several years the superintendent, and up to 1860 the shipment of coal to San Francisco averaged about 500 tons per year. In 1860 the old Bellingham Bay company leased these mines to Moody and Sinclair, granting to the lessees the privilege of taking out 1,000 tons per month. But the yield exceeded that quantity; their exportation the first year amounted to not less than 15,000 tons, which gradually increased each subsequent year. In 1866 the present management commenced, with Colonel A. Hayward, the modern Crœsus, holding the controlling interest. R. E. Myers, Esq., is resident superintendent. The delays in the fall of 1866, incident to the change of managers, caused a suspension of active mining operations. By the time matters were satisfactorily adjusted the mine took fire, the extinguishment of which prevented the resumption of mining till June, 1867. Indeed, now (September 1) the lower gallery is not yet completely pumped out. This company own about 3,000 acres of land in compact form, and have expended in improvements not less than $100,000. The shaft is about 500 feet deep, the slope at an angle of 45 degrees, decreasing as you descend; the first gallery 360 feet down, and the one now being worked extends some 600 yards. The lower gallery, which is still being pumped out, (though in its operations will soon be, if they are not already, renewed,) has been worked to the distance of 600 yards. It is in contemplation this fall to widen the slope to admit a double track, enabling the simultaneous descent and ascent of cars into and from the mine. About 100 tons per day are now being taken out, but arrangements are in progress by which the daily yield will be increased to 400 tons. The present cost per ton to put on shipboard is about $3. Practical miners express the opinion that if the claim was worked further from the beach there would be less slate, the coal would be clearer, and the expense per ton could be materially reduced by the cleaning process being rendered unnecessary.

SHIP BUILDING.

The time is not far distant when nearly all the ship building on the Pacific coast will be done on the shores of Puget sound. No other place has the same natural advantages for building either sail or steam vessels. From the Cascade range to the Pacific, comprising about one half of Washington Territory, the surface is densely covered with the finest forest growth in the world; some of the trees, straight as an arrow, are 400 feet in height, and 14 feet in diameter near the ground. Varieties of the fir predominate, interspersed with spruce, hemlock, tamarack, white cedar, maple, ash, white oak, and on some of the mountain slopes white pine.

PUGET SOUND AND FISHERIES.

Puget sound has unrivalled advantages for prosecuting the cod

and halibut fisheries at the north. No other locality except Vancouver's island has similar advantages, and their fish would be subject to heavy duties in American ports.

With no rivalry from the east or elsewhere, with abundance of fish, unfrequent storms during the fishing season, the best climate to cure fish, safe harbors, salt by the cargo at a comparatively low price, and all the requisite provisions for an outfit, it is scarcely possible to overrate the advantages of this region as the centre of the great fishery of the north Pacific. The sound waters are full of clams and small fish for bait. Good ship timber can be had near the shores for the mere cost of cutting.

Situated only a few days' sail from the best fishing grounds, the sound must become the main depot of business. Fish cannot be properly dried and cured either in Russian America or California; the climate of the former being changeable and too damp, and the latter too hot and dry. There is a large population of Fish Indians, both on the sound and in Russian America, or Alaska, who will make good sailors and fishermen.

Finally, the market is extensive and highly remunerative. What more could be desired for the successful prosecution of the business? Fishermen make good sailors; the cabin of the fishing smack is the school-house of the ocean. The full development of this important branch of industry will be a great benefit to the sound country, to the whole coast, to the shipping interest, and to the government as a great means of offence and defence during a war with any maritime nation.

Oregon.

MINERAL RESOURCES.

The mineral resources of Oregon, though not so thoroughly prospected as those of adjacent States and Territories, are both extensive and valuable, and will no doubt at some future time form a prominent source of wealth.

Placer mining has been carried on extensively and profitably in the southern counties since 1852, and the mines of John Day and Powder river have yielded several millions of dollars since their discovery in 1860. The annual product of these mines, until within the last two years, has been from $1,500,000 to $2,000,000. In common with the surface deposits elsewhere, there is a gradual diminution as the placers become exhausted. New discoveries, however, are being continually made.

QUARTZ LODES.

Numerous gold-bearing quartz lodes have been discovered in various parts of the State, but none of them have been developed to any great extent. East of Eugene City, near the McKenzie river, (north branch of the Willamette) some excellent lodes have been prospected, one of which extends north to Santiam and south across the head branches of the middle fork of the Willamette, Coast Fork, North and South Umbqua, &c. The Blue mountains, in the vicinity of Cañon City, John Day's river, abound in quartz which the miners think will pay, but as there are placer mines in the vicinity, and a lack of capital to erect the necessary mills, they have not yet been worked to any considerable extent.

IRON ORE DEPOSIT.

By far the most important mineral resource yet discovered in Oregon is the vast deposit of iron known to exist between the Willamette river above Portland and the Columbia, at St. Helen. Of the entire extent of this valuable deposit there is yet but little knowledge, but it has been traced for a distance of at least 25 miles, and is beyond doubt inexhaustible.

[We have already given in the JOURNAL OF MINING a description of the smelting works at this place.—ED.]

GOLD AND SILVER.

Southeastern Nevada.

[From our Regular Correspondent.]

AUSTIN, June 23, 1868.

The mines of Lander Hill are yielding about the usual amount of bullion, the shipment for last month being $195,776 69. Though some of them are less productive than they were a few months ago, others are doing better than in the past, so that the general average is maintained. The Buel North Star is yielding large quantities of high grade ore, and it is estimated that there is enough in sight even now to make sure of $20,000 being paid to the company as dividends within a few months. For a long time this claim has been a constant source of outlay to the stockholders. When the first openings were made on the croppings, the erroneous impression seemed to be entertained that the ore extracted would be sufficient to pay all expenses and even provide for dividends, but the fallacy of such a belief was speedily demonstrated. Like the majority of silver mines it was proved that a considerable outlay in gold was necessary before a return in silver could be depended upon.

After several months spent in dead work, the vein was reached on the 10th of May, by a drift run from the bottom of the incline, and in one month 65¼ tons of ore had been milled, the pulp assay of which was $459 12 per ton; the net yield over mill charges being $22.633 34 in bullion. The agent of the company started for Boston last week, having with him $18,000 in silver bars—tangible arguments likely to convince the stockholders that the mine has a value not hitherto attributed to it. Another crushing of fifty tons, of $300 or $400 ore, is now being taken to the Manhattan mill, and the ore house is daily receiving an addition to its treasure.

THE MANHATTAN MINES

are still yielding a fine quality of ore, though the quantity is not quite so large as it was a few months ago. A chimney of fine ruby ore has been penetrated recently in the North Star vein, but its extent is not known yet. When the Oregon shaft has been put down far enough to strike the Southern Light lode, the mines of this company are likely to turn out astonishing amounts of bullion.

The lode named is large and contains rich chimneys, as shown in the works of the Savage company, which are on the same vein to the west. The North Star lode will also be opened by this shaft at the depth of 500 feet at least, and probably the disturbance in the formation will be less there than it is where the work is now being prosecuted. The Manhattan mill is still doing a fine paying business, its yield of bullion for May, from 576 tons of ore, being $115,761 03, and its weekly product for this month from 22,000 to 28,000 ounces. The rates for custom work are still $45 per ton, and for high grade ore a guarantee of 85 per cent. of the fire assay value, is given.

THE OTHER MINES

on Lander hill, which have been yielding bullion during the last year are still producing more or less freely. There were 22⅞ tons of ore from the Tuscarora mine worked during last month the assay of which was $304 per ton. Another lot of about thirty tons is now at the mill, and will probably give a return somewhere over $200 per ton. From the Diana very little ore has been worked during the winter, till quite recently, when some sixty tons were sent to the mill, and as far as now worked, its grade is found to be a little over $100. This mine is worked at great expense, in consequence of the hoisting being done through a shaft and incline conjoined. At present there is very little ore being taken from the Florida mine. So much water has been struck in the bottom of the incline, that it is next to impossible to get down deeper without increased pumping capacity. An agent of the New York and Lander company has arrived from the east, and started work on the Roanoke mine, which has been left untouched for eighteen months. Some very rich ore was obtained from this ledge at one time, and if judiciously opened, it may soon become one of our standard mines.

The half-finished mill of the company, on the grade below the city, will be completed after a time, if the mine proves good.

YANKEE BLADE.

I learn from Mr. Taylor, the President of the Manhattan company, who is here at present, that he is about to open the original Yankee Blade mine, lying three miles north of this city. It has yielded some remarkably rich ore, and there is every reason to believe that it will prove a very valuable mine. A considerable amount of work is being done in that vicinity in taking out surface ores, but the bullion from that source is small in quantity—true, the Chase mine yields a few tons of rich ore at intervals, but the vein is too spotted to admit of anything like a certain return being depended on from it.

SILVER BEND.

The mines of this section never looked more promising than they do now, though it must be admitted that development has scarcely been commenced as yet. The El Dorado South, the property of Leon & Co., is proving itself a first class mine, large quantities of ore which assay $200 to the ton, in the mill, being available at and comparatively near the surface. When this and the other claims on the same lode have been properly opened, as also the mines of the Combination Silver Bend, Belmont, and other companies, there is no reason why the monthly shipment of bullion from High Bridge Hill should be less than a million dollars. This is looking forward, of course, but the mines are so good that there is no wild exaggeration in forming such an estimate as a thing not only possible, but, withal, very likely to be realized. If the English company now negotiating for some of the best mines of the district, once get a firm hold of the property, there will be some vigorous and successful mining performed, which, after a few years, will tell wondrous silvery tales.

COMBINATION MILL.

The shipments of bullion through John A. Paxton & Co., bankers of this city, from the Combination mill, during the first three months after it started work, was $101,000, or about $1,100 per day, though the daily yield was considerably lower for several weeks. During the last four weeks it has produced about $61,000, or at the rate of $2,000 per day. This is a great improvement in quantity, and the bullion is much finer than the first yield was. With 20 stamps for dry and 20 for wet crushing, the capacity of the batteries is 45 to 50 tons per twenty-four hours. The amount of ore ready for reduction will all be worked, if the mill continues to run, in less than three weeks, and, except custom ore can be obtained, the mill will have to be shut down. The selection of Captain James Watson as the agent of this property is eminently judicious, he being an experienced Lake Superior miner and a sharp business man. He will not mine, however, on the peddling hand-to-mouth principle which satisfies some mining superintendents. If he has the means put at his disposal to open the Combination mines as they ought to be opened, he will, after a reasonable length of time, give the company a steady paying property, with the dividends from which all will have reason to be fully satisfied. To some of the statements made by me in previous letters, in regard to the condition of the Combination mill, exceptions have been taken by the financial agent of the company. He controverts my assertion that the mill was not a first class one, by declaring that he considers it almost perfect—and of course he ought to know. But if the reduction works were as perfect as they ought to have been for the money they cost, they surely might have been kept in operation for a year without requiring any considerable alterations. Before the mill had run two months, work was suspended that the furnaces might be altered. Why so, if they were perfect? I had said that the pans were so light, and antiquated in pattern, that they would have to be replaced speedily, but I am informed that in saying this in the pages of the *Journal* I am doing violence to the truth. Here, however, are a few facts on this point: To replace the pan mullers sent from San Francisco, new sashings for each pan, weighing 750 pounds, have been obtained from the Austin foundry at a cost of 15 cents per pound, without freight to Belmont being added. To improve the pans further, new drivers and cones have been ordered, and for May the local foundry bill was $2,300 in coin, and the total castings already delivered exceed 20,000 pounds, to improve a mill which was said to be perfect. When dies and bottoms have been obtained, probably a few weeks hence, the pans will virtually be new, and they will have cost more than if a complete set had been ordered from San Francisco. I wish to state here that I have not alluded to the Combination property in these letters with a view to affect the stock either one way or another. I have invariably affirmed that the mines are good, but that the property was operated upon with a speculative end in view, rather than for the purposes of legitimate mining. A pamphlet, issued from the office of the company in New York, which spoke of the High Bridge as being far superior to the Murphy mine, and of sheets of native silver as thick as half dollar pieces being taken out of the vein, proves conclusively that the object of such exaggerations was to put the stock up to a high figure. When I see any operation of a similar nature in Southeastern Nevada, I shall expose it without hesitation. I care nothing for threats or abuse, come from what source they may. My interest is in seeing our mines properly represented in New York. If the interests of investors in this part of the State are protected, it will ultimately prove better for all of us who have permanent foothold here. On the other hand, a few hundred thousand dollars wrung from moneyed men in the East by misrepresentation, and put into even good mines, handled for stock-jobbing purposes, may be profitable to a few lucky men who can sell out in time, but the reputation of our mines suffers by the scheming plot. My object is to promote the best interests of the country, and if I do get hot at times when I see mismanagement and wrong doing, some of my strictures may be unduly severe, but they are not intended to be so.

PERSONAL.

In one of my recent letters I alluded to an outrage on a mining agent at Belmont in such terms as might make it appear that I was the apologist of crime and lawlessness. But such was not my intention by any means. In connection with the affair alluded to, it may be stated without any hesitation that the worst men in this or any other mining section on the Pacific slope will not have recourse to violence such as that referred to unless wrong has been done to them or to some of their friends. It is no excuse to say that the injustice has been done by a subordinate. It is the duty of an agent who knows his business to see that his subordinates are men he can rely upon, and that they are in reality discharging their duties properly towards even the lowest employé around the works. If he does this he incurs no risk whatever of ignominious treatment of the kind I have been forced to allude to here. It is a singular fact that the chief actor in the outrage has never been punished, and is daily to be seen in this city. To punish him would expose the whole affair from beginning to end. E. J. DARE.

Montana.

We learn from the *Independent* of the 19th ult., that Prof. Swallow and Col. Irvine are at Highland, making preparations for building a large quartz mill near the Balarat lode. The principal lodes at Highland are the Nevins, the Balarat, and the Only Chance. The placer mines at and near Butte City are being vigorously worked while water is plentiful. The miners there are doing well. Hendrey has just completed his quartz mill at Rochester gulch.....The Virginia City *Democrat* of the 20th ult., is furnished with the following items of news from Norwegian gulch and vicinity: T. H. Clark, Miller & Co. are running a bed-rock flume from the mouth of the canon. They own upwards of two thousand feet of ground upon the gulch. They are also bringing in the waters of Willow creek. The next parties above are Dr. Alexander & Co., who have about the same amount of ground. They are now engaged in sluicing and making from six to ten dollars a day to the hand. N. S. Davis & Co. have some twenty-five hundred feet of ground. Their bed-rock flume is thirteen hundred feet in length. They realize from six to twenty-five dollars to the hand per day. The next company, Vanderbilt, Glaseen, McArthur & Co., are running a drain ditch which they expect to complete in a few weeks. In Dry gulch, Joseph Caya & Co., on Thursday of last week, cleaned up fifty-six dollars, among which was a nugget of twenty dollars and fifty cents. On Friday they succeeded in securing another "Chispa" weighing forty eight dollars and sixty cents, and enough small gold to reach the amount of ninety-six dollars. On Saturday the same company realized one hundred and fourteen dollars, a part of which consisted of a piece weighing twenty-five dollars and thirty cents. The prospectors in Stately and Flint gulches, both of which run into the Norwegian, are getting from two to five cents to the pan. At Pony gulch, on Willow creek, they are averaging fifteen dollars to the hand. Another gulch has been discovered, which prospects from two to seven cents to the pan. There are now about fifty men at work in this neighborhood, and ground plenty at Willow creek that will pay good wages.....From the Helena *Post* of the 19th ult., we condense the following items of news: Another gold brick is exhibited, valued at $24,500 in gold coin, or nearly $35,000 in currency. Prof. Steitz run it.....Capt. Dusold, of Diamond city, reports that the water is very high in the Missouri. The flume of Hillis, running above the houses in Diamond city, and which carried the water from his hydraulic digging above the town, broke at midnight recently. A new flume is now being constructed at an expense of over fifteen hundred dollars. The ditch which drains the celebrated rich claims in Confederate gulch is believed to have become entirely filled up, so that a new drain will have to be dug. If this is the case, the claims cannot be worked again until late in the fall.....The news from Unionville is that about three weeks since A. M. Wood discovered a deposit of gold in a little sag leading up towards the discovery claim in the Whitlatch Union mine. Robt. Henford furnishes the following information relative to the Wilson creek mines, he having just returned from those new diggings: These diggings, which, for want of a better name, have been called the New Crow creek mines, are situated about thirty-five miles from Helena, and twenty miles from Hog'em, on Wilson's creek, a stream having its source on the divide between the Prickley Pear and Crow creek, and flowing into the latter stream. These mines were discovered during the latter part of May by Mr. A. J. Wilson, an old Last Chance miner, who soon left them for the purpose of informing some of his friends of the new gold fields. He and his party returned to them early in the present month, and it was then that the existence of the mines was first made publicly known. The bottom of the gulch is from one to three hundred yards in width, the bed-rock being nearly level, in this respect much resembling Tucker Gulch, as also does the gold produced. There is water in abundance, and so much timber that it seriously interferes with the working of the ground. Seven claims have been staked for discovery, thirty-six above discovery and fifty-six below. Prospects have been obtained from one to twenty-five cents to the pan. Last Monday was representation day. Something over eighty men were present at the miners' meeting, and it was resolved that each claim should be represented by actual work at least three days in the week. All the claims are, therefore, now in process of being opened and their real value will be speedily determined. Those who have visited the camp think it will prove good. Parties going from here should proceed by way of Jefferson City, there turn to the left and follow up the Prickley Pear a distance of seven miles, and then cross the divide passing over to Wilson's creek, and striking the new diggings at a point about two miles below discovery. From the same paper June 12, we condense the following: The James Stuart mill is closed owing to a leak in the boiler. A new one is now on the road from Benton, and as soon as it is placed in position, the mill will renew operations. Meanwhile, work on the Hope goes bravely on, the ore proving better as the work progresses..... There was at the assay office of F. Bohm, one of the finest specimens of Montana gold that has ever existed in the country. It consisted of a brick weighing 136 ounces and worth $2,650. It was particularly noticeable on account of its great purity, the assay showing it to be 975 fine, or worth $20.25 to the ounce. A still finer brick was run from Highland gold last year. It assayed 986 fine, or but a trifle less than one per cent. nearer pure than coin. The fact that Highland coin is nearer pure than any in the Territory has long been admitted, and we give the above figures to show how pure it is.....Capt. Hendry, just in from the Rochester gulch, says that his ten stamp mill is nearly completed, and will start up next week running on ores from the Waiseka lode. He is sanguine of success having great confidence in the mines of Rabbit district, and proposes shortly to put up the necessary apparatus for working silver ore in connection with his mill.....Messrs. Shroyer & Steele of Summit City, have sold the discovery claim on the Kearsarge lode, to Mr. Louis Vogle, of the Lucas mining company, for $12,000.....The far north mines of Libby creek, concerning which there was so much excitement last year, are now said to contain about one hundred men, who are working both in the creek and upon bars. Upon an average they are doing no better, it as well, as in this portion of Montana. They receive their supplies by pack trains from Walla Walla.... A correspondent writes from Highland gulch: "The old claims in the gulch are being successfully worked, and some very rich developments have been made in the lower part of the gulch, (heretofore considered valueless) which has given an impetus to mining not excelled in the palmiest days of placer mining in this Territory. A company composed of our most enterprising citizens, has been formed for the purpose of putting in a bed-rock flume about one mile below town. Work upon it has already commenced, and will be hurried forward to completion at an early day. Quartz is turning out richer than the most sanguine had ever hoped. The Only Chance has now 100 tons of rock out that will mill $300 per ton. This is no idle boast; but a pleasureable fact that can be demonstrated to unbelievers by a visit to the mine and arrastras of the company. The Ballarat tunnel is now completed a distance of 390 feet, leaving less than 50 feet to complete, when the ledge will be tapped at a depth of 179 feet. The Wilber tunnel has been pushed forward with commendable zeal, and the lucky owners are likely to be richly rewarded for their labors. They have less than ten feet to run to tap the ledge at a depth of 150 feet. At the bottom of their shaft, 90 feet deep, their ledge was 17 feet in width, and very rich in fine gold. All we want is mills to make it one of the liveliest camps in Montana.

Colorado.

Advices from Central City to the 25th ult. tell of the partial destruction by fire of Prof. Hill's smelting works. It appears that while the workmen were skimming a charge, preparatory to its being drawn, a quantity of sparks rose from the furnace to

the unprotected roof of the building, and in a few minutes afterward, before its presence became fully known to those present, it was in flames. A light breeze was blowing up the gulch at the time, which soon communicated the fire to the other buildings standing near, and in an incredible short time they were in ashes. A large pile of wood extending from the matting furnace to the premises above, occupied by Joseph Kenyon's works, took fire at the same time, and extended rapidly along the line to Mr. Kenyon's building, but by the prompt action of the people of Black Hawk, who fled to the scene at the first alarm, its progress was checked, and a valuable property saved from annihilation. Fortunately the building containing all the valuable machinery was saved. Professor Hill says after clearing away the charred ruins of his place he finds the damage to be much less than at first supposed. He thinks three thousand dollars will replace the buildings destroyed, and put things in working order again. The furnaces have sustained but little injury and could all be running again if they were housed. Woodbury & Co. have contracted to reconstruct the works entire within three weeks from date. ...The *Register* has also the following items of mining news. It says: Dr. D. W. King, who has just come over from Snake river, says that the Cheuango company, of which he is superintendent, has been doing big things lately. Last fall they started a tunnel into Glacier mountain, and in the course of time cut across several lodes of moderate promise. The adit is now two hundred and twenty feet in length. A few days since the workmen struck a prodigious vein of galena four or five feet wide, which they have christened "The Favre." The ore is exceedingly rich in silver, easily worked, and at the point where struck, one hundred and fifty feet from the surface. Mr. John Collum has been operating some time in that vicinity with "Scotch hearths," procuring a large amount of rich regulus. He will reduce the ores of the Favre until such time as the Doctor, who has duplicated this process can get his works into order. His capacity is ten tons per day. The material produced will be shipped directly to Newark, to be there separated. Mr. Collum is working the Comstock; has a tunnel into the mine 100 feet and a splendid crevice of ore; many cords from which are piled up at its mouth. People are pouring into Summit county by hundreds; the gulch mines are at work and producing largely.....Messrs. Dubois & Behr expect to start up the Mammoth mill by the middle of next week. They have some 200 tons of fine ore on hand, purchased from various parties.....Miller & Company, who are working property on the Bates-Hunter lode, have had 2½ cords crushed in a stamp mill, which yielded them 47 ounces of bullion, sold for $940. A very excellent result.....John Sensenderter will put up a twenty-stamp mill at the mouth of Missouri Gulch this summer..... R. Letcher, one of the contractors at the Bobtail Gold Mining Co.'s mine was killed on the evening of the 24th ult. by accidentally falling down the shaft of that mine.....From files of the Central City *Herald*, of the 27th ult., we condense the following interesting items of news: A letter from Granite District says that Mr. Royle has started up his 9-stamp water mill on quartz from the Yankee Blade lode. This company have thirty cords of surface quartz out, which prospects very rich. As yet they have only reached a depth of forty feet, and at that depth the pay material holds out well. Mr. Royle is also running a level in on the Amazet lode, recently discovered and named after his daughter. It is pronounced to be the extension of the Yankee Blade lode. Dr. Morrison's 10-stamp mill is about completed, and will be running about the first or middle of the coming month. Also, that Mr. Fullerton has a 10-stamp mill, built by Hendrie Bro.'s, at the Eureka Foundry, on the road in. Parties are at work on the Magenta lode. At the depth of 25 feet they have a two-foot crevice of fine looking free quartz. Mr. Tappan, of Boston, has purchased a one fourth in the Five-Twenty lode, and has a 10-stamp Gates mill *en route*, which will be set up in California gulch. This company now have out in the neighborhood of sixty cords of quartz, and are still developing the lode. The former owners have sluiced out as high as five ounces of gold per day, three men working. He speaks very encouragingly of the gulches, and says that on California gulch they have just got their claims in running trim. Mr. Thomas Wells, who is running two hydraulics and ground sluicing, is taking out at the rate of $12, gold, per day to the man. Parties sluicing on the side claims of California gulch, had taken out $1,000, gold, in two weeks time. He estimates that the gold production of Lake and Park counties this season will average 1,000 ounces per week, throughout the mining season.....Another "big thing" has been struck in Mountain House district, which bids fair to eclipse anything in that locality for richness and the quantity of ore it will yield. The ore is similar to that found in the May lode—sulphurets of silver. A shaft has been sunk fifteen feet deep, which shows a crevice of pay streak from ten to fifteen inches wide. Eight or ten tons of ore have been taken out, which will run over one hundred dollars per ton. It is easily treated. It is called the Sonora.....There are eighteen different companies at work on Russell gulch, which gives employment to one hundred and fifty men. A friend of ours, who is gulch mining, estimates that there are three hundred men gulching it in Russell, Lake, Illinois and other gulches in this county. .....Mr. Brown, agent of the Lincoln Gold Mining company, is working on the Golconda lode, and is running the ore in arastras at Mill city, with satisfactory results. He has eight arastras going constantly, and makes it pay.....The Consolidated Gregory company have about complated arrangements for their new 100-stamp mill. It is the intention of the company to have it on the ground and running by the first of December next.....F. H. Conant is running six stamps of the Holman mill on ore from the Bates, for Col. T. R. Tannant, and six stamps on ore from the Adaline lode, for the Adaline Gold Mining company.....Mr. Hurd has reached bed-rock, and to-day (17th) commences the foundation of his new 20-stamp mill. He is also fitting up the 6-stamp battery in the north end of his mill building, formerly used by the Fisher Gold M. Co., and expects to have it in running order the last of this week.....Next week Mr. Miller's 12-stamp mill will be run on ore from the Mountain City lode, and on Hunter ore, for Borkhem, Miller & Co. Heretotore it has been run steadily on Foot & Simmons pay. The lease of Lindsley and Bro. having having expired, and there being no prospect of its renewal, we will miss that part of our weekly shipments.....The Sensenderter company are running their 20-stamp water mill on ore from the company's claim, Bobtail lode. They are making regular shipments east. The foreman informs us that the mine is in the best possible condition for working, and the crevice of ore is of an average width..... Robert Frazier & Co., lessees of the Gregory property, belonging to the Chicago Gold Mining Company, are having runs made from their ore by Moore & Myers, of the Wilson mill, Mountain City, and Gunnell & Co.'s mill, below Black Hawk. The ore is considered to be of an average quality, and it is expected that it will yield satisfactory results.....Samuel Gould is having a run made from the Fiske lode, second quality ore. It is being run by L. C. Miley, who is running the University's 15-stamp mill. Mr. Miley is also running the Holbrook 12-stamp mill, on ore from the Discovery claim, for Sanderson & Co.....Bennett & Co. still keep a gang of men at work in Lake gulch. At present they are working a piece of ground just above the R. C. Waterman claims, which is yielding them eight dollars per day to the hand. This, John considers better than taking the chances in the Moreno or Cimarron mines.....Samuel P. Lathrop has resumed work on the Wood lode, head of Leavenworth gulch. The crevice matter which is being raised is of a very fine character. It is his intention to have a run made from it shortly.... Mr. Fitzpatrick's new 12-stamper has started up. It is one of the finest running mills in the Territory. He commenced running on ore from the Gregory extension, for the Smith & Parmelee Gold Mining company.....W. L. Dickerson has commenced putting 20 stamps into his water mill, in Black Hawk, and is tearing the Wykoff Process, which was erected last summer..... Mr. Jonson, of Black Hawk, is running the Cullison water mill, located at Missouri City, on surface ore from a lode in Lake district, with very flattering results.....The Wright claim, below Idaho, pans out pretty well. There are six men working on it. They sluiced five days, and cleaned up 79 ounces about $60 per day to the man. There are other claims over on that creek, which can be had by simply occupying them, which will pay. .....Messrs. Huepeden & Walters are doing handsomely with their reduction works at Georgetown, and there is no longer any doubt but that they will soon be able to secure plenty of ore to supply works of a much larger capacity.

California.

Alpine County.—According to the *Miner*, May 30, the old Whitesides mill has passed into the hands of the Pittsburg company. Mr. Thompson, the superintendent, has offered the I X L company to work their ores at $12 per ton, with the calculation that this, with the ore the Pittsburg's own mine will now furnish, will keep the mill running. The mine of the Buckeye No. 2 company has been sold at Sheriff's sale, to D. C. Riddell, for something over $2,000.

Amador County.—It is stated that the Casco mine, situated in Hunt's gulch, has been purchased by Messrs. Haley & Co., for $6,000. The shaft is ten feet by four in the clear, is now down two hundred and sixty-five feet, and is still being sunk at the rate of two feet per day.

Kern County.—The *Courier* says that the New York and Clear Creek Mining company are about to resume work on the Cape Horn claim.....A letter from Kernville says that the claims of Ellsworth & De Land and Hutton & Co. are yielding very rich ore. Ellsworth & Co's mill is running again. Their shaft is down about 300 feet, and prospects well. The old placer mines near Keysville, are being worked to a considerable extent, and are paying well.

Los Angelos County.—Soledad, once the scene of active operations in copper, is again attracting attention in silver and gold mining. Messrs. Searles & Yates are constructing arastras; these are miners of great experience, and they have the most sanguine hopes in their ultimate success. Polk & Kabler are now running the mills of Mr. McMurtry, and are realizing handsome returns. Scott & Edgerton have four horse arastras running, with every prospect of success.

Nevada County.—Files of the *Gazette*, May 30, have the following items of news: The American company, at Sebastopol, are taking out an immense amount of gold. The claims are paying $75 per day to one-eighth interest. All the claims along the ridge are paying splendidly. The Wyoming, Ohio, and Golden Gate companies, at North San Juan, are taking out lots of gold. The Eureka company has started up again after lying idle about two years, and the prospect is very good. It is estimated that over $1.000,000 has been taken out of these claims, and the largest clean up was about $10,000. The mine was or is owned by San Franciscans, and they stopped work on it two years ago because it did not pay well. There were two gold bricks at Furth's banking house, North San Juan, on Tuesday last, worth about $20,000, which came from the diggings in the neighborhood. Business is better along the ridges than it has been for two years. .....A gentleman from Red Dog says that a lump of quartz and gold was found in the diggings of Clipstine & Co., at Remington Hill, which weighed 240 lbs. It is estimatad that it will yield not less than $20,000.....A lot of mining ground, consisting of fifty claims 40x250 feet each, was sold by Martin Janch to John B. Hunter, for the sum of $17,500.....Considerable mining is now being done in the vicinity of Washington, and the miners are doing first-rate.....Copies of the *National*, to June 3, have the following: The Cold Spring and Fountain Head companies, on the Washington ridge, three or four miles above Nevada, are making arrangements to commence working. The companies have joined together and surveyed a ditch, connecting with the South Yuba canal, near the Central House, and extending down to the Cold Spring claims. The ditch will be about five miles in length. Men are already at work digging the ditch. .....Jacobs & Sargent cleaned up $1,675, after twelve days' run, in their Railroad claims at Quaker Hill.....We were informed in Grass Valley, on Tuesday, that the old Rocky Bar mine (in which the brothers Watt laid the foundations of their fortunes,) will be started up next week under the superintendence of A. B. Brady. Also, that there is every prospect of work being speedily resumed in the Allison Ranch mine .....The North Star company are taking out from forty to eighty tons of rock per day. In the sixth level, east, the ledge has been drifted upon for 300 feet, and is from two to three feet thick. We have seen ore before, but nothing to compare in beauty and richness, both in gold and sulphurets, to that we saw in this level. In this and the other levels there is all of ten years' work in sight. Chlorination works are in contemplation. The mine has yielded about $10,000 in rich specimen rock within ten days past.

Placer County.—The Nevada *Gazette*, May 3d, says: The quartz mill of the Rising Sun company, near Colfax, has been completed, and was started in operation a week ago Monday. A friend at Colfax informs us that after a run of four and a half days, they cleaned up the amalgamator and obtained $905. This was in addition to what may have been saved in the battery, which has not yet been cleaned up.

Plumas County.—The Quincy *National*, May 30th, says that the Crescent mill is only running sixteen stamps at present. The mine is full of water, and the mill is running on rock taken from the upper level. The Whitney mill and mine is utterly deserted—no one at work there.

Tuolumne County.—A gentleman from Jamestown says that marvelously rich rock is being taken out of the Crœsus mine, and that the further it is opened the better it looks. The machinery for a ten-stamp mill is already on the ground. In putting up, things will be arranged for an addition of ten more stamps.

San Diego County.—A correspondent writes in the New York *Times*, under date May 7, from the city of San Diego:—"Considerable work has been done upon the Escondido gold mine, located northeast of this city thirty-one miles. This mine has been worked at intervals for nine years, and although quite a large amount of pay rock has been extracted from it, it has, owing to gross mismanagement, failed to pay as it might have done under other circumstances. It is located on a Mexican grant, and the owner requires a heavy tax on every ounce of metal made, without any consideration of the time and money spent in the development of the mine. According to his books, $170,000 has been taken out of it."

Arizona.

The news from the mines to May 30, as reported in the Prescott *Miner*, is as follows: A prospecting party that searched the Silver Mountain country, succeeded in finding some rich lodes, but failed to find the one they went after. At the head of Humbug creek, they prospected for placer diggings, and got as high as 15 cents to the pan. Some of the party intend to start out soon again. The news from the Aztlan mill and the Chase mine is cheering. The mill has been running day and night the past week, and it is confidently hoped that the next clean-up will be a big one. Early in the week six tons of tailings from the Cloride lode were run through the mill, and yielded, it is said, ten ounces of good amalgam. Mr. Beardslee brought the gold to Prescott. Roddick and Feland, who are prospecting the Chance ledge, say that prospects looked flattering. They are down about forty feet in the new shaft, at which depth they have a good ledge, with nice walls, clay seam, etc. The water troubles them a good deal. F. A. Cook has been assaying and working rock from the Badger lode, Big Bug district, with good results.

Dakota.

A correspondent of the Cheyenne *Commercial Record* writes from South Pass City (Sweet Water mines) May 25th: Twenty-three days by slow freight from Cheyenne brought me to this place. The distance, via Sage creek, is about 320 miles, and the roads for most of the distance are very good, but freighters will meet with difficulty in finding water at this season of the year on the Sage creek road, as there are only two or three running streams, and the snow has nearly disappeared. Houses and stores are going up here very rapidly, and large stocks of goods are arriving every day.....Flour is selling at 12 and 15; bacon 50c; eggs, 50c. Mails arrive twice a week, by pony express, from Fort Bridger. Postage on letter, 50c., papers 25c. Owing to the severe cold weather and snow, the mines are not as far developed as the people expected to find them, but enough is known to satisfy all that the quartz will prove to be very rich. I have seen many fine specimens of rock from the "Miners' Delight," "Lone Star," "Buckeye State," and several other rich lodes. Several arastras are going up, and mills are expected soon. One is now on the road between here and Bridger, and is expected to arrive this week, when enough gold will be thrown out to satisfy all. The placer diggings are limited, although there are several that pay good wages. The "Yankee" gulch is now paying from $8 to $12 to the man. A new town, four miles east of this place, called "Atlantic," has been started in opposition, and several fine stores have been erected. Like all places, the "croakers" are here. But such persons are a nuisance to any place, and are better away. A few days ago the city was much excited over reports of Indians marching on the place, but it proved to be Waskabee with his band from Wind River, on their way to Bridger to receive their annuities.

COPPER.

[From Our Regular Correspondent.]

Michigan.

INCREASE OF SHIPMENTS THIS SPRING—LARGE MASSES—THE NATONAL MINES, ETC.

ONTONAGON, Mich., June 21, 1868.

EDITOR AMERICAN JOURNAL OF MINING:

My communications are few and far between, for the reason patent to all copper men, viz, general apathy in all things pertaining thereunto.

The amount of copper shipments this spring, from this port, excel in quantity and also in weight of masses those of last spring, by at least 150 tons. In the latter particular the National mine takes the lead, as it has done for some years past. Last week they shipped off, per "Northern Light," eight masses, weighing respectively: 5,080; 5,220; 7,300; 7,597; 7,860; 8,032; 10,569; 10,600 pounds, and they have now in the dock four more, weighing respectively: 6,480; 6,660; 7,910; and 12,710 pounds. Many of these masses were cut on three sides, showing a high purity of metal, probably 85 to 90 per cent.

This company was organized in 1852 and commenced work on the western portion of their bluff, the eastern part, where the present operations are carried on, being then in dispute between them and the Minnesota company. Many years of litigation resulted in favor of the National, three years since, yet with all the expense attending such suits, added to those of opening a mine in a new district, this one reached a dividend on $110,000 assessed; little more than a "breakfast spell" for some rich mines of the present day.

Still, all conversant with the early history of the property, will say that a good deal of liberality was bestowed on its development. Query (?) are the days of such mining ended? If it is necessary to expend a half million, as in the case of the Calumet and Hecla mines, to reach a dividend and then wait to see if the goal has been reached, it is time that capitalists knew it, so that a guardian may be appointed for any and every one who shall contemplate investing.

After some years of struggle against adverse winds the mine reached a dividend of in '58, paying $2 per share on 20,000 shares, with like favorable results for seven successive years, an aggregate of $280,000 to stockholders.

Since the depression in copper markets the National has paid expenses, but nothing more.

The north vein of the series that have been wrought, lies on a belt of conglomerate, from twenty to thirty feet thick, which, at points, bears heavy copper, and from one of which the pieces above named, in masses of twenty to thirty tons each, "in the original package," were taken. Another piece of six tons is now on the way here for shipment. More anon. SPECTATOR.

COAL.

Colorado.

The Golden City *Transcript* says: The G. C. Mineral Land Association are further developing their coal property at this place by putting down a shaft upon their principal vein, to be six by ten feet when cribbed and ready for work. At a depth of forty-three feet they have a sixteen foot vein of solid coal of the best quality. A large house is to be put up at once with engine and hoisting apparatus, when they will be able to raise 100 tons per day if necessary. Nearly all the coal taken out by them at present is used in their manufacturing establishment, but we believe it is their intention, when the new shaft is ready, to supply all who wish to purchase.

OIL.

Pennsylvania.

The production of the Pennsylvania oil wells, during the month of May last, was largely in excess of that of the month of April, and somewhat greater than that of the month previous. According to the Titusville *Herald*, the increase was occasioned principally by the finding of new wells, but in four or five districts the production was greatly enlarged by the use of torpedoes and the starting up of small producing wells. During the month of May about forty-four wells were completed and tested, and about thirty of them produced in paying quantities. The average daily production for the month reached nine thousand seven hundred and ninety barrels.

☞ A curious and at the same time interesting fact has recently been made known by the scientific journals. Cyanide of potassium, much used by photographers, is an exceedingly dangerous poison; and they will be glad to hear that the painful ulcers and other bad symptoms which it produces may be effectually prevented by rubbing the hands when soiled with it with a mixture of photo sulphate of iron reduced to a very fine powder and linseed oil.

MARKET REVIEW.

FRIDAY EVENING, July 10, 1868.

Gold and Silver Stocks.—Business at the board during the past week has been comparatively dull, and but few transactions are reported. Nevada stocks continue dull and weak, but the depressing influences that are now operating here, are without doubt, somewhat more potent than the facts regarding the merits of the various stocks would warrant. Colorado stocks are not so buoyant as formerly, but prices generally are well sustained. Prices in the market are thus quoted :

	Bid.	Asked.
Alameda Silver	— —	— 80
American Flag	— 40	— 60
Atlantic and Pacific	— —	— 80
Bates & Baxter Gold	— —	— 75
Benton Gold	— 30	— 45
Black Hawk G	6 50	10 00
Bobtail Gold	1 00	1 30
Bullion Consolidated	— 60	— —
Burroughs G	— 10	— —
Columbian G. & S.	— 4	— 16
Combination Silver	— —	20 00
Consolidated Gregory	4 50	4 75
Coryoon Gold	— 30	— 40
Edgehill Mining	— —	4 25
Empire G	— —	3 00
Gold Hill	— —	1 00
Grass Valley	— 35	— —
Gunnell Gold	— 80	1 25
Gunnell Union	— —	— 30
H'n G & S. bs	— —	— 90
Harmon G. & S. bs	— —	3 00
Holman	— 4	— 10
Hope Gold	— —	— 20
Kipp & Buell Gold	— 5	— 15
Keystone Silver	— 1	— 2
La Crosse Gold	— 36	42
Liberty Gold	— 2	— 5
Liebig	— —	— 4
Manhattan Silver	— —	150 00
Midas Silver	— 40	— —
Montana Gold	— 43	— 49
New York	— 65	75
New York & Eld'o	— —	1 75
Nye Gold	— 2	— 3
Ophir Mining	22 50	30 00
Con. Colorado	10	— —
People's G. & S. of Cal	— 5	— 15
Quartz Hill	1 10	1 15
Reynolds Gold	— —	— 4
Rocky Mountain Gold	— 10	— 18
Smith & Parmelee Gold	3 70	3 80
Sensenderfer	— —	10 00
Symonds Fork Gold	— —	1 00
Texas Gold	— —	— 12
Twin Riv Sil	— —	60 00
Vanderburg G	— —	— 70

Copper Stocks.—We have no change this week other than that Davidson and Rockland are a shade weaker. Prices are quoted :

Caledonia C	— —	5 00
Canada	— —	— 50
Charter Oak	— —	1 00
Copper Falls	22 00	— —
Davidson	— —	— 65
Evergreen B	— —	10 00
Franklin C	14 50	— —
French Creek	— 10	— 15
Gardiner Hill	— —	1 00
Hancock C	— —	5 00
Hilton	— 50	1 00
Isle Royale	— —	4 00
Knowlton	— —	2 00
Minnesota	— —	4 00
Ogima	4 00	6 00
Rockland	— —	3 50

Petroleum Stocks—Buchanan Farm now commands higher figures, as also does Rynd Farm and Union. Central and New York and Alleghany have declined. Prices range :

	Bid.	Ask'd.
Bennehoff Run	50	1 00
Brevoort	....	50
Buchanan Farm	51	54
Central	30	60
Continental	1 10	....
Empire & Pithole	....	10
Home	50	....
Manhattan	....	5
National	1 25	3 00
N. Y. and Alleghany	....	2 25
Pit Hole Creek	....	1 00
Rynd Farm	17	19
Second National	....	20
Sherman & B	60	....
Tarr Farm	30	40
United Pet. Farms	5	10
Union ex div	5 00	6 50
United States	2 00	2 40

Miscellaneous Stocks.—Walkill Lead is quoted at 15@19 ; Tudor Lead, 2 50 ; Rutland Marble, 15 50@18 ; Brunswick C. L., 10 ; Western Union Tel., 55 ; Quicksilver Mining, 21 ; Mariposa pref., 9 ; N. Y. Central, 134¾ ; Reading, 96½ ; Cle. & Pitts., 87½ ; Michigan S. & N. I., 92¼ ; G. & N. W. R., 78¾@79¼ ; Ch. & N. W. Pf., 81½@81¾ ; Ill. Cen. bet. call, 158 ; Cle. P. & Ash. T., 99½ ; Clev. & Tol. R, 103½ ; C. & R. I., 103½@108 ; Mil. & St. Pl. pf., 79¾ ; P. Ft. W. & Co., 108¼ , N. J. Cent. R., 124 ; T., W. & W. pref., 69 ; Mar. & C. 1st p., 23 ; D. & S. C. pf., 75 ; Clev., C. C. & In., 89¾ ; do. 2d call, 89¾.

Government Stocks.—The market for governments is moderately strong, and is thus quoted to-day :

U. S. 6s, 1881, coupon.....113¼@113¼
U. S. 5-20s, 1862, coupon.....113¼@113¼
U. S. 5-20s, 1864, coupon.....110¾@110¾
U. S. 5-20s, 1865, coupon.....111¾@111¼
U. S. 5-20s, July, 1865, coupon.....108½@108¾
U. S. 5-20s, July, 1867, coupon.....108⅝@108¾
U. S. 5-20s, July, 1868, coupon.....108⅜@108⅞
U. S. 10-40s, coupon.....107¾@107⅝
U. S. 7-30s, July, large.....108⅜@108⅞

Foreign Exchange is steady, on the basis of 110¼@110¾ for prime 60 days' bankers' sterling. We quote :

London, (prime bankers')60 days'.....110¼@110¾
London, (prime bankers') sight.....110¾@110¾
London, prime commercial.....109½@110
Paris, (bankers') long.....5.13¼@5.12½
Paris, (bankers') short.....5.10⅛@5.10
Antwerp.....5.16¼@5.15
Swiss.....5.16¼@5.15
Hamburg (bankers').....36⅛@36¼
Amsterdam (bankers').....41¼@41⅜
Frankfort (bankers').....41 @41¼
Bremen (bankers).....79¾@80
Berlin (bankers).....71¾@72

Gold is firm with the price ranging at 140½@140⅞.

American silver sells at 6¼@7c. below the price of gold, and Mexican dollars at 103½@104 in gold.

The money market is moderately active, but the supply of capital is fully equal to the wants of borrowers. Temporary loans are easily obtained upon acceptable collaterals at 4@5 per cent., the lower being the prevailing rate on Government securities and the higher upon pledges of stock. The range of discount for the best business paper is 5½@6 per cent. per annum.

The shipments of treasure from San Francisco from June 1st to June 13, and for the year to that date, were as follows :

Total since June 1st, 1863	$2,243,341 38
Previously this year	16,696,090 04
Total since January	$18,939,431 50
Corresponding period, 1867	19,532,611 50
Decrease this year	$593,180 08

The exports of specie from this port during the week ending July 2, were as follows :

Total for the week	$3,227,532
Previously reported	48,123 293
Total since January 1, 1868	$51,350,825

Copper has been quiet but firm. There is little copper offered for immediate delivery at the quotations of 23c. for Baltimore ; 23¼c. for Portage Lake, and 23½c. for Detroit. Sales of 400,000 to 500,000 lbs., including 100,000 lbs. Detroit, for September, at 24c.

The London market declined to £73 for Chili.

Tin—250 slabs Straits sold at 24c. gold ; Banca, 27¼c. nominal ; English, 24c.

Spelter steady at 6 45-100c. for Silisian.

Lead steady at 6 30@6¾c. gold for ordinary foreign, with sales of 200 tons in lots.

Petroleum—Is quiet, but steady, at 17½c. for crude, and 35c. for refined, in bond.

The following will show the movements of petroleum at this port to July 7th :

Receipts for the week	pkgs.	16 163
Exports for the week	galls.	1,418,091
Do. from January 1	do.	23,811,280
Do. same time last year	do.	15,591,310

The following is the quantity exported from other ports, Jan. 1 to June 27 :

	1868.	1867.
From Boston, galls.	1,214 838	929,334
Philadelphia	15,603 639	11,873,724
Baltimore	1,047 546	1,069,361
Portland	177,772	....
Total	18,048,795	13 872,419
Total exports from the United States	42,089,467	29,509.108
Same time in 1866		26.432,748
Same time in 1865		5,321,140

Antimony—16@16¼.

Nickel—$1 25@1 75, gold.

Bismuth—$5 75@6, gold.

THE IRON TRADE.

NEW YORK, Friday evening, July 10, 1868.

The iron market has been remarkably quiet, with but little inquiry.

In American iron the only sales we have been able to report are 200 tons Allentown, at $40 ; 500 tons grey forge at Philadelphia, $33.

Scotch iron but little inquiry and no sales. Market is higher and firm, with but little here or to arrive.

Old rails are scarce and in demand. We report 500 tons old T-rails, delivered out of our city, at $50 ; 500 tons old double-head rails, to arrive at Philadelphia, $49 ; 300 tons old T-rails, $49.

It is stated that a company of practical iron manufacturers of New York, at the head of which stands Hon. William Kelly, of Rhinebeck, New York, and Judge Parrott, of the West Point Foundry, has been organized for the purpose of manufacturing pig-metal with Broad Top ore at Riddlesburg, two miles east of Bedford, Pa. They have already commenced operations, preparatory to the erection of the furnace, which is to be sixty feet high, with fourteen feet boshes, and it is the intention of the Company to have the furnace in operation the coming Fall.

PHILADELPHIA, July 7, 1868.

In pig iron there is no change to note since our last report. There has been a steady but moderate demand for Scotch, with sales at $42@44 per ton for Gartsherrie and other brands, and $38@45 for American. In bar iron no change, with steady sales. Russia sheet iron is quiet and prices nominally 13@14c. per pound, gold.

Imports of pig iron from January 1, to July 4,

	1868.	1867.
For Great Britain	5,295	17,697
Coastwise	5,680	4,169

PHILADELPHIA, July 8, 1868.

In pig iron there is very little doing. Sales of Authracite at $37@38 for No. 1 ; $35@36 for No. 2, and $32@34 per ton for hard. Manufactured iron is firmly held at full prices.

Lehigh Valley Iron Trade.

The following table shows the amount of Pig Iron transported over the Lehigh Valley Railroad for the two weeks ending July 4, 1868, and for the season to that date.

From	June 27, 1868. Tons.	Total.	July 4, 1868. Tons.	Total.
Carbon Iron Co.	100	4,855	20	4,785
Lehigh Valley Iron Co.	170	5,910	200	6,110
Thomas Iron Co.	450	14,745	570	15,315
Lehigh Crane Iron Co.	540	13,415	550	13,965
Allentown Iron Co.	470	9,281	420	9 700
Robert Iron Co.	235	5,125	170	5,295
Glendon Iron Co.	410	12,550	630	13,180
Other shippers	540	9,642	710	10,352
Total	2,915	75,522	3,270	78,792

Lake Superior Iron Trade.

Receipts of Ore and Pig Iron at Marquette, up to and including Saturday, June 27, 1868, by the Marquette & Ontonagon Railroad.

IRON ORE.

	Previously reported.	For week end'g June 20.	Total.
Lake Superior Iron Co.	24,156	3.292	27,448
Cleveland Iron Co.	10,646	1,607	12,253
Marquette Iron Co.	3,295	195	3,490
Washington Iron Co.	8,618	929	9,547
New England Iron Co.	2,381	630	3,011
Edwards Mine	3.662	768	4 420
Pittsburg & Lake A. Iron Co.	6,378	1,814	8 192
Ore to Local Furnaces	7,517	844	8,361
Total Iron Ore, tons	66,653	10,079	76,732

PIG IRON.

Morgan Iron Co.	2,898	295	3,193
Greenwood Iron Co.	328	....	328
Bancroft Iron Co.	1.591	57	1,648
Collins Iron Co.	1,028	219	1.247
Michigan Iron Co.	2,244	130	2,374
Total Pig Iron, tons	8,089	701	8,790
Total Ore and Pig Iron, tons	74,742	10,780	85,522

Market Prices.

NEW YORK, July 10, 1868.

DUTY.—Bars, 1 to 1¼c. per lb. ; railroad, 60c. per 100 lbs. ; boiler and plate, 1¼c. per lb. ; sheet, band, hoop and scroll, 1¼ to 1¾c. per lb. ; pig, $9 per ton ; polished sheet, 3c. per lb. Payable in gold.

STORE PRICES.

Anthracite, No. 1, best.	$37 00@40	00	
" " 2x, fdry,	34 00	38	00
" Grey Forge,	31 00	33	00
Scotch Pig, No. 1	40 00	43	00
White and Mottled	31 00	—	—
Charcoal, cash	45 00	65	00
Old Wrought sc'p, lin yd.	47 50	—	—
" " " fm. vsl.	46 00	—	—
English rails, gold	51 00	51	50
American " at works.	75 00	—	—
American Bar Iron.			
Common, per ton	80 00	85	00
Refined " "	90 00	95	00
Old Railroad Iron	50 00@		
Bar, Swedes, ord'y sizes	— —	150	00
Bar, Eng. and Am., rl'd	95 00	100	00
Bar, Eng. & Am., com.	85 00	90	00
Scroll	125 00	170	00
Ovals and half round	120 00@	150	00
Rand	125 00	—	—
Horse Shoe	125 00	—	—
Rods, ⅝@3-16 inch	100 00	160	00
Hoop	133 00	185	00
Nail Rod, per lb	9	10	
Sheet, Rns., Med. Nos.	18¼	19½	
Sheet, s'gle, D. & T. com	5	7	
Rails, Eng., gold, ton	51 50	52	00
Rails, American	79 00	80	00

STEEL.

English, cast (2d and 1st quality) per lb	18	@23
English Spring (2d and 1st quality)	10	@12¼
English Blister (2d and 1st quality)	11½	20
English Machinery	13½	16
English German (2d and 1st quality)	14	16
American Blister, "Black Diamond,"	10	16
American, Cast, Tool " "	19	—
American, Spring " "	10	13
American, Machinery " "	—	13
American German " "	10	13

PITTSBURGH, July 4, 1868.

We have no particular change to note in raw irons as relates to prices or demand, says the *Commercial*. The prices are nominally the same as last week. The suspension of navigation has cut off receipts by that channel. The sales of the week were comparatively light. It must, however, be taken into consideration that the first of July is a time for general settlement.

The supply of desirable brands of forge iron is pretty well reduced, and, as a general thing, well sold up, and in some instances ahead.

We are reported the following sales :

ANTHRACITE.

80 tons Gray Forge.....$37 50—6 mos.
340 tons Neutral.....37 00—5 mos.
90 tons Red Short, gray and mottled.....36 00—6 mos.
70 tons " " " .....36 00—5 mos.
10 tons No. 2 Anthracite.....38 00—4 mos.
150 tons Youghiogheny, No. 3.....private terms.
80 tons Neutral Anthracite.....37 50—6 mos
50 tons Lebanon.....36 50—6 mos.
80 tons Neutral.....36 00—6 mos.

CHARCOAL.

100 tons Cold Blast.....$44 00—4 mos.
100 tons Hanging Rock, Hot Blast.....43 00—time.
50 tons " " " " .....43 00—time.
25 tons " " " " .....44 00—time.

IRON AND NAILS.

The demand for iron and nails during the past week has been fully up to the production of the mills. Stocks are very light and prices are firm at the quotations of last week.

IRONTON, Ohio, July 2, 1868.

The *Register* says : A remarkable hopefulness, considering the scarcity of orders, exists among the metal men. Holders display very little desire to concede materially. Transactions have occurred during the past week, for local consumption, at maximum rates quoted below. The iron men place some stress on the proposed favorable modification of the tariff bill.

The shipments of the past week amounted to 375 tons ; receipts 340. We quote this week :

Mill, hot blast.....$36 00@37 00
Foundry, hot blast.....38 00@39 00
Cold blast.....55 00@60 00
Bituminous forge (Bellont).....37 00

Manufactured iron exhibits the usual dullness. Rates still bold at 3½@4¼c. The mills are doing little. The Ironton rolling mill shows some indications of continuing idle a very long time yet.

Nails maintain a steady trade, but the prices obtained are considered very low ; $4 85 for 10d.

Bellont furnace has blown out, and will probably not light its fires for a month. A change in the gas pipes is necessary.

The Ironton foundry keeps in full operation, and finds ready market for its productions.

The prospects of an improved tariff on iron are brighter. The postponement of the Morehead bill, brought upon Congress a whole deluge of petitions from the iron working men of Pennsylvania and Michigan, so the Ways and Means Committee will report a bill for the benefit of a few weakly protected articles. By this bill rolled iron will be protected by a duty advanced to 2½ cents. This will resuscitate business.

The foundries alone, of all the heavy manufacturing establishments in Troy, are now in operation.

One thousand tons of Oregon pig iron have been received in San Francisco recently. A rolling-mill is about going into operation.

LONDON, June 19, 1868.

In Staffordshire, says the *Mining Journal*, the reports that there are rather more orders, both on home and foreign account, are confirmed ; and some orders have already been received from Austria, under the reduced scale of duties which the new tariff imposes. The Central Committee of Ironworkers have now formerly agreed to leave the men to make the best terms they can with their masters, so that soon, no doubt, all will be at work for whom employment can be found. In Welsh it cannot be said there is any material increase in operations at the works ; but the exports are large, and should clearances continue at the present rate stocks will soon be considerably reduced. There are several vessel loading rails for the United States, and the shipments for that country this month are likely to be fully equal to last, when New York alone took no less than 7,736 tons. In Swedish iron the enquiry continues good, and a few sales are taking place. In Scotch pig iron the market has assumed a rather more cheerful tone, and rather more speculative enquiry is abroad. The price has gradually advanced from 51s. 9d. cash, at which it stood at the commencement of the week, to 52s. 1½d., cash, with an upward tendency, buyers remaining.

LONDON, June 12, 1868.

Bars, Welsh in Lond.	£6	5	0@..	Do. railway, Wales.	£5	10 0@£5 15 0
Ditto to arrive	6	2	6 6 5 0	Do. Swd. in London	10	0 0 10 5 0
Nail rods	6	15	0 7 0 0	Te arrive	10	0 0 10 5 0
" Stafford in Lond.	7	7	6 8 10 0	Pig, No. 1. in Clyde.	2	12 6 2 15 6
Bars	7	5	0 9 10 0	Do. f.o.b, Tyne, Tees.	2	9 6 .. ....
Hoop	8	2	6 9 15 0	Do. Nos 3, 4, f.o.b. do	2	6 6 2 7 0
Sheets, single	9	0	0 1t 0 0	Railway chairs	5	10 0 5 15 0
Pig, No. 1, in Wales.	3	15	0 4 5 0	" spikes	11	00 0 12 0 0
Refined metal, ditto.	4	0	0 5 0 0	Indian Charcoal Pigs		
Bars, common, ditto.	5	10	0 5 15 0	in London, pr. ton	7	0 0 7 10 0
Do. merch. Tyne or Tees	6	10	0			

STEEL.

Swed., kegs (rolled)	14	5	0	Swed., in faggots	16	 0
" (hammered	14	15	0 15 00 0	English, spring	17	.. . 23 .. .

THE COAL TRADE.

NEW YORK, July 9, 1868.

Prices remain unchanged ; trade is very dull ; freights steady at our quotations.

A telegraphic dispatch informs us that the strike announced last week, in Schuylkill district, is spreading to the Lehigh district. We understand that large bodies of strikers are marching to the various collieries and forcing the men to join them. That this strike will become general there is but little doubt.

The coal trade here cannot suffer materially by it, provided the strikers do not hold out over thirty days. There is quite a surplus of stock on hand here, and at the various shipping points, dealers will no doubt advance prices immediately, which will cause the coal on hand to pay them a fair profit, which would not have been the case had the strike not occurred.

Retail dealers have not awoke yet to the fact that coal will advance. Perhaps it will not. We shall see!

In Foreign and Provincial coals there is no change ; prices remain at our quotations.

The amount of coal exported from the port of New York for the week ending July 7, was :

Exports for the week, tons	4,254
do. from January 1st, do.	32,935
do. same time last year, do.	36,710

BOSTON, July 7, 1868.

In English Cannel the sales have been confined to small lots at $20 per ton. Sydney has been selling at $8@8 25 ; and Pictou at $7,50@7 75 per ton ; Cumberland is steady at $8@8 25 here, $6 75 delivered in Baltimore, and $4 35 at Georgetown ; Pennsylvania and Westmoreland gas have been in steady demand at $7 20 per ton ; Authracite has been in steady demand at $6@6 50 per ton by the cargo, and $7@7 50 per ton in retail lots.

PHILADELPHIA, July 3, 1868.

The market continues dull and prices remain unchanged.

The following table exhibits the quantity of Coal passed over the following routes of transportation for the week ending July 4, 1868 :

	1867. WEEK.	1867. YEAR.	1868. WEEK.	1868. YEAR.	INC. OR DEC WEEK.	INC. OR DEC YEAR.
Phil. & Reading R. R.	64,061	1,621.359	70.666	1,637,586	i 6,605	i 16.227
Schuylkill Canal	30,053	427,325	33,922	453,676	i 3,869	i 25,863
Lehigh Valley R. R.	38,181	999,260	42,418	1,265,567	i 4,236	i266,307
Lehigh Canal	27,602	325.804	35.298	353,188	i 7,696	i 27,384
Scranton North	8,834	201,575	12.812	240 765	i 3.978	i 39.190
" South	23,458	641.556	17.937	546,198	d 5,522	d 95,358
Penn'a Coal Co. Rail	17.354	376,384	17.802	422,819	i 448	i 46,435
Penn'a Coal Canal	1,183	8,230	1,068	10,980	d 115	i 2,750
Del. & Hudson Canal	34,125	533,842	40,259	580,884	i 6,134	i 47.042
Shamekin	10,772	235,560	12.231	234,382	i 1,459	d 1,178
Trevorton	1,524	22,179	661	11,026	d 863	d 11 153
Short Mountain	2,128	32.381	2,966	50,099	i 837	i 17,718
Lykens Valley C. Co.	1,570	30,187	1,893	41.109	i 323	i 10,922
Broad Top	4,103	119,336	4,056	119,047	d 47	d 289
W'mstown Col'y, E.	1,634	49,719	3,329	86,761	i 1,695	i 37.041
Wyoming South	15,640	65,355	4,718	81,718	d 10,922	i 16 363
Wyoming North	.....	.....	.....	2,780	.....	.....
Lehigh & Susq. R.R.	.....	.....	7,113	187,576	.....	.....
Total	282,222	5,690,052	309,149	6,326,161	.....	.....
	.....	.....	.....	5 690,052	.....	.....
Increase	.....	.....	.....	636,109	.....	.....

Schuylkill Coal Trade.

BY RAILROAD AND CANAL, FOR WEEKS ENDING JULY 4 AND 10, 1868.

	RAILROAD.	CANAL.	RAILROAD.	CANAL.
St. Clair	32.176	.....	12,446	.....
Port Carbon	6,758	11,466	4,170	6.947
Pottsville	1,030	1,681	1,067	7,404
Schuylkill Haven	21.654	20,439	11.174	9,584
Auburn	4,130	.....	3,555	.....
Port Clinton	2.846	335	2,332	465
Company's use	1,968	.....	1.221	.....
Total for week	70.562	33 921	35.965	24.400
Previously this year	1,557,835	399,962	1,628,397	433,883
Total for season	1,628,397	433,883	1,664,362	458.283
Same time last year	1,621,359	427.323	1,682,591	463,732
Increase	7,038	6,560	.....	4,551
Decrease	.....	.....	18,229	.....

Cumberland Coal Trade.

By B. & O. RAILROAD.—The shipments over the Baltimore and Ohio Railroad, for the week ending July 4, were as follows :

Consolidation Company	915 04
Borden	1,062 10
Midland	844 03
Total	2,821 17

No report from Piedmont region or Eckhart.

BY C. & O. CANAL.—There were despatched from this port, during last week, 15,518 06 tons of Coal, forwarded by the following companies :

American	3.111 18
Borden	1.242 07
Central	3.360 15
Consolidation	902 05
H. & B.	1.418 09
Total	10.035 14

Report of coal transported over Lehigh Valley railroad, week ending July 4, 1868, and previously this season, compared with same time last year :

Total Mahony	7,812 02	259,643 13	267 455 00	
" Hazleton	19,743 09	675,269 10	595,013 05	
" U. Lehigh	819 17	30,172 02	30,991 19	
" B. Meadow	9,585 17	221,814 19	231,400 16	
" Total Wyoming	4.456 08	136,249 03	140,705 11	
Grand Total	42,417 12	1,223,149 03	1,265.556 16	
Same time last year	38,181 04	961,078 16	999,260 00	
Increase	4,236 09	262,070 07	266.306 16	
Forward East from Manch Chunk by rail	42,417 13	1,223,149 03	1,265,565 16	
Del'd at M. C'k and on line of of road ab. that point	137 03	15,802 07	15,939 10	
At P. Haven for shipment by canal	8,693 03	29,936 05	37,867 13	
At M. Chunk for shipment by canal	3,258,08	25,340 00	28,598 08	
Toll by rail and canal	54 506 07	1.294 227 15	1,347,972 07	
Same time last year	42,088 01	996,723 06	1,038,811 07	
Increase	12,418 06	297,504 09	309,161 00	

Lehigh and Susquehanna Railroad, Week ending July 4.

WHERE FROM	WEEK. Tons. Cwt.	TOTAL. Tons. Cwt.
WYOMING REGION.		
Haverill	.....	.....
Newport Coal Co.	.....	.....
Valley Coal Co.	.....	.....
Warrior Run Mining Co.	.....	.....
Parriab & Thomas	288 09	5,666 11
New Jersey Coal Co.	448 14	7,855 14
Joseph Stickney & Co.	.....	.....
Lehigh & Susquehanna	.....	15 10
Germania Coal Co.	380 16	9,778 03
Franklin "	.....	.....
Andenreid Improvement	.....	.....
Wilkesbarre Coal & Iron Co.	8,847 01	101.211 04
Union Coal Co.	.....	2,040 07
Mineral Spring	.....	6,029 06
H. B. Hillman & Son	.....	1,303 17
Bowkley, Price & Co.	.....	228 14
Wyoming	.....	3 006 09
Henry	225 14	2,944 02
J. H. Swoyer	.....	2,739 06
Everhart Coal Co.	.....	.....
Albrighton, Roberts & Co.	289 10	2,078.16
Shawnee	664 02	5,952 05
Morris & Essex Mutual	.....	78 19
Delaware & Hudson Co.	352 04	4,914 14
Pine Ridge Colliery	238 04	1,548 18
Consumers Coal Co.	148 17	1,514 09
Harvey & Brothers	.....	184 11
Total Wyoming Region	11,883 11	162,031 12
UPPER LEHIGH REGION.		
Upper Lehigh	2,551 11	58,301 12
Total Upper Lehigh	2,551 11	58,301 12
HAZLETON REGION.		
A Pardee & Co.	1,762 03	29,268 17
Linderman & Skeer	.....	756 06
Sharpe, Weiss & Co.	1,118 01	19,531 14
W. S. Halsey & Co.	.....	1,701 09
Harleigh Coal Co.	1,123 07	13,920 02
G. B. Markle & Co.	1,025 02	22.224 09
Ebervale Coal Co.	878 05	13.437 01
Stout Coal Co.	632 08	7,429 18
Buck Mountain Coal Co.	654 00	7,881 05
Coxe Brothers & Co.	235 05	4,057 15
Ashburton Coal Co.	.....	64 06
Highland Coal Co.	635 11	7,915 06
Pardee Bro. & Co.	544 08	4,256 17
Jeddo Coal Co.	305 09	4,591 06
Mount Hall	.....	.....
Other Shippers	.....	927 02
Total Hazleton Region	8,913 19	137,963 07
" Upper Lehigh	2,551 11	58,301 12
" Wyoming	11,883 11	162,031 12
Grand Total	23,319 01	358,296 11
Corresponding week last year	10,685 11	253,316 14
Increase	12,663 10	102,979 17
Decrease	.....	.....
Forwarded South from Mauch Chunk by rail	6,110 17	157,918 18
Delivered on line L. & S. R.R. above Mauch Chunk	1,002 00	29,657 05
Delivered at Coal Port for shipment by Canal	16,236 04	170,750 08
Total	23,349 01	358,326 11

Prices of Coal by the Cargo.

[CORRECTED WEEKLY.]

At New York, July 11, 1868.

Schuylkill R. A., choice	$5 50@$....		Schuylkill Chestnut	4 00	....
" Ordioary	5 25	....	Lehigh W.A Lump Old Co	5 00	...
" W. A., Lump	5 00	....	Lehigh Broken	4 87½	....
" Steamboat	5 00	....	" Egg	4 87½	....
" Broken	5 00	....	" Stove	5 12½	....
" Egg	5 25	....	" Chestnut	4 37½	....
" Stove	5 25	....	Shamokin	5 50	....

SPECIAL COALS.—DEALERS' QUOTATIONS.

Diam'd Vein R. A., Scb'kill	5 50	....	Old Co.'s W. A. Lehigh	5 50	....
Locust Dale W. A., "	5 50	....	Mt Pleasant	5 00	....
Honey Brook " Lehigh	5 50	....	Broad Mountain	....	....
Harleigh " "	5 50	....	Buck Ridge W. A., Sh'kin	5 50	....
Spring M'n " "	5 50	....	H. Heils, E. P'klin, Lorb	5 50	....
Sugar Creek " "	5 50	....	New England Red Ash	6 25	....
Ashburton " "	5 50	....	Wyoming	5 50	....

Dealers in these Coals may be found in our advertising columns.

At Philadelphia, July 11, 1868.

Lehigh Lump and Sc'mb't	5 00@....		Henry Clay, Egg & Stove	....@4 40	
" Broken and Egg	5 00	....	Locust Mount Lump and Steamboat	3 25	3 40
" Stove	5 50	....	" Broken	3 25	3 40
" Chestnut	4 25	....	" Egg	3 60	4 00
Schuylkill R. A.	4 25	4 50	" Stove	4 00	4 15
" Chestnut	2 60	....	Lorberry Coal	4 50	....
" W. A. Lump	3 25	....	Shamokin	....	....
" Broken	3 25	3 50	Franklin, (Lykens Valley)	5 00	....
" Egg and Stove	3 75	4 00	Broad Top	4 00	....
Schuylkill Chestnut	2 75@....				
Hill & Harris, Egg & Stove	....	4 30			

Scranton Coal at Elizabethport, July 11, 1868.

(Corrected weekly by D. L. & W. R. R. Co.)

Lump	$4 00@....		Egg	4 50	....
Steamer	4 25	....	Stove	5 00	....
Grate	4 50	....	Chestnut	4 25	....

Prices for Pittston Coal at Newburgh, July 11, 1868.

(Corrected weekly by Penna. Coal Co.)

Lump, per ton of 2240 lbs.	$4 20@....		Egg " " "	4 30	....
Steamer, " " "	4 20	....	Stove " " "	4 65	....
Grate " " "	4 30	....	Chestnut " " "	4 15	....

70 cents additional to New York.

Lackawanna at Rondout, July 11, 1868.

Lump	$4 30@....		Egg	$4 40@....	
Steamer	4 35@....		Stove	4 75	....
Grate	4 30@....		Chestnut	4 20	....

65 cents additional to New York.

Lehigh Coal at Elizabethport, July 11, 1868.

Lump	5 00@....		Chestnut	4 25	....
Steamboat and Broken	4 75	....	Stove	5 00	....
Egg	4 75	....			

Wilkesbarre Coal at Hoboken, July 11, 1868.

(Corrected by Wilkesbarre Coal & Iron Co.)

Lump	$4 25@....		Egg	4 45@....	
Steamer	4 45	....	Stove	4 85	....
Broken	4 45	....	Chestnut	4 25	....

At Baltimore, July 11, 1868.

Wilkesbarre & Pittston W. A. by car	$5 25@5 50	From wharf or yard, 50c. to 75c per ton additional	
Lykens Valley R. A. by car	....@ 5 55	Retail, del'd, per 2,240 lbs	7 00@7 50
Sunbury & Shamokin R. or W A. by car	5 00 5 50	George's C'k and Cumberland f. o. b. at Locust P't for shipping	....@4 75

At Havre de Grace, Md.

Wilkesbarre or Pittston, W. A., on board	$....@4 85	Sunbury or Shamokin, R. or W. A., on board	....@4 85
Trevorton R. A., on board	.... 5 25	Lykens V'y, R. A. on b'd.	....@5 50

Havre de Grace is the terminus of Susquehanna and Tide Water Canal.

At Georgetown, D. C. and Alexandria, Va.

George's Creek and Cumberland f. n. b. $....@ 4 35

Prices of Gas Coals.

July 11, 1868.

PROVINCIAL. Duty, $1 25	Coarse. Gold.	Slack. Gold.
Block House	$1 75	$ 75
Gowrie	1 75	75
Lingan	1 75	75
Sydney	2 13¾	71¼
Pictou	2 13¾	1 18¾

AMERICAN. Currency.	Coarse.	Slack.
Westmoreland Co.	$8 50	$8 00
Despard Coal Co.	8 25	8 00
Pean	8 50	8 00
Newburgh Orrel Gas	8 50	8 00
Delivered in New York.		

Prices of Foreign Coals.

Duty $1.25 per ton.

Corrected weekly by PARMELEE BROS., 32 Pine Street, N. Y.

Liverpool Gas Caking	$ 9 50	Liverpool House Cannel	18 00@19 00
" " Cannel	14 00	" " Orrel	16 00@18 00

Per ton 2240 lbs., Ex. ship.

PRICES FROM YARD:

Liverpool House Orrel, scr'd..$18@20 | Livp'l House Can'l, scr'd. 22 00@— —

per ton 2000 lbs. delivered.

Coal Freights.

(Corrected Weekly.)

Rates of Freight from Newburgh

RIVER.		EASTERN.	
On "Pittston" Coal, by boats and barges of the Pennsylvania Coal Company, per ton of 2,240 lbs.		Stamford	$1 25
Troy and West Troy	$ 55	Norwalk	1 25
Albany and Greenbush	50	Bridgeport	1 25
Coeymans	45	New Haven	1 25
Coxsackie and Stuyvesant	40	New London	1 40
Hudson & Catskill	35	Norwich	1 50
Tugerties and Barrytown	35	Mystic	1 45
Neeb[illegible]ck and Roudout	30	Stonington	1 45
Ke[illegible]sh and New Paltz Land.	25	Sag Harbor	1 45
Fishkill Landing	20	Bristol	1 55
Cold Spring and West Point	30	Newport	1 55
Peekskill	40	Fall River	1 55
Haverstraw	45	Providence	1 60
Sing Sing and Nyack	50	Dighton	1 60
Tarrytown and Piermont	50	Warren	1 60
Yonkers	55	Pawtucket	1 75
The Coal must be discharged with all reasonable dispatch, at the expense of the consignee, who shall also pay wharfage on the boat. Boatmen will tend gny while unloading.		New Bedford	1 90
		Boston	2 10
		East Cambridge	2 20
		Salem	2 10
		Newburyport	2 20
		Portsmouth	2 15
		Portland	2 00

Freights on Coal Sea-borne from Port Richmond, Philadelphia.

July 8, 1868.—From Philadelphia & Reading Railroad Wharves, Phila., to

Boston	2 55	2 65	New York	1 25	1 30
Portland	2 50	2 65	Albany	— —	1 50
Salem	2 60	2 70	Augusta	— —	3 00
Providence	— —	2 10	Bath	— —	2 75
New Bedford	— —	2 25	Cambridgeport	2 55	2 56
Dorchester	— —	2 60	Danversport	— —	2 60
Gloucester	2 60	2 75	Fair Haven	— —	2 20
Pawtucket	— —	2 25	Hingham	— —	2 65
Brooklyn	— —	1 30	Ipswich	— —	2 80
Portsmouth	2 80	2 85	Milton	— —	2 60
Roxbury	— —	2 80	Newberryport	— —	2 85
Norwich	— —	2 10	Neponset	— —	2 60
Calais	— —	2 60	Nantuckot	— —	2 66
Chelsea	— —	2 60	East Chester	— —	1 33
Charlestown	2 60	2 75	Green Point	— —	1 30
Dighton	— —	2 17	Poughkeepsie	— —	1 50
Lynn	— —	2 65	Sag Harbor	— —	2 10
Weymouth	— —	2 80	Williamsburg	— —	1 30
New London	— —	2 00	Mott Haven	— —	1 25
Troy	— —	1 40			

From Elizabethport and Port Johnston.

Albany	$ 85@— —		New London	$1 15	— —
Boston	2 00	— —	Newport	1 40	— —
Bridgeport	1 00	— —	New York	60	— —
Fall River	1 45	— —	Norwalk	1 00	— —
Hartford	1 50	— —	Norwich	1 35	— —
Hudson	1 00	— —	Pawtucket and towing	1 60	— —
Lynn	— —	— —	Portland	1 90	— —
Middletown	1 25	— —	Portsmouth	2 10	— —
New Bedford	1 50	— —	Providence	1 10	— —
Newburyport	2 15	— —	Salem	1 75	— —
New Haven	1 00	— —	Augusta	2 25	— —

Rates of Transportation to Tide Water.

[BY RAILROAD.]

To Port Richmond.—(Philadelphia.)

Philadelphia and Reading R. R. from Schuylkill Haven $2 00

The following are the drawbacks allowed on all coal shipped East of New Brunswick and South of Cape Henry, until further notice:

	Drawback.	Freight.	Nett.
Lump	$1 25	$2 00	$ 75
Steamboat	1 15	2 00	85
Broken	1 00	2 00	1 00
Egg	65	2 00	1 35
Stove	50	2 00	1 50
Chestnut	75	2 00	1 25

From Port Carbon, 8 cents per ton more.

To Elizabethport.

L. V. Railroad from Mauch Chunk to Easton	$ 69
C. R. R., N. J., Easton to Elizabethport	1 06
	1 75
Shipping Expenses at Elizabethport	25
Total	2 00

To Port Johnson.

L. V. R R	$ 69
C. R. R. of N. J.	1 12
Shipping Expenses	25
Total	2 06

To Hoboken.

L. V. R.R.	69
Morris & Essex R.R.	1 12
Shipping Expenses	25
Total	2 06

[BY CANAL.]

To Port Richmond.

From Schuylkill Haven to Port Richmond	$1 00
Freights and tolls by Raritan Canal	1 90
	2 90
Drawback	30
Total	2 60

To New York.

From Mauch Chunk to New Brunswick, by Lehigh, Del. Div. and Del. & Raritan Canal	$ 90
	1 25
Freights through	20
Towage	
	2 35

To New York via Morris Canal.

Lehigh Canal	$ 34
Morris "	40
Towage	10
Freight	1 55
Total	2 39

Expenses from Mauch Chunk to Jersey City for Re-shipment.

Lehigh tolls (net)	$ 34
Morris "	34
Freight	1 50
Re shipping	30
Total	2 48

Provincial Freights.

TO NEW YORK.		TO BOSTON.	
Sydney	....	Sydney	$2 75
Lingan	....	Lingan	2 75
Cow Bay	....	Cow Bay	....
Port Calidonia	$3 00	Port Calidonia	2 50
Little Glace Bay	3 00	Little Glace Bay	2 5

Foreign Freights.

New Castle and Ports on Tyne	£13@15 keel.
Liverpool	12s. 6d.@15s. ton.

New York Imports of Metals, &c.

The following will show the imports of Metals, &c., at the port of New York from foreign ports, for the week ending July 3, 1868. The quantity is given in packages, unless otherwise specified.

Metals, &c.	Quantity.	Value.		Quantity.	Value.
Brass Goods	9	1,710	Iron, other, tons	620	22,464
Bronzes	2	151	Lead, Pigs	8,083	16,611
Anvils	162	1,455	Metal Goods	275	12,313
Chains & Anchors	25	1,045	Nails	3	223
Copper	..	213	Needles	13	5,480
Cutlery	30	15,071	Nickel	5	2,981
Guns	26	3.983	Old Metal	..	2,106
Hardware	82	15,711	Percussion Caps	221	2,342
Iron, hoop, tons	53	2,318	Steel	6,635	91,634
Iron, Pig, tons	550	7,618	Spelter	107,982	4,686
Iron, Railroad bars	26,270	130,378	Silverware, cs	1	106
Iron, sheet, tons	68	2 682	Tin, boxes	25,621	155 562
Iron, tubes	1,523	3,669	Tin slabs	695	6,067
			Wire	306	3,053

BOSTON STOCK MARKET.

(By Telegraph.)

BOSTON, July 10, 1868.

The following were the prices of mining stocks bid to-day:

Calumet	30	Quincy	20¼
Copper Falls	19¼	Cary Improvement	9¼
Franklin	12	Isle Royal	—
Hecla	45	Water Power	16¾
Hancock	2¼	Bos., Hart & Erie RR	15¾
Minnesota	3	Rockland	—

SAN FRANCISCO STOCK MARKET.

A Telegram from San Francisco, dated July 8, to Messrs. LEES & WALLER, Bankers, 33 Pine street, this city, quotes stocks as follows:

Stocks.	Bid per ft.		Stocks.	Bid per ft.	
Gould & Curry	112	@ —	Belcher	185	@ ..
Savage (per share)	158	@ 156	Uncle Sam	..	@ ..
Cholar Potosi	228	@ 219	California	..	@ ..
Ophir	15	@ —	Imperial (per share)	131	@ 126
Hale & Norcross	69	@ 67	Alpha	50	@ ..
Crown Point	97	@ 95	Kentuck (per share)	390	@ ..
Yellow Jacket	1,32	@1,290	Cal. Steam Nav'n Co.	70	@ ..

MONTHLY METAL CIRCULAR.

NEW YORK, July 2, 1868.

My last circular was dated June 4th. The prospect for the grain and cotton crops are very favorable, but nevertheless business remains dull. A new tariff with higher duties on copper and copper ores is talked of, but it is scarcely likely that it will be acted upon.

GOLD.—The lowest point was 139½ per cent. on the 8th of June, the highest 141¼ per cent. on the 17th. To-day it is quoted 140½ per cent. Exchange on London 110¼ per cent.

TIN quiet and without wholesale transactions. Straits and English are nominal 24c.; Banca, 27¼c. gold; 600 slabs Billiton were sold at 24c. but it is now quoted 25½c.

The importations for June amounted to 1,250 slabs Banca and 30 tons English.

The stock is estmated at 25 000 slabs Straits,
3,000 " Banca and Billiton,
and 30 tons English, equal to 1,500 "
Total, in Boston and New York, 29.500 slabs,
against 16,300 " on the 1st of July, 1867.
29,600 " " " 1866.
6 300 " " " 1865.

The English market has declined to 91s. 6d. for Straits.

The Dutch Trading Co. advertised for sale on the 18th of June the 40,000 slabs Banca tin withdrawn from their spring sale, but limited fl. 55, at which price 2,500 slabs only were sold.

SPELTER nominal at 6¾ and 6 7 16c. gold for Silesian. Importations for June 125 tons. Stock 500 tons against 600 tons 1st of July, 1867, and 1,000 tons on the same date 1866.

COPPER.—Under a pressure to sell from second hands part of the receipts from Lake Superior, now arriving, the price declined to 22¾@23c. There is still a difference of ¼c. made between the copper smelted at Detroit and that smelted at Hancock, Portage Lake. For Detroit 23½c. has been paid. A few parcels of Baltimore copper sold at 22½c. but the quotation is 22¾@23c. The market remains unsettled and it is as difficult to buy at quotations as it is to sell.

220 tons, mostly Detroit copper, have been shipped to Europe. The preference has been given to Quincy, which commands ¾ to ½c. more than the other Detroit smelted brands.

The London market is dull at £75 for Chili.

LEAD.—Three to four hundred tons have been sold at 6½c. gold for ordinary lireign, but $6 30 to $6 37½ is the quotation. Best English and other kinds suitable for white lead are scarce and worth 6¾ to 6¾c. The importations for June amounted to 1,300 tons, and the deliveries for consumption to 1,500 tons.

The stock is 4,200 tons,
against 3,000 " on 1st of July, 1867.
3 800 " " " 1866.
4,500 " " " 1865.

RUDOLPH C. WINTERHOFF, 64 Beaver street.

P. S.—A bill has been introduced into Congress raising the duty on copper from 2½ to 5c. a pound; on Spelter from 1½ to 2½c. a pound; on lead from 2 to 2½c. a pound, but its passage is not thought possible.

Copper is firmer, and Detroit ¼c. higher.

London Copper Trade Circular.

Messrs. Vivian, Younger, and Bond, June 19, write—"There are scarcely any transactions to report in West Coast produce; only 25 tons of best brands of bars are reported at £75, Swansea. About 200 tons of regulus, also at Swansea, have fetched 15s. per unit, white 50 tons of Barrilia have made 15s. 6d. per unit. There has been some business doing in fine foreign at rather irregular prices—£80, £80 10c., and £81 for Wallaroo, cash, and £81 10s. for delivery. The market closes very quiet."

THE UTILIZATION OF COAL.—For many years past the subject of utilizing the vast quantity of small coal which is daily accumulating, both under and above ground at our collieries, has engaged the attention of some of the most eminent men of the country, it being generally felt that if a practical plan could be discovered to make the waste coal marketable, vast benefits, not to the coal owner alone, but to the nation at large, would be the result. It is satisfactory, therefore, to be able to report that the Uskside company, Newport, Monmouthshire, have recently erected, at a colliery in the forest of Dean, a patented machine, capable of converting 100 tons per day of small coal into bricks of patent fuel, and the experiment has proved a complete success. The machine is constructed with moulds, linked together so as to form an endless chain, which is carried forward by an ingenious motion under presses, where the coal dust is subjected to a pressure equal to 80 tons, which can be varied if necessary. The same firm is now engaged in constructing another machine for the same purpose. The cost of manufacture is comparatively small, and the price at which the fuel sells leaves a handsome profit on the outlay. When it is considered that most of the coal dust suitable for this fuel has hitherto been reckoned as worthless, the importance of the invention can hardly be overrated.—*London Colliery Guardian.*

BRITISH MINES.—During the year 1866, there were produced from mines in the United Kingdom 101,630,544 tons of coals, valued at the place of production at £25,407,635; 4,523,897 tons of pig iron, valued at £11,309,742; 11,153 tons of fine copper, valued at £1,019,168; 67,390 tons of metallic lead, valued at £1,381,509; 9,990 tons of white tin, valued at £885,368; 3,192 tons of zinc, valued at £69,916; 636,188 tons of silver from lead, valued at £174,951, and other metals valued at £94,000, so that the total value of coals and metals taken from British mines in the year above referred to was £40,345,945, including 743 oz. of gold, valued at £2,656.—*Engineering, June 12.*

AMERICAN

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☞ Mr. T. P. PEMBERTON is Editor of the Mechanical Department and Agent for the JOURNAL OF MINING.

BRANCH OFFICE.—MESSRS. M. A. LATHROP have been appointed our sole agents in the New England States for the AMERICAN JOURNAL OF MINING and our Spanish paper EL CORREO HISPANO-AMERICANO. Their address is 11 Court street, Boston, Mass., where all information respecting communications, subscriptions and advertisements for these papers will be gladly given to those who may wish to favor us with their patronage.

NEW YORK, SATURDAY, JULY 11.

CONTENTS OF THIS NUMBER.

RELATION OF MINING TO OTHER INDUSTRIAL PURSUITS.

We have spoken somewhat at length, editorially, of Ross BROWNE'S report upon the States of California and Nevada, nor have we failed to present to our readers the more salient points of that section of the work devoted to the "Miscellaneous Minerals of the Pacific Coast." The comparatively undeveloped condition of the other States and Territories, as regards their mineral resources, together with the fact that our extracts from them for our mining summary have been very full, renders it quite unnecessary that we glean anything further from those pages of the work. At the close of his report upon the individual States and Territories, some sections have been appended by the Commissioner that are more general in their character, and at the same time so suggestive that they have not failed to attract our especial attention. After all that has been said, it will, in our estimation, be appropriate here to record some of the views entertained by the author of this excellent report upon the relation that mining bears to the other interests of the Pacific slope. It is suggested that within the short space of nineteen years, we have opened up to settlement a larger area of territory than has ever before been brought within the range of civilization in the same length of time. Moreover, this stretch of territory is especially valuable as a source of supply for nearly all the necessities and many of the luxuries of life. The question naturally arises as to the cause of this sudden advance in the march of civilization. No one who is at all informed in regard to the facts of the case, can fail in the answer. It is a truth that no reasonable man will pretend to deny, that the discovery and development of our mineral resources has caused to be written this wonderful chapter in the history of civilization. It was a search for precious metals that first carried the adventurer away from the culture and comforts of an Eastern home, across the plains, over the Sierras, until at last he struck upon the golden shores of the Pacific. Nor has the end yet come. This extraordinary advance of civilization, with all its attendant results to the trade and commerce of the world, still continues and will continue, until in its wealth, culture, power, and influence, the West shall vie with the East. And yet notwithstanding this all-potent influence that the development of our mineral resources has had upon the civilization. agriculture, trade, commerce, and manufactures of the country, how many there are that stand ready to discourage and cripple the interest, but for which the great West would be now, as twenty years ago, known only to the trader and trapper. They forget that the great work the mining interest has done already for the country, is as nothing compared to what it will do, if a wise and liberal policy on the part of the Government give to it a well-deserved, well-earned support. Upon these important questions the report speaks very clearly and to the point when it says:

"It seems a little singular, considering the millions of treasure thus added to our National wealth, the vast range of industry opened to our people, the wonderful impulse given to agriculture, commerce and manufactures, that of all our great National interests, the business of mining has had the hardest struggle to enlist the favorable consideration of our Government. There are in the Atlantic States many who will speak of mining as an interest inimical to the welfare of a people, owing to its fluctuating and hazardous character, and to the contempt it is supposed to beget for the more gradual methods of acquiring wealth. There is much truth in this view when it is confined to the early style of mining, which despised restraint and debauched the morals as it impaired the constitutions of those who followed it in a spirit of wild adventure. But the objection does not lie against mining as a regular, systematic pursuit, directed by skill and capital, and relying upon the steady continuance of moderate profits. This kind of mining, by common consent, is destined to be one of the most permanent and healthful sources of prosperity. The application of American ingenuity and enterprise to the development of the deposits of precious metals found west of the Rocky Mountains, is certain ultimately to make mining for gold and silver as legitimate and safe a business as mining for coal and iron, and as great a promoter of diversified industry.

"If we take mining only in its past condition and its present transition state, we must admit that with all its evil effects upon individuals, it has caused most important general benefits, especially in anticipating by generations the peopling of the immense Territories of the West, and thus widening the field for the display of National energies, broadening the spirit and firmly bracing the National credit. But for the mining furor of the last nineteen years, California would probably have remained a vast cattle range to this day, and all the great Territories that adjoin it, now peopling with civilized communities, and nearly traversed by a railroad uniting both shores of the continent, would still be savage wastes, held and controlled by the barbarians who are fast retiring before the forces of modern progress."

The direct effect of mining upon agriculture, commerce, and manufactures, has never been shown in a more striking manner than in the case of California. To the miners of California is due the commercial relations that exist, to-day, between San Francisco and other parts of the world. The valleys of California would not, to-day, be dotted with towns, teeming with a civilization but little, if at all, behind that of the East. To speak in the language of the report:

"How far would the Pacific railroad have been constructed; where would have been the overland mail and telegraph, and the China steamship line, but for the necessities created by the development of our mineral wealth? The mines have not only led to these things, but they have built up a great manufacturing interest, which already, in San Francisco alone, estimates its annual product by a figure nearly as high as that of the gold fields."

It may, perhaps, be thought by some that there exists an incompatibility between mining and other branches of industrial pursuits; that mining enterprises are antagonistic to those of agriculture, commerce, and manufactures. Upon this point we are told that the truth is, they are essentially homogeneous pursuits. In their normal state the prosperity of the one goes hand in hand with the prosperity of the other. The words of the report upon this subject are so full of point and hopefulness, that we cannot forbear a quotation in full of the paragraph:

"The only antagonism is one of wrong methods, and these are sure to be rectified in time. In some quarters of the globe it is commere that leads, in others agriculture, in others miming. The last has been especially conspicuous as a motor of emigration and industrial development in the Pacific States, and has caused the others to flourish where nothing else could have attracted them for a long time later. The rich silver mines of Nevada have peopled that State with an industrious and thriving population. Farms are seen where sage-brush deserts existed a few years ago; the rugged declivities of the mountains abound in gardens. On the western slope of the Sierra Nevada we have luxuriant orchards and vineyards, in the place of endless forests of pine. Baron Humboldt, the most learned of travellers and most acute of observers, tells us that the best cultivated fields of Mexico are those which surround the richest mines; and he bears testimony to the fact that 'wherever metallic veins have been discovered, in the most uncultivated parts of the Cordilleras, on the isolated and desert table-lands, the working of mines, far from impeding the cultivation of the soil, as it is generally imagined, has been singularly favorable to it.'"

In regard to the relative position that the mining interest of California, will hold in a few years, as compared to those of agriculture and commerce, the report makes no doubt but that the latter will be far in advance. As a stimulating and co-operative industry, the pursuit of mining has no parallel. Upon this point, HUMBOLDT has very aptly said: "The influence of the mines on the progressive cultivation of the country is more durable than they are themselves." In view of this, then, how much have we to hope for as regards the progressive civilization of our country. Our mines have been, as it were, only scratched over. In comparison to the great work yet to be done, ground has hardly been broken. For centuries to come the work of the miner and smelter will be the great, the leading industry of the mountains of the West. Who, then, will undertake to estimate the measure of its influence, not only upon the progressive civilization of this country, but also upon that of the whole world? In this view how fitting, how imperative, that the Government should foster the mining interest of its people. In so doing it will extend not only the sphere of its influence, but also give greater strength and permanency to the conditions upon which, in a great measure, its own perpetuity depends. A half dozen mountain States filled with a mining people, intelligent, skilled, inured to hardship, and disciplined to danger, would be a bulwark of strength to the republic. We will make but one more extract from this copious document, and that upon the present condition of the mining interest. With it we close our editorial review of Ross BROWNE'S report, hoping that, altogether, it has been a source of as much interest and profit to our readers, as it has of pleasure to ourselves:

"Although the business of mining has not advanced in any remarkable degree during the past year, the average yield is fair, and greater confidence exists than ever before in the profits to be derived from this pursuit when conducted upon legitimate principles. The depression in mining stocks so far from affording evidence of any actual decline in the value of the mines, is a healthy indication. It proves that the era of reckless speculation which has resulted so disastrously to thousands of our citizens is drawing to a close. It presents conclusive evidence that a system of mining based upon the fluctuations of a stock market can never be permanently prosperous. Wherever the mines are carefully worked by individuals or by companies, we find the average of success quite as great as in other branches of industry."

THE NEW YORK TRIBUNE AND THE SUTRO TUNNEL.

We are glad to see that the New York *Tribune* has taken up the matter of the projected Sutro Tunnel, and defends it in a manner that clearly shows it to be thoroughly alive to the real merits of the case. We are of the opinion that if a few other journals would follow the example of the *Tribune* in this matter, namely, examine carefully into the real points at issue, then, even if they did not see fit to advocate the cause of the tunnel, they would certainly be enabled to speak somewhat intelligently upon the subject. The *Tribune* says:

"The application of Adolph Sutro and his associates in the Sutro Tunnel Company to Congress for the loan of Government bonds to the amount of $5,000,000, to aid in boring a tunnel for draining and removing the ore from the celebrated Comstock lode in Nevada, calls for a grant of a novel character. We are opposed to aiding public or private enterprises of any kind unless there are the most unequivocal proofs of the necessity, profit and safety of doing so, and we have therefore examined this project with every predisposition to oppose it. If our prejudices have been reversed by investigation, it is probable that the same facts which have convinced us of the propriety of such a grant may convince others."

After an intelligent review of the whole case, the question that follows is the necessary and logical conclusion to which the *Tribune* has come:

"The construction of a single tunnel like that proposed would demonstrate to practical miners and capitalists the utility of such enterprises wherever operations have been prosecuted on fissure veins to a depth that renders the cost equal to the income, and would thus lead to the prosecution of other similar enterprises by private capital. The case is a unique and peculiar one. The consequences of withholding the aid will be the speedy destruction and loss of the private capital now invested in mines to five times the value of the aid sought; while the consequences of granting the aid will probably be to add very heavily to our annual product of gold and silver, upon which we rely in some measure for the discharge of the National debt. The prospect that the Government will be speedily repaid the amount advanced seems to be more immediate than in the case of any similar aid it has ever given. The only question, therefore, seems to be, not whether the aid should be extended, but on what terms. With every allowance for the energy with which M. Sutro has prosecuted the work, in the hope of enlisting private capital in the enterprise, it would seem reasonable that, if the Government furnish the entire means of bringing it to a successful conclusion, and sustain, as it must, all the risk of the operation, it should be paid not merely the principal and interest of the amount advanced, but a perpetual royalty on the proceeds of the operation of the tunnel, which might wisely be devoted to the endowment of schools of mining or other similar purpose, or to the payment of the National debt."

"Through Canada to the Pacific."

The near approach to completion of our inter-oceanic railway, begins to startle our British brethren. They begin to regret that they know so little of their proper relations to their Canadian kindred. Indeed, as our tunnel blasts amid the Rocky Mountains knock the scales from their eyes, they are troubled with visions of a line of communication "through Canada to the Pacific." Through that country, they argue, lies the most direct route to China and Japan. Let them declaim, "there is a certain work that *must* be done." Let Lord Milton "sum up," in the British Parliament, as concisely as he can, when he argues for the development of British Columbia, there is no help. Before English rails can cross the Canadas and Columbia, there will be a trio of lines belting the continent. The control of commerce with China and Japan is to be in our hands.

Diamond Making.

Perhaps art has at last triumphed completely over nature, and torn from her grasp, after a long continued struggle, the great secret. What was the process by means of which nature, in the secret places of her great world labratory, fashioned the diamond from the carbon, in one form or another, that it took in hand? The following lines from the London *Mining Journal*, speak for themselves:—"Mr. Saix sent in a paper to the Academy of Science on the artificial production of black, colorless, and colored diamonds. If a current of chlorine be made to pass through cast-iron, when in a state of fusion, perchloride of iron is formed, which disappears by evaporation, leaving the carbon of the metal at liberty, in a crystallized state."

Hue and Cry.

It is well put when the San Francisco *Mining and Scientific Press*, in speaking of that Stevens compound, that "thrusts out of the walls of the ore the miners' great curse, the silica," and performs other never before heard of, and, it is to be hoped, never hereafter to be heard of metallurgical feats, says, "the *hue* and *cry*-olite flux." We hear the noise of it in Nevada. Now and then discordant notes reach us from the gold fields of the South. Even England contributes now and then an echo. But, alas! it's hue and cry—and nothing more.

The Highest and the Deepest Mine.

The highest mine in the world is a silver mine, and is that of Potosi, in the Andes of Peru. It is situated 11,375 feet above the surface of the ocean. The deepest mine in the world is a salt mine. It is the so-called new salz werk in Westphalia, and is 2,050 feet below the surface of the ocean.

EDITORIAL CORRESPONDENCE NO. VI.

PECULIARITIES OF SAN FRANCISCO.

SAN FRANCISCO, June 7, 1868.

As might naturally be expected, themes of interest and importance are multiplied upon us much faster than we can discuss them in these weekly epistles. A veteran editor like ourselves is always good for a column, subject or no subject; dearth of ideas is neither novel nor perplexing to him; but sudden wealth of suggestive thoughts is calculated to confuse the best of us. In making choice among so many say

able things, one is not always wise or witty, though, in handling less abundant material, one were both. Before we turn again in earnest to the hopeless task of keeping our readers informed of our experience of travel—hopeless, since if we travel we cannot write, and if we write we cannot travel, and if we travel a mile we must needs write a week—we propose to jot down a few of the superficial peculiarities of the city, the dust of which we are about to shake from our feet (not to say our eyes, nose, mouth, ears, whiskers, back-hair, and all integuments, from epidermis to our coat,) after a delightful sojourn of a week.

Entering the harbor late in the afternoon, it was our good fortune to see the Golden Gate in its glory. From the stern of the steamer, we looked back through the narrow passage to the declining sun. The water glowed like fire. The bare, but beautiful hills (fine natural symbols of what artists call "the nude") the sea-lions, sporting on the rock at the Cliff House, the fort, the islands, and the light brown houses of the city just coming into sight were all tipped with the post-meridian splendor. The city itself looks very picturesque from the water. The high hills, the vistas of broad streets, the occasional graceful spires or fine buildings, are displayed to good advantage. No modern metropolis stands on such uneven ground.

Once in the town, the up-hill and down-hill becomes still more apparent. Every street makes it a point to run up a hill, sooner or later. The grades are very steep still, in spite of much improvement in the last few years. Some of the hills, which impede the business of the place, will probably be removed, at whatever cost; but most of them will remain, as they are at present, favorite sites for handsome residences. They command magnificent views on every side, and though exposed to winds (as what cranny in San Francisco is not,) they are comparatively free from the clouds of dust which still infest the lower and suburban parts of the city. Wind and dust, we need scarcely remark, are notoriously characteristic of San Francisco. We confess that we found neither of them as intolerable as we had been led to believe. In fact, it is seldom that one suffers extreme discomfort in the streets; the nuisance consists in the invariable repetition, for months together, of a petty annoyance; in the rapid degeneration of broadcloth and linen, and small matters like that. In the outskirts, and along vacant lots, indeed, one may study the celebrated simoon of the desert. There, the whirlwinds darken the air, and the sand drifts along sidewalks and fences like snow in a New England winter. But the wooden pavements and the blocks of buildings have considerably abated the evil in the more thickly settled streets. The citizens, as if they scorned to acknowledge its existence, have a strange penchant for black broadcloth. One sees more men in dark suits here than in other cities. There is naturally much brooming of coats and blacking of boots, for which purposes very neat and comfortable saloons are open in great numbers.

The streets are wide and straight, the houses in general very low. Three stories are unusual. We are told that the big earthquake a couple of years ago caused low wooden buildings to be fashionable, but that the effect of that panic is somewhat abated, and many new blocks are three stories high. The finest building in town, though a small one, is that of the Bank of California, which is constructed of beautiful dove-colored stone. Wells, Fargo & Co., have a low-browed stone building. But most of the handsome houses are covered with stucco, which stands very well in this climate, and, it must be owned, is capable of producing magnificent architectural effects. That noble edifice, the Merchants' Exchange, is a striking example. Montgomery street, the Broadway, and California street, the Wall street, of San Francisco, though comparatively short, are full of splendid fronts.

The high winds, and the numerous wooden buildings render the city peculiarly liable to conflagrations; and this great danger has stimulated the creation and maintenance of a thoroughly efficient fire department. The promptness with which the steamers of the department rattle away to a fire, and the quiet, business-like way in which the whole thing is managed, are evidence of the high training of the force, and of the confidence which people repose in it.

Drinking is very common—we might almost say universal, in this city, as elsewhere on the Pacific slope; but intoxication seems to be less frequent than at the East. Perhaps the climate, the active, out-door life of the people, and the great consumption of claret and light wines, may explain this fact.

The Chinamen are met everywhere, and seem to be most peaceable and industrious members of society. They have been frequently exposed to cruel treatment, and still suffer, in many parts of the Pacific States, under most illiberal legislation; but all decent men are disposed to protect them in their rights. The miners as a class are opposed to Chinese labor, because they fear the competition. Chinese workmen at a dollar a day are naturally in the way of Americans, Cornishmen or Irishmen, who demand two or three dollars and upwards. But the miners have been calling for years for the assistance of capital; and, if they receive that boon, they must take the consequences along with it. Capital will look for labor where it can get it most advantageously; and we do not hesitate to say, that the present high wages of miners (high in proportion to the cost of living,) are the greatest of the many obstacles to the successful establishment of that industry in this region. Many evils, but this more than all, hinder the necessary and inevitable reduction of mining from a speculative to a business footing; and when, in spite of ignorance and prejudice the irresistible laws of trade and labor shall have effected the change, American miners will be the first to see that their condition is improved, not injured, by it. At present, there are many capable men working as common miners, because they cannot find places suited to their experience and skill. If there were ten mines where now there is one, such men would be foremen and mining captains. By conspiring against the introduction of cheap labor, they are really shutting off the only chance for advancement in their trade. This is only another illustration of the fact, that all trades unions are liable to become institutions for the benefit of poor workmen, at the cost of the good ones. Individuals cannot rise, because the guild hangs like a millstone to their necks.

But a truce to political economy. We will only add that we have seen some hundred Chinamen employed at the celebrated woollen mills of the Mission Dolores. They are docile, dextrous and faithful. Each man being set always to do one thing, does it with literal accuracy and skill; but they cannot easily change work, or act with intelligence and discretion in novel situations. Still, we must suspend judgment on the Chinese. People here are just beginning to study with interest, though by no means yet to comprehend, that queer thing, the Oriental mind. A gentleman who attended the dinner recently given in "Frisco" to Mr. Mandarin BURLINGAME and his suite, told us that almost all the speakers indulged in gorgeous descriptions of the benefits which old China was about to receive from the introduction of the enlightened civilization of the West, while the Chinese officials (many of whom possessed far more polished manners, and spoke better English, too, than the orators) sat quietly listening, with the proud humility of some great philosopher, bearing with the extravagance of some conceited youth, out of whose bombast he hopes to glean a fact or two worth knowing. "I couldn't help feeling a little uneasy," said our informant, "as if, in their sleeves, they were laughing at us."

R.

NEW PUBLICATIONS.

THE JOURNAL OF THE FRANKLIN INSTITUTE.—The June number is at hand. In addition to the usual number of editorial items and novelties, we find an article given to a consideration of "The National Government and the Universities." It is claimed that the proper men to fill the various posts of honor and trust that are in the gift of the National Government, are to be found in our Universities. A quotation of the first, and two or three of the last paragraphs will give the reader the gist of the article. Says the writer:

"Honesty, perseverance and genius are things too valuable to be lost; but our National Government is losing them and the country suffers. * * * * * * * * * Let it then appoint a council composed of the chief men in the National Government and representative of its various departments, like Motley, Bancroft, and Charles Francis Adams, and let them be associated with our College presidents. Let such a council appoint examining courts, devise rules for the conduct of examinations, prescribe the qualifications for success, etc. Then should we have a National Government which would be stronger than steel, though without an army to defend it, because it would have enlisted in its support the moral worth, the education, and the genius of the entire country."

It would seem that the *backbone* of honesty, perseverance and genius is still left to the National Government, even in the mind of the writer, notwithstanding his first assertion, if the Representatives of its various departments, that is, its chief men, are those whom he would associate with our College presidents. Let there be a council, examining boards, etc. What then? There would be as much of favoritism and partisanship as at the present time. There would be simply another field of operations. The right man would hardly be more likely to fall in the right place. Men of larger experience and observation, not College striplings, should be made "consuls and attachés." If College culture is united to those, of course, so much the better. Comparatively speaking, it is a question still open for discussion, as to how much more of genius and moral worth, if any, there is to found among our Universities, than among the masses, who see less of books but more of men. The article on the Suez Canal is included in this number. BENJAMIN SMYTH LYMAN also concludes his paper on "Telescopic Measurement in Surveying."

COMMISSIONER TAYLOR'S REPORT.—We are under obligations to JNO. JAY KNOX, Esq., of the Treasury Department, Washington, D. C., for a copy of the "Reports on the Mineral Resources of the United States." In addition to J. ROSS BROWNE'S Report, this work contains the Report of JAMES W. TAYLOR, on the Mineral Resources of the United States east of the Rocky Mountains. The latter will be hereafter a subject of special comment.

The Sutro Tunnel.

The Secretary of the Treasury has addressed a letter to the Chairman of the Committee on Mines and Mining, stating he has considered the bill proposing to aid in the construction of the Sutro tunnel, in Nevada, and says he has no doubt if the proposed tunnel should successfully prove the indefinite downward extent of our mineral lodes, it would largely increase the value of our mineral lands, stimulate mining, and result in vast benefit to the country. The Commissioner of the General Land Office, Mr. Wilson, says geologists appear to agree in the opinion that the Comstock lode is a true fissure vein, and that it will continue of equal richness to any depth which is practicable to work in the mines. In view, therefore, of what other governments have done for mines not having a tithe of its productiveness, and of the fact that as a nation we are at this moment deeply interested in the development of all our resources, and preeminently so as to those of the precious metals, it is believed that if the policy of a loan of the public credit, as adopted by Congress in regard to the continental railway, should be extended to the enterprise, now under consideration, the results that would follow would be of great value to this Republic.

Original Papers.

[WRITTEN FOR THE AMERICAN JOURNAL OF MINING.]

MONOGRAPH ON IRON.—No. I.

BY DR. L. FEUCHTWANGER.

The metal iron is known from the most remote period. The Egyptian pyramids were fastened together by means of iron bars. In the Trojan war it was eagerly sought after, because the Egyptians, Phœnecians and Hebrews were well acquainted with its use. PLINY gives a full description in his 7th and 24th volumes, where he tells us of the island of Elba possessing inexhaustible resources of iron. In the year 500 B.C., iron was brought from the Black Sea into Greece; the Trojans, the Carthagenians, and then the Romans brought iron from Spain after the time of Alexander of Marcedon; in fact the Grecians were the first who used it as coin and for weapons of war. Low furnaces for the reduction of iron were used in the seventeenth century, in Styria, where likewise immense deposits of iron have been discovered and worked. Iron, which is the most abundant of the heavy metals and most largely employed in the arts, is but little known in a state of absolute purity; it is but seldom met with in nature in the metallic state; its compounds, however, are so widely distributed, that very few bodies exist in nature in which iron is not present to some extent. Its ores are universally disseminated. The ordinary coloring ingredients of soils, and many rocks tinged with red, yellow, green, brown, and black, indicate the existence of iron. It is in the ashes of most plants, and it appears to be an essential constituent of the blood of animals; and the organic, inorganic and atmospheric worlds lay claim to this element.

The iron met with in commerce, always contains carbon and to the amount of 10 per cent. of some other foreign substances, which exercise some influence on the character of the metal; it is, however, chiefly the amount of carbon contained in iron which determines the remarkable differences of character presented by the several varieties of metallic iron known as malleable iron, cast iron and steel, which are the different kinds employed in the arts. Pure iron is silver-white, takes a high polish, is extremely tenacious, softer than ordinary malleable iron, and has a conchoidal crystalline fracture, and a specific gravity after melting, of 7.843, and in sheet iron or wire, of 7.75. It crystalizes either in cubes, octahedrons, or some other form belonging to the regular system. The cleavage is parallel to the faces of the octahedron. Native iron is found in meteorites, in which the percentage of iron is from eighty-five to ninety-five; the balance of the ingredients consists of nickel, cobalt, chromium and copper. Meteorites have a specific gravity of about 8.0. Some of the masses found upon, and seen falling to the earth, from time to time, are very large. One of 30,000 pounds weight was found near the river Parano, in South America; one of 1,600 pounds was found in Siberia; and one from Texas, of 1,675 pounds in weight, is deposited in Yale College. Meteoric iron is not considered of any practical value, but it is highly useful in a scientific point of view.

Meteorites show that the nickel found in them, diminishes very much the tendency of the iron to rust. It is not my intention to give you in this paper, an extended description of the metallurgical processes used in obtaining the various kinds of iron from their ores, for the reason that I have another object in view, viz: to explain, by autopsy, the great variety of native ores, having iron as their base. There are but three or four kinds of iron ores used in the production of cast or malleable iron and steel, while over two hundred varieties or species have been discovered in nature. I propose to lay before you examples of the most important minerals used for the furnace, and in the arts, in order to convey to your mind some idea of the very important part that iron and its compounds play in the fields of art and science. I will, however, begin with those ores from which the iron of commerce is obtained, and then describe quite briefly the process of smelting those ores and the subsequent refining of the metal, thereby converting it into cast and malleable iron, and steel, according to the latest improvements. The principal ores used in this country for making pig metal, are:

1st. Magnetite or magnetic iron ore is the richest of the ores of iron available for smelting purposes, and contains generally, 72.41 per cent. of iron. Magnetite crystalizes in the monometric system—the three axes being equal in length as in the cube the octahedron and dodechadron. This ore is black and has a metallic lustre, and is found either crystalline, granular, compact, or in the form of sand. It forms entire mountain masses in many parts of the world. The State of New Jersey furnishes inexhaustible supplies of this ore, vieing with Sweden and Norway. This mineral is used in Pennsylvania, quite extensively, and is obtained from the Sterling mines in New York, and the Ogden mines in New Jersey. It is mixed with one-third or one-half of its quantity of Hematite and yellow bog ore, found extensively in Pennsylvania.

2d. Franklinite is a very valuable mineral, and much sought for by the manufacturers of malleable iron. It contains sixty-six per cent. of peroxide of iron, sixteen per cent. of sesquioxide of manganese, and seventeen per cent. of oxide of zinc. This is only a variety of magnetic iron ore, and owing to its manganese, it is expected to give an iron that will take the place of the "Spiegeleisen," of Belgium.

3d. Brown Hematite comprises a great variety of hydrate

oxides of iron. It contains from forty to sixty per cent. of iron, and about fifteen per cent. of water. It is crystalline and fibrous, bnt is mostly compact, or of an earthy natnre. It is of varions shades of color, from blackish brown to yellow and red. Brown Hematite contains some manganese and a considerable admixture of foreign earthy substance. This mineral is in very great abnndance in Connecticnt, New York, Vermont, Pennsylvania, Tennessee, and in the region of Lake Snperior. Yellow ochre, clay iron, and bog ore, belong to this class. Next to Magnetite this ore is most extensively used, both in this country, as well as in France and Germany.

4th. The red oxide of iron contains seventy per cent. of metal, and is anhydrous. This ore is found in crystalline, massive, earthy, or in nodnlar forms. Large beds of this ore are fonnd in the Canadas and in the Adirondac regions of northern New York, where, according to EMMONS, beds of seven hnndred feet in thickness are known to exist.

[TO BE CONTINUED.]

[MS. FURNISHED TO THE AMERICAN JOURNAL OF MINING BY HON. J. ROSS BROWNE.]

NOTES ON LOWER CALIFORNIA.—NO. VIII.

BY W. M. GABB, ESQ. PHILADELPHIA, LATE OF THE CALIFORNIA GEOLOGICAL SURVEY.

Copper, like gold, is reported from nearly every part of the Territory; numberless mines have been opened and invariably abandoned. The Delphina mine is the only one that seems at all promising. This mine is in the North Western part, between San Telmo and Sta. Tomas. The principal work is a shaft about 150 feet deep, which we did not examine, fearing the presence of gas at its bottom. There being nobody present who knew the mine, we did not feel inclined to rnn any risks. On the surface, however, there has also been considerable work and the vein appears in a cnt, over fifty feet deep, to be very well defined, with distinct walls and from five to seven feet wide. The ores, of conrse snrface ores, oxides and carbonates, are usually rich and abundant. Between three and four hundred sacks are stocked at the mine, ready for shipment, and I have been informed that several hnndred sacks more, of the same character, are at San Isidoro, the shipping point, awaiting a rise in the markot price of copper, so that the proprietors can sell without sacrifice. Of conrse it is impossible to prophesy the futnre of a copper mine on the character of its surface ores; bnt it is claimed that so far as the work has gone, the vein has not changed materially in character.

Baser metals exist also in the Territory, but there has never been any active search made for them, and many a year mnst elapse before they can become valnable.

Coal has been reported in a few places where it does not exist. It is said to be found near the Ojo de Liebre. It may be that some "brea" or asphaltum is found there, and the two minerals confonnded; a mistake that has often occurred in Upper California.

Salt occurs in almost innumerable localities; bnt there are three spots, which are noted both for the quantity and quality there obtained. These are San Quentin, Ojo de Liebre and Carmen Island, in the Gulf. We did not visit either of the latter places, but contented ourselves with examining the ponds at San Quentin. These ponds, or little lakes, half a dozen in number, vary in area from one to five acres. They are situated near the coast among a number of sand-hills, and separated from the beach only by low ridges of sand. They are qnite shallow, and the salt crystallizes on the mud-flats, on their margins, in flakes of half an inch or more in thickness. By a dextrous motion this salt is lifted, unsoiled, from its soft bed, thrown into heaps whence it is carried to the vessel. At present the place is abandoned. The royalty required by the Mexican Government, the cost of collecting, hauling and shipping, and the high United States tariff on imported salt, in the aggregate amount to so nearly the price of the material in San Francisco, as to completely eat up all profits, and thus effectually close the only market to which this salt can be taken.

Sulphnr is found in moderate quantities near Moleje, and is said to be very abundant in the vicinity of the Volcano of the Virgins. Gypsnm, generally in its crystallized form of selenite, occurs in many places in the post pliocene rocks, or weathered out from them and scattered over the soil. It also occurs near Moleje, but not in the enormous qnantities which have been reported by interested parties.

AGRICULTURE.

The climate of Lower California is so mild that all the usually cultivated plants of both tropical and temperate countries grow side by side in the open fields. The lowest temperature we encountered, in four of the coldest months of the year, was 57° Fahr. and the winter averages from 65° to 70°, so far as our experience went. Several species of palms are native and the date grows wild, thoroughly acclimatized. Plantains and bananas, figs, oranges, olives, lemons, limes, pomegranates, peaches and, in the Northern parts, even apples grow and flourish, requiring bnt little care when first set out, and none afterwards. Vineyards exist everywhere, and the native wine is infinitely snperior in quality to that of Upper California. Fields of sugar-cane are too common to excite remark, and the mannfactnre of sugar is one of the most important interests of the Southern part of the Peninsula. Tobacco and cotton are cultivated in various places, especially in the valleys south of La Paz, and over more than half the Territory wild cotton is as common a weed as is the Jamestown Weed (stramonium) at home. The castor bean grows wild, a perennial tree with a woody trunk, and melons are so abnndant that dnring their season they make the greater part of the food of the people in some districts.

The principal agricnltural regions are as follows: The vicinity of San Jose del Cabo, and along nearly the whole of the valley and its branches. Here wine, sngar, dried fruits, cotton and tobacco are the principal prodncts. The cane-fields extend as far as the eye can reach from San Jose, and there is still plenty of nnoccnpied land, only requiring the digging of ditches to render it available. This is necessary, as everywhere else in Lower, and in many parts of Upper California. On acconnt of the rains being confined to the wet season, the dry season being literally so, vegetation requires artificial assistance. Sta. Anita, twelve miles np the valley from San Jose, is a lovely spot, connected with San Jose by an almost continuous line of gardens; and beyond it are ranches scattered along on every piece of bottom land to the head of the valley. Santiago is a little group of honses surrounded by similar farms and gardens, a sngar mill or two, being engaged at the time of our visit, in finishing the work begun by the farmer. Miraflores, Las Palmas, Los Martyres, San Bartolo and numberless other spots, prove that wherever an acre or two of level land, or even hill side, can be irrigated, the yield is such as to make a farmer from the Atlantic States open his eyes in amazement. We Californians are so accnstomed to big crops, and to seeing natnre on an exaggerated scale, that we could bear it with a commendable degree of eqnanimity.

About San Antonio are many pretty little patches of ground, which will, one day, be cnltivated as well as many spots on the road to, and in the vicinity of La Paz.

Todos Santos has a valley of one or two square miles, most of which is planted in canes, vineyards and orchards, and every year yields a fine revenne to the owners.

Many little valleys and nooks exist among the granite mountains of the South still nnoccupied, and which will one day be brought into cultivation.

(TO BE CONTINUED.)

The Chlorination Process in Mining.

One of tho chief features of the present condition of onr mining indnstry is the multiplication of chlorination furnaces, bringing with it necessarily a demand for concentrating machinery, for chemical knowledge, and for a careful study of tho characteristics of the ore in the leading mines. The principle of chlorination is that the metallic gold is dissolved by chlorine gas, while metallic oxides are left untouched. The ore is first roasted in a furnace of proper construction, and then enclosed in a covered vat, into which chlorine gas is introduced until the gold is converted into chlorine of gold; then the vat is opened and filled with water, which dissolves the gold as sugar is dissolved nnder similar circumstances. The solution is drawn off and the metallic gold precipitated from it by the introduction of the proto-sulphate of iron. The cost of the entire process does not exceed $20 per ton, and in some locations, where wood is cheap and freights moderate, it may be worked as low as $12 per ton of sulphurets. The roasting is probably the most difficult step in the entire process, and yet every part must be as correctly performed. Plattner describes several kinds of roasting, as oxydizing roasting, reducing roasting, chloridizing roasting, evaporating roasting, etc.; of which oxydizing and chlorinizing roasting are the only kinds we have to do with. Oxydizing roasting is either to form oxyds free, and to drive off in form of vapor the residum of sulphur, arsenic, etc., or if the substance roasted is a componnd of metal and oxygen, to snbject it to further oxydation. Air must be freely admitted. Oxydizing roasting is for the purpose of oxydation of such metals as are combined with sulphur or arsenic. Chloridizing roasting is the combination of metals with other bodies by aid of proper admixtures, when in a roasting process, having for its object the oxydizing and decomposition of sulphur and arsenic metals. Certain snbstances are added, as for instance salt or sulphate of iron. In roasting for chlorination we have first to oxidize the iron, and next, by introduction of salt, to chloridize certain other substances which vary with the locality from which the ore is obtained, nsually either lead, magnesia, or alnmina, or all of these. When this is rightly done we have usually formed either oxides or oxychlorides of all the base metals in the ore treated, and leaving gold as the only free metal to absorb the chlorine gas. In order to be successful in roasting the ore, attention must be given to the construction of the furnace. If the arch over the hearth is too high, the ore will not be oxydized; so also if the flues are too large, or the damper is opened too wide, as the excess of cold air or draft has a tendency to cool the ore. Then again if the arch is too low, or flues too small, the air will fail to yield its oxygen to desulphurize and oxidize the ore. Cold air must always flow into the furnace through the work-holes, but it must be in proper qnantities. and the work-holes must be in proportion to the chimney flues. In our knowledge a furnace was erected, in which. by the mistake of the builder, the flues were constructed about one-half the size intended, and the error was not discovered until the furnace was heated up. The result was a failure. It was warm weather, and there were no sides to the furnace building, so that the prevailing winds had free circulation around and through the furnace—across the hearth. Under these circumstances we had a partial success, but the desulphurization was quite irregular, depending entirely npon the prevalence of strong winds. Chlorination in the furnace was almost impossible. Even the hottest fire would avail nothing, for it is not a hot fire which is required, but heat combined with a current of air.

Sometimes the absence of draft into the furnace is evidenced by the appearance of yellow sulphur on the rake handles. This is an extreme case; a more delicate test is the fact that the gold is discolored when examined by washing a small portion of ore in a Wedgewood mortar. It is not impossible to work every kind of demipyrites, but some ores reqnire a different treatment from others. The most simple ores are those pyrites which are perfectly free from lead or alkaline earths. All alkaline earths, snch as magnesia or alnmina, which are nsually fonnd in talc and serpentine, create more difficulty in chlorination, because they reqnire the nse of salt in roasting. Talc and serpentine frequently occnr in the ores as bedrock, and in strata next to the seams. When salt is reqnired to be nsed in roasting, it must be nsed in proper qnantity, or it is of no avail; and it must not be introdnced before the proper time, or else, then, also, it is of no use.—*Alta California.*

Very Profitable Mines in California.

The following information in regard to the yield of some of the leading mines in the State is from a new book on "The Natural Wealth of California." The total prodnction of the Hayward mine in ten years was $3,725,000. The qnartz raised monthly now is 1,800 tons; the average gross yield is $20 04 per ton; the expense, $6 04, and the net yield, $14. The total monthly product for 1867 was $36,000; the net earnings for the year, $302,400; the net estimated valne of the ore in sight at the end of the year, $840,000; the total vertical depth of the deepest workings from the surface, 1,049 feet. The gross yield of the North Star, for four years, ending December 31, 1866, was $8 2,000; the net earnings for five years, ending June 30, 1867, was $375,000. For six months, ending December 31, 1867, the yield was $110,545 84, and the profits $20,000. The Enreka mine, at Grass Valley, in the year ending September 30th, 1866, took ont 11,375 tons of quartz, the average gross yield per ton being $45 83, and the expense of extraction and reduction $13 75. The total productoin of the year was $521,431 41; the expenses $192,648 44; the net profit $327.782 77. For the year ending September 30th, 1867, the total gross yield was $585,316 10; the total net yield $348,102 36; the average gross yield per ton, $48. The Empire mine in fonrteen months ending June 30th, 1867, produced 37,840 tons, averaging $36 20 gross. and in the six months ending December 31st, 1867, produced 3,500 tons, yielding $100,000 gross, and $27,000 net. The Banner mine, at Nevada, in four months ending December 31st, 1867, produced $67,512 72, the qnartz averaging $23 74, and in three years, ending at the same time, yielded $207,640 66, an average of $20 34 per ton.

Testing Steam Boilers.

Prof. S. W. Robinson, of the University of Michigan, proposes to the engineer who wishes to determine the pressnre to which his boiler can be worked with safety, the following very simple process: Let the boiler be filled entirely full of cold water, even to the throttle and safety valves, and all closed tight to prevent any escape. Now, by lighting a fire under the boiler, the water will be gradually expanded, and produce a pressure sufficient even to ruptnre the iron, before the temperature of the water arrives at the boiling point. While the pressure is increasing, let the steam gange or pressure indicator be watched; and when the test pressnre, which may be twice or more times as great as the working pressure, is reached, a portion of the water may be allowed to escape and the pressure reduced. The pressure results from the fact that water expands more by heat than iron, at a corresponding temperature. The process given above is attended with as much safety as tho use of the hydrostatic press, nnless the water be heated over 212° F., which wonld not be required unless the boiler leaks. Below this temperature no disastrous consequences would follow, even if the boller should be torn asunder, inasmuch as explosions resnlt from the sndden expansion of gases or vapors.

"Minargent."—The New Substitute for Silver.

"Minargent," the new snbstitnte for silver, recently invented in Paris, possesses, according to the London *Mining Journal*, nine-tenths of the whiteness, malleability, ductility, tenacity, sonorousness, and density of silver, while it has a superior metallic luster, wears better, is less liable to be acted on by the emanations of sulphureted hydrogen, and is less fusiblo than silver. "Minargent" may he nsed for all purposes to which silver or other white metals or alloys are applicable. It is composed of one thonsand parts of pure copper, seven hnndred parts of pnre nickel, fifty parts of pure tungsten, and ten parts of pure aluminnm. The inventors do not, however, limit themselves to the exact proportions given. The novel featnres of the "minargent" consist in the introdnction in the alloy of pure tungsten and pnre aluminiam, and also the considerable proportion of nickel which they have succeeded in alloying with the aluminiam. The metal is formed into ingots, and monlded in sand in the ordinary way.

Necessity for Wide Streets.

The following from the *Chemical News*, showing an increase in the quantity of carbonic acid met with in the air in narrow streets and houses, is snggestive in its character. Professor Dr. Gunning records a series of experiments concerning the quantity of carbonic acid gas contained in the atmosphere of the City of Amsterdam. While the average of carbonic acid gas found in a most densely popnlons part of that city was only 4·13 vol. in 10,000 vols. of air, it appeared that the air in the thoroughfare called *Halsteeg*, and taken at 3 meters height above the pavement, contained from 4·9 to 5·4 vol. of carbonic acid gas in 10,000 vol. of air. The width of the thoroughfare alluded to is about the same as that of Birchin Lane, Lombard street, E. C. Dr. Gunning advocates the proposed widening of the above-named thoronghfare as necessary, also, on sanitary grounds.

Preservation of Building Materials.

M. Payen has paid a good deal of attention to the preservation of building materials, and especially of wood. There is no novelty in his latest snggestion for the snperficial carbonization of timber, for we know that it was practiced by the Romans. M. Payen, however, recommends that the whole surface of ships should be carbonized, and for this purpose snggests the use of the gas blow-pipe, or, when gas is not at hand, a blow-pipe and lamp fed with heavy petrolenm oils. He would treat all wood-work exposed to wet in the same way. The ntility of this plan of treatment is incontestable, the only question being whether the same end cannot be gained at less cost.—*Mechanics' Magazine.*

Patent Claims.

Interesting to Miners, Millmen, Metallurgists, Oil-Men, and Others.

79,229.—MANUFACTURE OF GUNPOWDER.—William H. Jackson, Salem, Mass.

I claim the manufacture of gunpowder by mixing a solution of nitrate of potash, or a known equivalent thereof, with a soluble vegetable extract, such as extract of logwood, or with other soluble organic matter, and by subsequently evaporating to dryness, with or without the addition of sulphur or of pulverized charcoal, substantially as hereinabove described.

79,313.—APPARATUS AND PROCESS FOR MAKING STEEL.—T. J. Chnb, Williamsburg, N. Y., Antedated Dec. 30, 1867.

I claim, 1st, The construction of a series of deoxidizing and carbonizing retorts or chambers, A A A, arranged so as to prevent the gases from the heat-producing fuel from coming in contact with the ore or the materials in the retort, in combination with a melting chamber for the purposes set forth.

2d, The arrangement of the melting chamber, B B', with openings and doors at both ends, in such a manner as to facilitate the manipulation of the ore or metal, under treatment from both ends, substantially as described.

3d, Making provision for feeding loose ore and metallic and other substances in at one end of the melting chamber or furnace, B', and tapping the molten metal at the other end, substantially as described.

4th, Making provision for conducting heated air and gases over the ore or molten metal, said air and gases entering at one side or end of the said melting chamber or furnace, and passing out at the sides or other end therefor, for the purpose of reducing said ore, metal, or metallic substances therein into a liquid or molten mass, substantially as described.

5th, Making provision for shielding the ore, metal, and other substances from the direct action of the gases of the fuel, by arches T.

6th, Making provision for shielding and protecting the molten metal in a melting chamber from the direct action of the air, flame, and gases of the fuel, by floating shields, or an equivalent refractory substance or substances floating on the top of the metal, as described.

7th, Making provision for skimming off the surface of molten metal, by floating scrapers, or their equivalents, substantially as described.

8th, Effecting the separation of the cinder or upper layer of substances floating on molten metal by the means herein specified and described.

9th, The construction of a vessel or melting chamber of a furnace, so arranged that it may be heated solely from above, by which means the metal therein becomes fully melted into a liquid state previous to skimming, tapping and drawing off the same, substantially as herein described.

10th, Making provisions for and effecting the melting of metals by heat applied solely from above the metal, when said heat is derived from a gas regenerative apparatus or furnace.

11th, The arrangement of a furnace or of a vessel or vessels in a furnace for melting metals therein, in combination with and heated by the flame produced by the mingling together of the air and gas rising from and having passed through an air-heating and gas heating or re-heating furnace, chamber, or apparatus, in separate currents.

12th, Providing for keeping the under side of the melting chamber, or chambers in which the melting chamber or vessel is placed, cool, or from melting or leaking, by the arrangement of the cold air chamber or space below the same, C.

13th, The employment of slats or arch pieces, T T, for the purposes set forth.

14th, The employment of scrapers or skimmers, S S, or their equivalent, for the purpose set forth.

15th, The employment of floating fire shields and heat conductors, S S, or their equivalents, for the purpose set forth.

16th, Constructing slabs, arches, and shields with an uneven or irregular surface on one or both sides thereof, for the purpose set forth.

17th, The method or process of refining metals, and separating the dross and other extraneous matter from the surface of melted metal by mechanical power and appliances, or of inserting of refractive or infusible colder substances than the dross and scum, cooling and congealing them that they may be skimmed or removed from off the surface of the molten metal, substantially as set forth.

18th, Making provisions in the construction of a melting chamber of a furnace for reducing iron into such a liquid state by igneous fusion that highly carbonized iron ore, or pig iron, cast or steel, and natured iron ore, or wrought iron, may fuse and mix with each other, and the impurities and surplus carbon, silicon, and other matter that is not essential to the production of good cast steel, may be flooded and removed from the surface of the melted steel, refining and running the same into vessels or molds, substantially as described.

19th, Obtaining cast steel, or products of any degree of malleability or ductility, by melting together in a vessel or chamber in a furnace, combinations of pig iron and wrought iron, or of natured or partly natured iron and cast iron and fusing, mixing, refining, and running the same into molds, substantially as described.

20th, The production of cast steel by mixing together, in a fixed or stationary melting vessel, chamber, or furnace, cast iron and iron ore, when such iron has been previously reduced, or natured, or partly natured, or carbonized in a separate vessel, retort, or furnace, and when mixed with manganese or titanium, or the ores or compounds thereof, and fusing, mixing, and running the same into molds.

21st, The production of cast steel by first melting the iron or metal containing the most carbon in a stationary vessel, and adding the metal or ore containing the least carbon to the molten metal, and when the whole is reduced to the proper consistency of cast steel, running the same into molds.

22d, Effecting a continuous process or reducing or melting and refining ores and metals by mechanical appliances, and at one heating, and in one furnace chamber substantially as described.

23d, Effecting a continuous process of making cast steel from iron ore by submerging it into a bath of molten cast iron or highly carbonized iron, whereby the whole will be liquified and brought to the consistency of cast steel and refined and run into molds.

Special Scientific Brevities.

☞ The practical working of a new electro-magnetic motor was exhibited recently in the lecture room of the College of the city of New York, Lexington avenue and Twenty-Third street. It is the invention of Laban Clarke Stuart, and it is claimed that it will produce a power which, in various ways, can be used to supply the place of manual labor. Professor Doremus explained to the large audience which had assembled to witness the experiment, the principle of the invention, and how electricity was made available and utilized in the matter. A series of magnets were longitudinally arranged in an armature, or open case, about three feet long, so that they could be connected at pleasure, by a wire, with a battery in the basement, which consisted of forty cups. When the current was turned on the magnets were so ingeniously placed in connection that they revolved rapidly like an axle. The current was continuous, provision having been made to avoid the inconvenience of breaking it in order to produce motion. This magnetic axle, so to speak, turned a small wheel, and the wheel, which was only about seven inches in diameter, worked the piston-rod of a pump by which water was raised nine feet. It would be rated in the market at a quarter-horse power, but it is not actually so much. It can be increased, however, in proportion to the extent of the battery and the size of the magnets used. The cost of working the motor exhibited, yesterday, is fifteen cents an hour. Prof. Doremus said it is in advance of anything of the kind which has yet been produced, and can be turned to practical account in various mechanical operations.

☞ Mr. W. R. Birt has called the attention of astronomers to a spot now visible on the surface of the moon, and presenting the same phenomena as those latterly observed in the crater Linnæus, and the true nature of which might be investigated by means of photography. The spot in question is situated under two degrees west longitude and five degrees south latitude, and presents variations of appearance which can hardly be explained otherwise than by volcanic action, exactly as in the case of Linnæus. Now, in Mr. Birt's opinion, these apparent changes of shape can only be explained by supposing that these two craters are provided with a sort of lid, which, from time to time, conceals the orifices.

☞ At a recent sitting of the French Academy of Sciences a paper was received from M. A. W. Hofmann on the persulphuret of hydrogen, which, he maintains, does not consist of one equivalent of hydrogen and two of sulphur, but of two of the former and three of the latter. This he proves by an analysis, the only interesting feature of which is that he obtains a crystallized body completely insoluble in water, ether, alcohol or any other known solvent capable of redepositing it in crystals. This singular compound he obtains by mixing a saturated solution of strychnine with another of hydrosulphate of ammonia containing an excess of sulphur.

☞ M. F. Carre has made pencils of artificial coal, the illuminating power of which by the aid of electricity has been found much superior to that obtained from the coal supplied by the gasworks. To make this substitute he takes various kinds of charcoal and charcoal reduced to impalpable powder and then washed in acids; they are next ground with fine oils mixed with resins; and lastly, subjected to a powerful pressure, strongly agglomerating them into prisms or cylinders, which are subsequently calcined in close vessels at a white heat. By addition of iron or antimony the electric arc may be considerably enlarged.

Gudit about Minerals, &c.

☞ With regard to the road from Mount Cenis to Turin, Capt. Matthew Francis, in a letter dated Turin, March 19, says: "I looked at the great rocky screens about me before the night came on, and to me they seemed decidedly hard ground. The rocks stand up perpendicularly in most places like lodes, and they seemed very much interlaced with veins of spar, giving them a metal-bearing appearance. The rock seemed for the most part highly indurated clay-slate, and down towards the center or core I am not surprised to hear that it is somewhat hard for boring; if it were not so my judgment of ground would go for very little. Towards the foot of the hill, under the mouth of the great tunnel, I observed mining operations for anthracite coal, showing that this mineral is older than the clay-slate. The rock further west, in the meridian of Geneva, was tufa, of a great many beautiful shades of yellow, and the mountain feet were washed by blue lakes, and the scenery had all the beauties so often and well-described as appertaining to Switzerland."

☞ The Baltimore *Commercial*, June 27, says: Messrs. F. W. Bennett & Co., auctioneers, sold yesterday, at the Exchange salesroom, all the property of the Baltimore and Montgomery Mining company, better known as the Steele gold mine, on the Uahnvie river, in Montgomery county, North Carolina, containing about seven hundred acres of land, with all its equipments, consisting of two steam engines—one of 10-horse and the other 25-horse-power—pumps, two round buddles (16 feet diameter), three washers (with rockers and sluice bores), buildings for office, barn, stables, blacksmith shop, and about twenty small houses for miners, &c. This mine is developed to a depth of upwards of 150 feet. The vein is composed of argillaceous slate and forms an auriferous bed of from ten to twelve feet in thickness, carrying string veins of free gold in its centre. Purchased by W. S. Raynor, for $11,000.

☞ Capt. Hutton, F. G. S., has been making a survey of the Lower Waikato district of the north island of New Zealand. He reports that there is no probability of finding an alluvial gold district of any extent, but that the district has other deposits of value. The tertiary formation contains brown coal, having the appearance of cannel coal, lustrous and pitch-black in color, with brown film in places. It is hydrous coal, containing a notable amount of water, but answers well in the steamers on the Waikato. It burns with a bright clear flame, and gives intense heat. This coal bed is estimated to contain 140,000,000 tons of coal. The whole of it can be worked without pumping, or any mechanical means for raising it to the surface.—*Scientific Review.*

☞ The most expensive railway line in England, and probably the costliest ever constructed, is that of the London and Southeastern company's, from Charing Cross to Sevenoaks. Upon this road, less than twenty-six miles in length, the enormous sum of $47,500,000 in gold has been expended. We were informed by an engineer in London that the Charing Cross connection in the city, in length about two and a-half miles, cost $5,000 per yard forward, including stations and two bridges across the Thames.

☞ The mineral wealth of Algiers is represented to be inexhaustible. At the iron mine Makta-el-Hadeel, near Bone, the mineral in some places crops up above the surface of the ground, and is worked in immense, crater-like cuttings to the depth of one hundred feet. About 200,000 tons of ore, yielding 65 per cent. of pure metal, are annually sent to France from these mines.

☞ The tin mines of Temescal, Los Angeles county, California, are again attracting the notice of capitalists. They have long lain idle, and, remarks the *Star*, should the same policy be continued as has heretofore characterized the claimants of these mines, the probability is they will long continue to be unremunerative.

☞ The extensive nail works and nail-plate mill of the Pottstown Iron Company at Pottstown, were burned on the 29th ult. The furnace, rolling mill and other buildings, were unharmed. The loss is estimated at $100,000 to $150,000, most of which is covered by insurance.

☞ A recent fire at Idaho City destroyed property to the value of $40,000.

All Sorts.

☞ Regarding the longevity of musicians, the following facts are given:—Geminiana lived till he was ninety-six. Dr. Burney till he was eighty-eight: Gluck and Zingarelli till they were each eighty seven. But they were all surpassed by a composer of antiquity, Zenophilus, who was as celebrated a musician as he was a Pythagorean philosopher. He lived till he was one hundred and five, without feeling the slightest sign of decay. According to Lemprière he did not die until he had attained his one hundredth and seventy-first year, and even then he was in possession of all his faculties. It is to be hoped that Auber and Rossini will follow his laudable example.

☞ A correspondent writes that Alaska has a plant called baounick, similar in appearance to the yerba canada of Mexico and California, and possessing almost the flavor of the South American matté, much in use among the Indians, which they decoct for a beverage instead of tea, and as to purpose and effect, the substitution is not greatly factitious. The Russian settlers, however, employ it more as a remedial agent, ascribing to it the properties of our honest or thoroughbred (*eupatorium perfoliatum*). With the dried and smoked collections, I regret that it is impossible to determine accurately its botanical relations.

☞ "Did your wife have an income last year?" asked an internal revenue officer of a citizen of Carlinsville, Ill. "Yes, she had twins—both girls." The officer concluded that it was a pretty liberal income.

☞ Paris has a newspaper which sells for one sou, and gives to each of its quarterly subscribers a ticket entitling the holder to have his or her photograph taken at a certain establishment free of charge.

☞ Mexican journalists exhibit a somewhat eccentric taste in the selection of names for their papers. *Anti-Christ*, *The Devil's Own*, and *The Devil's Tail*, are specimens.

☞ When is iron the most ironical? asks *Fun*. When it is a railing to be sure.

☞ A prolific cow in this city has five calves, none of them false ones.

☞ Land in London sells at the rate of ten million dollars an acre.

☞ Marry young, and if circumstances require it, often.

Silver Lead Vein, Madison County, Missouri.

We have just received a communication from J. Vancleve Phillips, Esq., who has recently opened a mining office and geological rooms at No. 1 North Fourth street, St. Louis, Missouri, in which he sets forth the character and condition of a gold, silver and lead bearing quartz lode, situated in Township 32, Range 5, East. A topographical map of the territory in the locality of the vein, together with a vertical section across the lode, showing the dip, etc., accompanies the communication, and may be seen at the office of the JOURNAL OF MINING. The vein appears to dip at an angle of about forty-five degrees. It is twenty feet wide, and shows a half a mile in the direction of its strike. It is in reddish porphyritic granite. An assay of the ore shows it to contain $15 per ton of gold, and the same of silver. The vein is but sixteen miles from a railroad, in a timbered country, 400 feet above the St. Francis river, and is but two miles from the point where tin has been recently discovered. Colorado miners have examined the ore and say that it will pay largely to work. We are informed that Mr. Phillips is one-fourth owner of the mine, and is desirous that parties buy up the other three-fourths, and then, with him, develope the property. It is thought that the three-fourths interest can be bought for the sum of $8,000. This is the only quartz vein that has been found in Missouri. Mr. Phillips is well known as the author of "Phillips' Geology of Missouri," and active service in the development of the mining interests of that State since 1844, is a sufficient guarantee that it is no sham concern of which we speak, but, on the contrary, a substantial mining property, that only needs a proper application of capital to make it a source of steady revenue to its owners. Mr. Phillips invites parties who may wish to interest themselves in this vein to communicate with him. He will accompany, and make with them an examination of the property. A shaft fifteen feet deep has been already sunk upon the lode. Mr. P. can be addressed either as above, or at Dubuque, Iowa.

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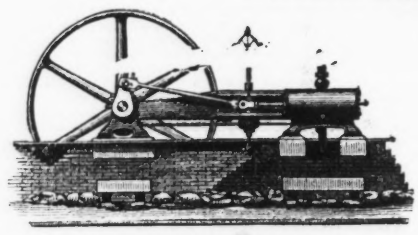

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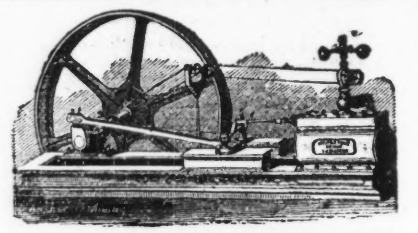

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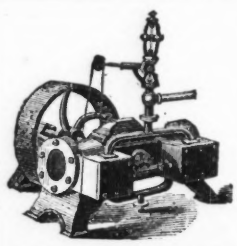

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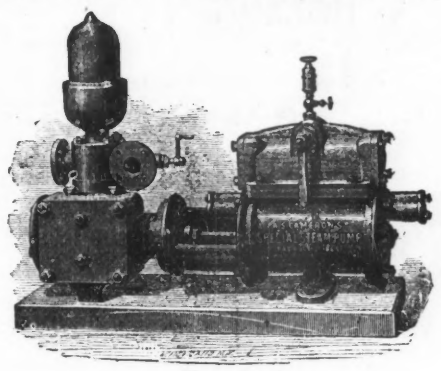

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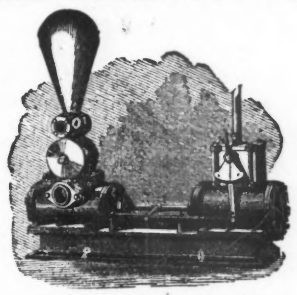

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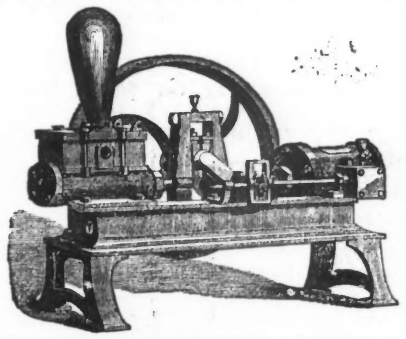

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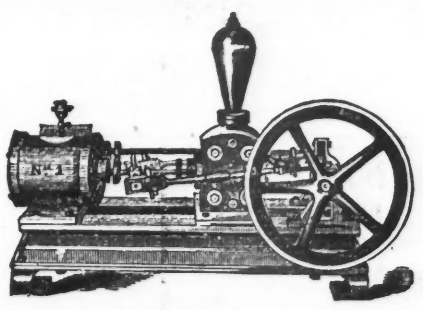

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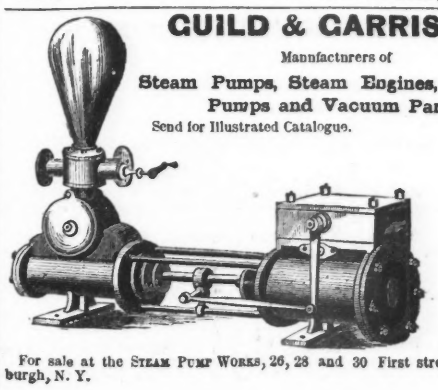

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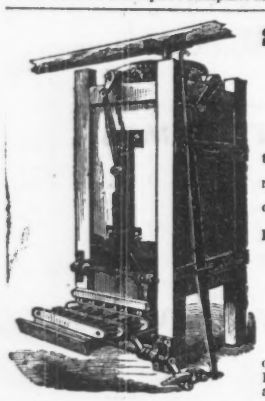

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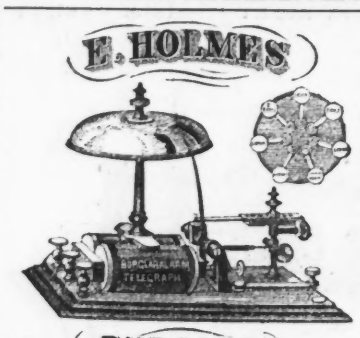

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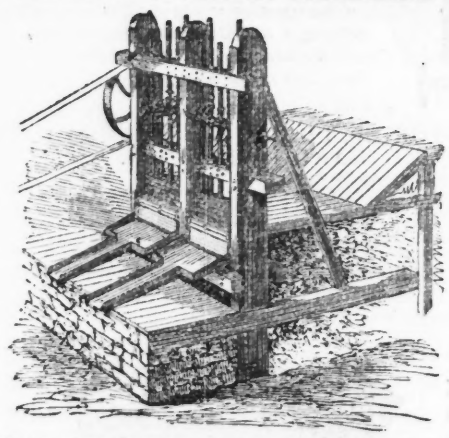

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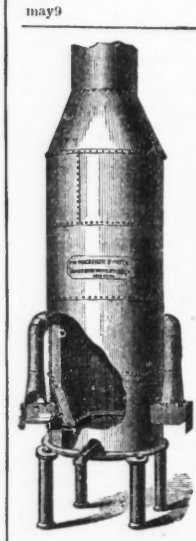

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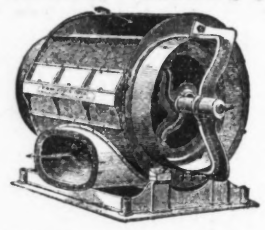

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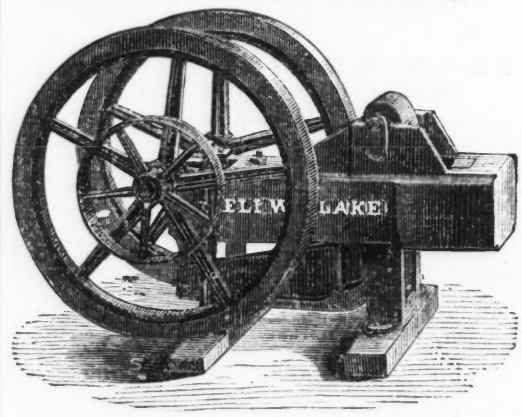

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