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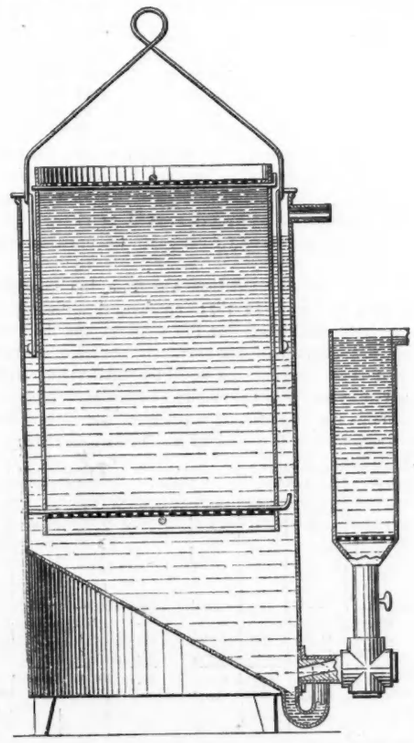
North Carolina Amalgamator.

In the ENGINEERING AND MINING JOURNAL for June 13, we noticed Mr. J. T. TUNBRIDGE's Amalgamator, now in use at the gold mines of STURGES & SON in North Carolina. We to-day give a cut of the apparatus, and refer for a full de-



scription of it to the above-mentioned number of the JOURNAL. We have no figures giving the actual work done, but we understand the apparatus works satisfactorily.

Coal Mining in Italy.

By P. LE NEVE FOSTER, Jun.

THE astonishing increase in the consumption of coal within the last few years in Italy has led capitalists to turn their attention to the working of some of the numerous deposits of mineral fuel in that country, and more especially in the Tuscan Maremma.

It has been stated by many eminent authorities that no true coal can be found in Italy, and this statement, up to a certain point, is correct, admitting that the term of "true coal" should only be given to that found in the true Carboniferous formation of the Palæozoic period, in contradistinction to "lignite," which term by some people has been applied indiscriminately to coal of later geological periods, without regard to their true character or commercial value.

The coal deposits in the Tuscan Maremma appear to have had one common origin in the middle of the Tertiary series (Miocene), and at that period of the earth's history probably formed one immense unbroken coal field, extending from Monte Bamboli and Monte Rufoli on the North, to the Roman frontier at Pitigliano on the South, and towards Siena on the East.

At some later period, though probably before the close of the Miocene period, a violent upheaval, caused by the intrusion of igneous rocks, took place, throwing up the superincumbent strata in all directions, and in many places bursting through the earth's crust.

Further removed from the center of action, this igneous rock, instead of bursting through, only raised the upper strata here and there, forming a series of hills and undulating country, and it is, therefore, here that the coal seams will be found of greater extent, and with fewer faults, than in the immediate neighborhood of the trachytic eruption. The violent upheaval, together with the action of denudation in later times, has without doubt been the cause of the breaking up of the great coal field of the Maremma into a series of smaller basins. It is to the action of heat from the intrusion of the igneous rocks that the perfect mineralization of the vegetable matter may be attributed, and that which under ordinary circumstances would have required a far longer time to bring about, and would only have been complete in the older Palæozic formation, we find here accomplished in the Tertiary series.

One of the most important of the coal basins of the Maremma is that of Casteani, situate to the southeast of the town of Massa Marritima, at the foot of an extensive range of hills and mountains, which form a vast amphitheatre, enclosing a large extent of plain.

The mines of Casteani are, perhaps, the most important that are at present worked in Italy, and are owned by Signor LUIGI FERRARI-CORBELLI. This estate occupies an area of upwards of 4000 English acres, in the north-eastern portion of the above-mentioned plain. The coal is found in two seams, entirely in the clay; the upper one averages six meters in thickness, and is separated

FIG. 1.

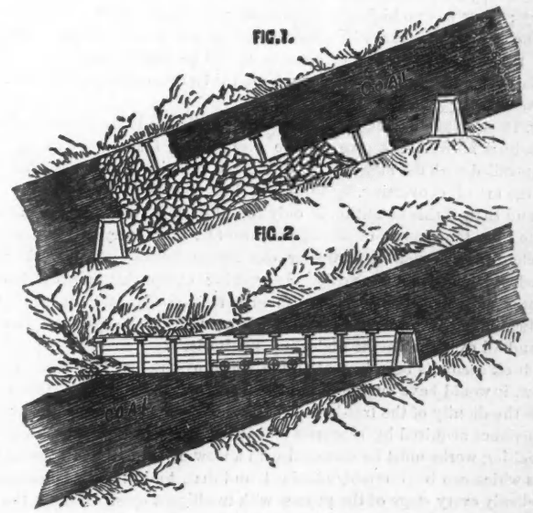


FIG. 2.

from the lower seam, which varies from 0·80 to one meter in thickness, by a layer eight meters in depth of clay, in which are met with no fewer than seven or eight seams of coal, of a few centimeters only in thickness each. The dip is 25° to 30°. The coal of the upper seam alone is worked at Casteani, and consists of about 50 centimeters in depth of shaley coal of inferior quality, which until the present time has not been saleable, although without doubt it will in future find a market for the burning of bricks, etc. Next follows about 50 centimeters of good coal of first quality, then 1·50 meter of coal of fair quality but not so compact; it is sold as second quality, and is succeeded by 2·50 meters of coal of best quality, on a bed 50 centimeters in thickness of inferior shale coal, similar to that of the roof.

Owing to the great thickness of the seam, and the pressure of the upper and lower beds of clay, it is found necessary (in order to excavate the whole of the coal) to carry forward the workings in three distinct layers, taking out the bottom portion for a depth of two meters first, and after filling up the space that was occupied by the coal, with earth, the middle, two meters in depth, is taken out, and hence the loss. The earth for filling in is brought from the "Mulinello," as the place is called, where the earth is allowed to fall in for that purpose. The

mode of working these mines is shown at Fig. 1, and the "Mulinello" at Fig. 2.

The getting of the coal is carried on by piece-work, the miner being paid at the rate of 2 fr. per ton for that of the inferior quality, 2·50 fr. per ton for the second quality, and 3 fr. per ton for the best, or on the average 2·50 fr. per ton. This includes the filling in and conveyance underground to the bottom of the shaft, but not the timbering, driving of levels, and other work. The rate of wages at these mines for day-work is—carpenters, blacksmiths, timbermen, etc., from 70 to 80 fr. per month; miners, from 1·70 to 2 fr. per day; and laborers, 1·50 to 1·70 fr. per day.

At the Casteani there are three shafts and two inclined planes. The principal shaft (Il Pozzo Teodore), sunk to the dip, is about 100 meters in depth, and in this the greater part of the coal is raised to the surface. The pit is provided with cages and winding gear, worked by a double-cylinder high-pressure horizontal engine; the other pits serve only for ventilation, and are provided with ladders for the ascent and descent of the men. One of the inclined planes is 57 meters in depth, and is also used for raising the coal from the upper levels, the winding gear being driven by a portable engine. The annual output of these mines averages 20,000 tons, and the coal is sent chiefly by rail to Leghorn and Rome from the Potassa station, which is about five miles distant from the mines. The price of the coal at the pit's mouth is 16 francs per ton for the first quality, and 12 francs for the second, and delivered at the railway station 5 francs extra per ton is charged. The number of men employed at these mines is about 225, of whom 180 are engaged underground. The miners are lighted at their work by open oil lamps, but in some parts of the mines, especially where the ventilation is bad, and there is danger from explosive gases, the safety-lamp is used, and each workman is supplied with printed regulations for using these lamps, and testing the presence of gas in the mines.—*Colliery Guardian.*

Avoidable Waste at American Lead Smelting Works.*

BY A. EILERS, M.E.

IN a former paper on Western Smelting Works, I mentioned the great difficulty of obtaining accurate information in regard to the economy of the processes in practice; and to-day, although nearly two years have elapsed since my former paper was written, I am sorry to say that very little improvement has taken place in the keeping of accounts, and in the direction of a more systematic management in the majority of these works.

But I am quite certain that by this time even the most sanguine furnace-managers must have become convinced, from the experience of the last year, that somewhere in their processes there are enormous losses. Rates for the purchase of ores in 1873 were not as high as they were in former years in certain parts of the country; labor was no higher than formerly; the demand for unparted lead was good throughout the year, with the only exception of the time of the panic, in the fall of 1873;—yet there are, of between 40 and 50 works, not more than two or three in Utah and Nevada to-day, that have paid a reasonable interest on the capital invested.

Why, then, not commence at the root of the evil, and bring some system into the business? Why not give up the idea, which, I am sorry to say, has so long prevailed with the majority of mining and smelting companies, that smelting is the art of converting, by means of heat, the solid minerals into liquid form, and that, if this condition is only complied with, the precious metals will separate from the gangue of their own accord; that everybody generally, and new-patent-process-men in particular, can manage metallurgical works; that it is a business which requires no specific training, except that which a few weeks or months of personal experience can give to anybody, and especially to the "practical miner, whose experience extends over the whole space of time since 1849, and all over the Pacific States and Territories"?

Had book accounts been kept at all the Western works, as they have been at a very few, it would have long been clear to even our practical men, that it is not beneath the dignity of the free-born American citizen to learn from, and utilize, the experience acquired by centuries of patient study and practice in Europe; that smelting works must be managed with a view of extracting all the metals in the ores which can be profitably obtained, and that, to do this, it is necessary to watch closely every stage of the process with intelligent eyes. Besides the negligence in accounts, the use of the chemical laboratory as a guide in the operations has been shamefully neglected, so that it is quite safe to say that the majority of smelters actually do not know what they are doing.

Under these circumstances, it is impossible to keep the proper accounts, and to give detailed and absolutely correct data in regard to the losses incurred at the majority of works. But, fortunately for the statistician, most of our Western works in the same districts labor under the same or very similar circumstances, technically as well as economically; and, if we therefore find out the losses in one, we may reasonably suppose that we have a fair indication of the losses of the others, especially if we have convinced ourselves, from repeated personal inspection, that the works we take as standards are, if anything, better managed than the rest. Indeed, the very fact that at these works accounts are kept, and the laboratory is brought into requisition beyond the mere determination of values of ore and bullion, is proof of more intelligent, and, therefore, better management.

I have had the good fortune of persuading some friends in charge of smelting works—the one at Eureka, Nevada, the other in Utah—to communicate to me the losses incurred at their works. I am the more thankful to them for this favor, as they have, for the benefit of the public, disregarded the danger of divulging "company secrets," and because they have conquered their professional pride to the extent of acknowledging extraordinarily large losses, for the sake of the truth. For be it said here plainly, that even in regard to old and well-established works in foreign countries, where it is supposed that no information is ever kept back, the true losses are seldom made known. Allowances in the purchase of ores to smelting works, rivalry, and professional pride of the metallurgists in charge, prevent such inquiry effectually.

The object of this paper is to direct the attention of those interested to the main sources, and especially to the aggregate magnitude, of the losses in the silver-lead smelting works of the West. And if thereby only one tenth of the wealth now wantonly, and, in many cases, irreparably, lost, is saved to the nation, the labor involved in this discussion will be amply compensated.

The principal losses in Western works are occasioned by the escape of the furnace-dust, and by the neglect to work the matte and speiss formed. In order to arrive at average figures for the money values of these losses throughout the West, I shall here give such figures, in addition to those collected by myself, as I have been able to obtain.

M. P. L. BURTHE, a French engineer of mines, who studied the smelting processes of various works in Utah, in 1873, gives, in a late publication of his experience, the losses of the Flagstaff, Last Chance, and Wahsatch furnaces, as follows:

LOSSES IN PERCENTAGE OF DRY ASSAY OF ORES.

Name of Works.	Lead.	Silver.	Gold.
	per cent.	per cent.	per cent.
Flagstaff	15.03	15.64	12.0
Last Chance	21.09	12.50	12.0
Wahsatch	16.93	12.05	..

MR. ELLSWORTH DAGGET, formerly the manager of the Winnamuck works in Bingham Cañon, who saved his matte, but not his ore-dust, gives, in a paper published in the United States Commissioner's report for 1872, the losses at his works as 3.82 units of lead, or (as his ore assayed 34.98 per cent. of lead) 10.9 per cent.; and 3 ounces of silver, or 5.8 per cent., the ore assaying 51.46 oz. per ton.

The following records of two campaigns are from the manager of the only works in Utah, which possessed, in 1873, condensation chambers. The latter were, however, entirely inadequate for the purpose, and the manager acknowledges that he could not save half his dust. At the same works the matte produced in the shaft-furnace smelting was saved for further treatment. The figures, as originally received by me, gave the amounts of raw material and product only; the remaining columns I have added for the sake of comprehensiveness.

CAMPAIGN FROM OCTOBER 27 TO DECEMBER 4, 1873.

Materials used.	Amount in lb.	Contents of Lead.		Contents of Silver.		Contents of Copper.		Remarks.
		lb.	per ct	ozs.	oz. per ton.	lb.	per ct.	
Ore	1,618,458	454,889	28.1	27,859	34.4	8,092	0.5	15 to 22, average 20 per ct. with 11 per ct. ashes —35,606 lb. of slag-material.
Iron ore	323,691							
Coke	323,692							
PRODUCTS.								
Lead bars	280,543	—	—	22,989	163.88	—	—	
Matte	47,980	23,900	49.8	1,320	55.2	7,197	15	
Dust*	40,000	14,200	35.5	730	36.5	?	?	
	36,254	12,000	33.1	504	27.8	?	?	
	76,254	26,200	34.35	1,234	32.3	?	?	
Slag, (approximately)	1,496,978	29,939	2.00	59.9	0.08	—	—	(From 1 to 3 per cent. of lead, average assumed 2 per cent.

* The dust was collected at two different times. The whole was worked over, and yielded 15,000 lb. lead and 800 oz. silver.

CAMPAIGN FROM DECEMBER 4 TO 25, 1874.

Materials used.	Amount in lb.	Contents of Lead.		Contents of Silver		Contents of Copper.		Remarks.
		lb.	per ct.	ozs.	oz. per ton.	lb.	per ct.	
Ore	640,642	235,849	36.81	9,518	29.71	?		
Iron ore	164,000							
Coke	168,000							
Stonecoal	60,000							
Charcoal	6,000							500 bushels@12c.
PRODUCTS.								
Lead bars	161,065			9,462	117.49			
Matte	15,000	5,000	33.3	300	40.0	900	6.0	
Dust	30,000	10,500	35.0	450	30.0			
Slag			1 to 3		0.08			

If we analyze these tables for the purpose of determining the actual losses, we find in the first one that, in spite of dust chambers and the saving of matte, there were lost:

Lead.....124,246 lb.=27.3 per cent. of the ore-contents.
Silver..... 2,316 oz.= 8.31 " " " " "

of which there are accounted for in the slag:

Lead..... 29 939 lb.
Silver..... 59.9 oz.

leaving still 94,307 lb. of lead and 2,256 oz. of silver, or 20.7 per cent. lead and 8.1 per cent. silver, which must be supposed to have been lost in uncaught dust principally, though a portion was, no doubt, in furnace residues not mentioned in the tables.

If no matte had been saved and no dust caught, as is the case in the great majority of Utah and Nevada smelting works, where, furthermore, furnace residues

*A paper read before the American Institute of Mining Engineers at the St. Louis Meeting, May 28, 1874.

and debris, generally so rich in lead and silver, are also thrown on the dump, the loss in this particular campaign would have been in

Lead	174,346 lb.	=38·3 per cent. of ore-contents.
Silver	4,870 oz.	=17·4 per cent. of ore-contents.
Copper	8,092 lb.	= total ore-contents.

and of total value of contents=26·8 per cent.

From the second table we can deduce the following losses and gains :

Lead lost	59,284 lb.	=25·1 per cent of the ore-contents.
Silver gained	694 oz.	= 7.3 per cent. (nearly) of the ore-contents.

Had the matte and dust not been saved the loss would have been :

Lead	74,784 lb.	=31.6 per cent. of ore-contents.
Silver	56 oz.	=0·58 per cent. of ore-contents.
Copper	900 lb.	at least,

and of total value of contents 15·3 per cent.

The gain in silver, recorded in this campaign (which in the West is quite unusual) is no doubt due to an extraordinary allowance made to the smelting works in the ore assays. If the true contents of silver in the ore were known the balance of the account would certainly stand on the other side of the balance-sheet. As it is, the apparent gain of the works is somewhat over 2 oz. per ton of ore, an amount which is no doubt smaller than what is usually gained in the sampling, weighing and the assays by smelting works.

The proportion of the quantity of matte to that of argentiferous lead produced in the first campaign is 1:5·8. The money value of the matte saved, if we assume the same values per lb. of lead and oz. of silver in the two, and a value of $2 50 per unit for the copper, is 8·85 per cent. of that of the argentiferous lead. It is 6·64 per cent. of that of the ore.

In the second campaign the proportion of the quantity of matte produced to that of the argentiferous lead is 1:10·7, and the value of the matte saved is 3·78 per cent. of that of the "base bullion." It is 3·22 per cent. of that of the ore.

The value of the dust saved, which is, according to the statement of the superintendent of the works, less than half of what is actually blown out of the furnaces, represents in the first campaign 4·9 per cent. of the ore value, and if no dust had been saved, the value thus lost would have been 9·8 per cent

In the second campaign, the dust saved represents 4·6 per cent. of the ore value, and at least 9·2 per cent. would have been lost, had no dust chambers been used.

From the foregoing data we may fairly estimate that in the great majority of Utah smelting works there is at least lost of the original value of contents in the ore treated :

In matte	5 per cent.
In dust	9 per cent.

While an additional loss occurs in slag, furnace residues, careless handling, &c,, which may reach 12 per cent of the ore contents, and is certainly not less than 5 per cent.

In Eureka, Nevada, where far longer campaigns are made than in Utah, nearly the whole loss in smelting has its source in the dust and the speiss formed.

According to data, which I have received from one of the works at that place, and which may be assumed for all of them for the purposes of this paper, as the ores treated are of the same quality and of nearly the same value at all the works, the production of lead is 83 per cent.

Of silver	82·3 per cent.
Of gold	96·4 per cent,
and of the precious metals	86·4 per cent.

of the original contents of the ore ; the loss of the latter is :

in dust	8·6 per cent.
in speiss	4·4 per cent.
in slag, etc,	0·6 per cent.
Total	13·6 per cent.

Speiss is produced in proportion to lead bars as 1:2 and sometimes as 5:8.

At another smelting works, at the same place, the production for a whole year has been found to be :

Of lead	81 per cent.
Of the precious metals	85 per cent.

And the loss of the latter is :

In dust (nearly)	10 0 per cent.
In speiss	5·0 per cent.
Total	15·0 per cent.

The loss of the Cerro Gordo, in Inyo Co., Cal., which is in the third great smelting district, but of which I have been unable to get even approximate data, I estimate to be less than that of Eureka. I can only judge of this, however, from the fact that a portion of the dust is saved and re-worked, and the matte is, in at least two works, thrown back into the ore smelting without a previous roasting. As there is a lack of sulphur in these ores, part of the copper is driven into the lead at every smelting, and eventually all is incorporated in it, to the great detriment of the purity of the lead.

The foregoing data give us an opportunity of estimating in money-value that waste of the precious metals and of lead, at least, which may be so easily averted by simple and well known methods, in the smelting works of Utah and Nevada, by applying the figures found to the production of the respective works.

The latter was for 1873 :

In Utah, from all works, including Tecoma	9566 tons.	
Value of gold and silver		$2,135,911
" " lead at $80 per ton		765,280
		$2,901,191

In Nevada, from all works, including Railroad District, Truckee, and several small works along the C. P. R. R., (the latter product estimated at 300 tons at $150 gold and silver) 12,811.89 tons.

Value of gold and silver	$4:038,284
" " lead at $80 per ton	1,024,951
	$5,063,235

The production of Utah smelting works, $2,901,191, represents, according to the above data, not over 81 per cent. of the ore value, and the 14 per cent. lost in the shape of matte and ore dust would thus, at a low calculation, amount to $501,440, without taking any account of the copper, lost also in the matte.

If we assume for Nevada works the most favorable figures given above, those of the first works mentioned, and accept the statement that not more than one per cent. of the loss of lead is lost in the slag, we have the loss in speiss and dust for

Lead	$197,581
Gold and silver	603,422
Total for Nevada	$801,003
" " Utah	501,440
	$1,302,443

This is only for the year 1873. But losses, at this rate, have been going on for years, and it is to be deplored that, for the greater part of them, there seems to be now no reparation. The ore-dust is certainly lost forever. The matte may be partly regained at a much higher cost of handling than it would have been, had it originally been kept separated from the slag ; the speiss is probably also lost, because, once solidified, it will cost too much to crush it for roasting and subsequent treatment.

For professional men, it is unnecessary to add anything to the foregoing figures. They will know how to utilize economically the riches now so carelessly wasted. Non-professional owners of smelting works, I hope, I may have impressed sufficiently by the foregoing figures with the importance of expending the small amounts required to build capacious condensation-chambers in connection with their works, and of erecting such additional apparatus as may be necessary, in order to utilize the values contained in the matte. At the same time they ought to provide their works with complete chemical laboratories, which are so far, I am sorry to say, nowhere to be found. For only by subjecting raw materials, educts and products to frequent analysis, can smelting processes be conducted intelligently and economically, and accounts kept, which give a true insight into the state of the business. That the systems used with such perfect success in foreign countries may have to be modified in certain details, according to local circumstances, I need not add. But to discern the necessity of such changes is the business of the trained metallurgist ; and no other should ever be put in charge of a business, in which so much depends upon the proper supervision of operations.

Prof. EGLESTON congratulated the Institute on the presentation of the paper of Mr. EILERS. The subject of the condensation of fumes was one that has attracted great attention for years past. Sometimes the condensation chambers are a mile long, and yet valuable material escapes at the chimney. The losses are thought even greater than Mr. EILERS' paper showed.

Mr. EILERS admitted that the total losses in smelting were greater than the figures he had given, but he had been dealing only with the avoidable waste.

Structure of Coal.

BY close investigation E. W. BINNEY, F. R. S., believes he has established the following facts : Soft caking, or cherry coal, is chiefly composed of the bark, cellular tissue, and valcular cylinders of coal plants with some macrospores and microspores. Caking coal has much the same composition, except that it contains a greater proportion of bark. Splint, or hard coal, has a nearly similar composition, but with a great excess of macrospores. Cannel coal, especially that yielding a brown streak, is formed of the remains of different portions of plants which had been long macerated in water ; it contains a great excess of microspores. Macrospores are from 1-20th to 1-25th of an inch in diameter, and can be easily seen by the naked eye. Their exterior is composed of a brown coriaceous substance, containing within it carbonate of lime, or bisulphide of iron, according to the nature of the matrix. The microspores are about 320 times less in size, and contain some form of hydrocarbon, which, by the action of heat, becomes paraffin. These conclusions were arrived at merely as to the composition of the different kinds of coal. Each seam is materially affected by the nature of the roof, since, if it is an open sandstone, gaseous matter can freely escape, which is, of course, not the case when the seam is roofed in with air-tight black shale or blue bind.

The Fireless Locomotive, which we have described in the ENGINEERING AND MINING JOURNAL of Feb. 7, is growing in favor. The New Orleans and Carrollton Railway is said to be running eighteen of them between Napoleon Avenue and Carrollton, 3¼ miles. The great drawbacks to the use of the ordinary locomotive in the mines, can, to a great extent, though not altogether, be avoided by using the fireless locomotive,—the inconvenience of heat and steam, so injurious to mine timber and destructive to certain kinds of roofs would, however, still remain.

The English Government, in recognition of the immense national importance of the Sub-Wealden exploration now being made with the diamond drill in the South of England, has made a grant of £1000 to assist it. The money is to be paid at the rate of £100 for every 100 feet pierced in excess of 1000 feet. Should coal be found in this boring, it would increase enormously the coal area and wealth of England,

THE ENGINEERING AND MINING JOURNAL.

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ROSSITER W. RAYMOND, Ph. D., Editor.
RICHARD P. ROTHWELL, C. E., M. E.,
Editor of the Coal and Iron Department.

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CONTENTS FOR THIS WEEK.

NEW gold and silver fields have been discovered by Gen. CUSTER in the "Black Hills" of Dakota Territory, lat. 44° N., long. 103 to 105 W. from Washington. The country is described as fertile and beautiful in the extreme, and gold has been found in a number of places, it is supposed in paying quantities. As soon as the Government will allow expeditions to enter this part of the Indian Territory there will doubtless be a rush for this new Eldorado, which, in addition, is stated to be a very Garden of Eden inhabited by the guileless redskins.

The Liability of Mine-Owners who Flood Adjoining Mines.

A RECENT decision in the English Courts, in the case of SMITH vs. FLETCHER and others, is of much interest to our mine owners, especially as the absence of precedents in mine legislation in this country makes the English ruling of great value.

The plaintiff and defendants were the owners of adjoining mines, communicating with each other, and the action was brought for the alleged flooding of the plaintiff's mine by the negligent and wrongful working of the defendants. It appeared from the plaintiff's case that some years ago the defendants had worked their mine by means of open quarry as well as underground workings, and the quarry at length communicated with the mine itself. Formerly there was an ancient brook near the quarry, which served as an intercepting drain to collect and carry off the surface water of the land ; but the defendants' workings let down its bed, and they thereupon altered its course altogether and substituted a new one for it. The new one, however, failed to answer either purpose of draining the land or carrying the stream, and several times overflowed, letting the water run into the quarry and thence through the defendants' into the plaintiff's mine. It was contended for the plaintiff that if the defendants chose to work their mine out to the surface by means of quarrying, they were bound to prevent water pouring down it and thence into the plaintiff's mine, and also that they had no right to alter the stream as they had done. The defendants' case was that the new watercourse was one capable of carrying off more water, and was altogether a more efficient one than the old one, and that the overflowing of it, and especially that in 1871, causing the principal flooding complained of, was owing to extraordinary floods and from causes which the defendants were unable to control. Under the ruling of the court the jury returned a verdict in the plaintiff's favor.

Co-operation in England.

THE principle of co-operation is making constant and rapid progress in England. Some time since, we noted the enormous capital and income of the English Co-operative Stores, and have several times called attention to the co-operative mines and ironworks. In an address which Messrs. NORMANSELL and CASEY, the Secretaries of the Miners' National Union, have just issued to the lodges on strike in South Yorkshire and Derbyshire, advising the men to accept a reduction of 10 per cent. and arbitrate the 2½ per cent. additional claimed by the masters, they make the following remarkable statement :

"Our remedy is this. Let our men resume work, keep off strikes and lock-outs, we are strong enough to obtain justice by the moral power of our Association. We have an income large enough to purchase a colliery every year. In five years we shall be able to sink or purchase two every year, and in less than twenty years we can laugh at strikes and lock-outs, and 71 prices, and gross, and percentages, and the whole lot. In that time, the grand principle of co-operative industry will have become so strong, its principles will have taken such deep hold of the minds of our people, and its benefits will have become so patent to all, that nothing can stop its onward march or prevent its spread among all trades in the country ; and we ask is this grand prospect to be shut out? Is this splendid opportunity to be lost for a paltry two-and-a-half per cent. going to arbitration?"

We have constantly advocated the settlement of differences between employers and employed by arbitration, and see in that and in the great principle of co-operation, the true solution of the labor question. Not that we advocate the wild Utopian or Communistic theories that are proposed from time to time, but we believe the interests of the capitalist not less than those of the laborer will be best promoted by making the latter directly interested in the product of his labor.

Relative Economy of Aloe and Wire Ropes for Mines.

WE are generally disposed to consider the introduction of wire in the place of the hemp ropes formerly used as one of the great improvements of the age, and when steel ropes were proposed to take the place of iron we saw in this a still further improvement. Our experience with steel ropes in the Anthracite mines was, however, generally unfavorable ; in a few cases, in very dry shafts or slopes, or on outside planes, they did indeed greatly outlast iron wire ropes, but in wet mines in the Anthracite region they were very soon rejected as inferior to good charcoal-iron wire ropes ; we have never made any comparison between these latter and hemp ropes, our mines having been opened since the fashion of using wire was almost universal in England. Such a comparison is not wanting, however, for the French and Belgian engineers have devoted much a tention to the subject, and have long since arrived at the conclusion that, in nearly every case, hemp, and especially aloe-fibre ropes are safer and more economical than wire. These conclusions are the results of practical tests at a great number of mines, and their correctness is evidenced by the general return to the use of aloe or hemp ropes at nearly all the mines which had been using ropes made of iron or steel. The weight of tarred aloe rope is about 8.1 times less than that of iron wire, while its strength is 8.6 times less, or, practically, they will carry nearly equal loads for equal weights of rope. Mr. VANDEVOORDE estimates wire ropes in Belgium to be nearly 80 per cent. more expensive than aloe or hemp ropes, and Mr. PONSON, another experienced and eminent engineer, endorses this conclusion. M. WORMS DE ROMILLY, in the *Annales des Mines*, assumes the weight of a running meter of wire rope at 0·76 x section of the rope in square centimeters, while the weight of aloe rope he gives at 0·096 x sectional area in square centimeters ; and the limiting length (where the rope would be fully loaded with its own weight) would be for ropes of uniform section, 600 meters for wire and 687 meters for aloes. By using conical or taper ropes, these limits can, of course, be indefinitely extended.

From experiments with a great number of wire ropes, both in this country and England, we deduce the fact that their strength is only about *two-thirds* of the united strength of their component wires.

The simple fact that the French, Belgian and many of the German engineers, after a large experience with wire ropes, have abandoned their use and returned to hemp and aloes (the latter is generally preferred) is very interesting to our mining engineers and mine owners, and suggests the importance of a discussion of this subject.

Blast Furnace Examples—No. II.

BY JOHN A. CHURCH, E. M.

THE discrepancy between the estimate of the amount of air blown into a furnace as calculated from the capacity of the blowing engine and that which is indicated by the amount of fuel burned, was lately pointed out in the ENGINEERING AND MINING JOURNAL. It has awakened the interest of the gentleman who furnished the statistics of anthracite practice lately published, and he now sends accurate measurements of a blowing engine which supplies one furnace without connecting with the air-pipes of the other furnaces, and also details of the charges in that furnace. The stack is 52 × 15 ft., and the distance between tuyeres (diam. of hearth) is 7 ft. 6 in. From these elements a comparative calculation can be made, which will be as accurate as the present state of knowledge and the lack of precise analyses permit.

Air delivered to the Furnace, or Capacity of the Engine.

Diameter of air cylinder	6 ft.
Stroke " "	6 ft.
Revolutions of engine (never exceeding 21)	20
Capacity per minute, deducting 12 per cent. for leakage	5900 cu. ft.
Weight of air, per hour	11·85 tons.
Weight of air per ton pig (1¼ tons per hour)	9 5 tons.

The dimensions of the engine, therefore, account for a delivery of 9 5 tons of blast per ton of pig. It should be remarked, that the working of this furnace is not controlled by the blast, but the engine runs constantly, and with great regularity, at 20, rarely 21, revolutions per minute.

Air received by the furnace, calculated from the fuel burned. The following table is the basis of the calculations :—

RESULT OF FURNACE FOR EIGHT WEEKS ENDING JULY 17, 1874.

Material Consumed.			Product of Furnace.				Remarks.	Aggregate.
Coal.	Ore.	Limestone.	1X	2X	2	3		
363.07	438.04	284.14	173.10	29.10	..	..	Stopped 1½ hrs.	203
364.13	442.04	285.08	200.	..	..	..		200
385.01	473.17	304.18	200.10	11.10	..	..	" 12 "	212
349.07	416.13	269.06	162.10	37.10	..	..		200
369.15	445.17	288.04	160.	38.	10.	..		208
382.09	458.04	298.02	166.10	82.	1.10	..		220
390.03	464.18	304.02	159.	51.	2.	..		212
341.12	396.12	263.07	93.	84.	9.	4	" 22 "	190
2946.07	3536.09	2298.01	1315.	303.10	22.10	4		1645
1.790	2.148	1.400	Per ton of pig.		Average number, 1.21.		54½ days, per day 30.3 tons.	

These amounts differ from the average for 1869-'73, as worked out in the JOURNAL for July 11. Assuming the same analyses as then given, we have :

Amount of slag per ton pig.....1.5 tons.
" gas " .....2.5 "
" oxygen in ore per ton pig.....0.435 "
" carbon burned " .....1.491 "

The total amount of carbon is 1.521 tons, of which 0.030 tons is taken up by the iron.

The heat requirement is :

Reduction of Fe_3O_4 0.474×1665	789	units.
" Fe_2O_3 0.526×1887	993	"
" SiO_2	210	"
Fusion of pig	337	"
Decomposition of limestone, 1.273×337.5	430	"
Fusion of slag, 1.5×550	825	"
Evaporation of water, 0.332×606.5	201	"
Decomposition of H_2O, 7×0.0062×3222	140	"
Sensible heat of gases, 10×260°×0.239	621	"
Radiation, etc	400	"
	4946	"
Carried in by blast, say	810	"
Total to be supplied by fuel	4136	"
The 0.435 tons O in ore burning 0.327 C (in CO) to CO_2 gives	1833	"
Leaving to be supplied by carbon	2303	"

This corresponds to 0.930 tons of carbon. We have seen, however, that taking the fuel at 85 per cent. carbon, and deducting 0.030 tons C for the pig metal, we have left 1.491 tons for combustion in the furnace. The difference, 0.561 tons, or nearly 11 cwt., must be consumed to maintain the reduction of carbonic acid. Of this difference, 56 per cent. must be added to that burned in the hearth, while 44 per cent. is consumed in the upper part of the furnace. We have, therefore :

Burnt in hearth, 1.245 C to CO, =	3079	heat units.
" at top, 0.327 C (in CO) to CO_2, =	1833	"
	4912	"
Reduction of CO_2, 0.246	771	"
	4141	"

From this result, the required amount of oxygen is readily deducible. It is, evidently, just what is necessary to burn 1.245 tons of carbon to carbonic oxyd, or, 1.245×1⅓=1.660 tons. Air contains 23 per cent. of oxygen, so that 1.660 tons of this element corresponds to 7.22 tons of air. The result of this comparative calculation is, therefore :

Engine delivers	9.5	tons air per ton pig, or 5900 cu. ft. per min.	
Furnace receives	7.22	" or 4770	"
Difference,	2.28	" 1130	"
Or	24 per cent.		

It was mentioned above, that there are two causes of inaccuracy in these calculations—the defective state of knowledge concerning fuels, and the absence of proper analyses. GRUNER shows that the most compact fuels give out the least heat, because the gasification of their extremely condensed molecules absorbs heat that *lighter built* coal does not require. That is a splendid generalization, but too little is now known of the behavior of the different fuels to enable us to form any opinion of the amount of the discrepancy thus introduced. As to inaccuracy due to analysis, it is easy to prove that this item is of very little account. Let us, for instance, assume that the coal used contains 90 per cent. of carbon (instead of 85, as above), which is a fuel of maximum purity. We should then have 1.611 tons of carbon, less 0.030=1.581 tons consumed. The heat distribution would be :

Burnt in hearth	1.295 C to CO	3205 heat units.
" at top	0.327 C in CO to CO_2	1833 "
		5038 "
Reduction of CO_2	0.286 C	898 "
		4140 "

1.295 C requires 1.727 oxygen, or 7.5 tons air per ton pig, which is only one quarter of a ton more than calculated before.

From the above figures we may say that in this instance the amount of *air received* is about 71 per cent. of the capacity of the blowing engine, without deduction for leakage; for 6720 cu. ft.×0.71=4771 cu. ft., which is the amount received as found by calculation.

It is hardly necessary to point out the importance of these results. In the course of the discussion which has been carried on in this paper, two questions of general interest have arisen. First, what proportion of the air, presumably delivered by the engine, is really received by the furnace? The above calculations answer this question for one example. Second, what causes the great consumption of fuel in anthracite furnaces? This is probably the most important technical problem now before the anthracite iron makers. The articles which have appeared in this journal leave but one answer to it, namely : The large amount of fuel used in anthracite furnaces is due to the EXCESSIVE REDUCTION OF CARBONIC ACID in the upper part of the charge.

NEW PUBLICATIONS.

Improvements in Steam Engines by JOHN HOUPT. Published by J. B. LIPPINCOTT & Co., Philadelphia.

This is a very convenient compilation of Mr. HOUPT's patents and improvements, principally in condensing apparatus for marine steamers, and jet condensers for land engines. To machinists who desire to know all improvements that have been suggested in this class of machinery, this little book will be quite useful. The sixteen patents described are illustrated by reduced copies of the patent office drawings.

CORRESPONDENCE.

Work in the American Hearth Furnace.

TO THE EDITOR : SIR—A friend writing from Granby, Mo., says : There are six Scotch hearths and two English slag hearths constantly running. Those conversant with the work on Scotch hearths will understand the importance of an improvement introduced here, by no longer breaking the charge in the back part of the hearth, and no longer using split wood in the smelting process, replacing this unhealthy and obnoxious part of the work by lifting the charge from the front by the heavy straight shovel so as to give the blast full access to the lower part of the charge. It takes 6 to 8 hours to run 2000 lb. of lead in the improved way. Besides two smelters for each hearth, there is only one helper for six fires. The galena occurs in a flat vein overlying the Archimedian Limestone (Lower Carboniferous), and is overlaid by flinty concretions resembling drift deposits. The most of the galena occurs in heavy masses, which are broken by a Blake crusher. The grains are jigged on a jig with one coarse sieve, and the resulting sands and slimes are treated on a Cazin's One-Plunger Jig, with good success, the tailings showing no traces of galena under a good lens. C.

Blast-Furnace Work at Scranton, Pa.

AUG. 10, 1874.

TO THE EDITOR : SIR—As you are publishing some blast-furnace information at present, the following may be apropos and interesting. It is a statement of the work of the No. 5 furnace of the Lackawanna Iron and Coal Co., Scranton, Pa., during "the long blast."

The figures were given me by officers of the company and may be relied upon.

Blown in, October 31, 1865,
Blown out, May 7, 1874,
8 years, 6 months, 6 days.

Product.....100,677 tons, 3 cwt. 1 qr. 20 lb.
Average weekly product... 227 " 5 " 0 " 27 "
" " yield of ore, 52.50 per cent.

Stock consumed :

	tons.	cwt.	qr.	lb.
Ore	191,769	1	0	2
Coal	174,126	17	1	4
Limestone	81,926	13	1	13
	447,822	11	2	19

Stock per ton of iron :

Ore....1 18 0 11 Coal....1 14 2 10 Limestone....0 16 1 2

The blast lasted through two coal strikes—and at such times any coal from egg up was used. During this year, in one week 303½ tons pig were made—275 was not an unusual product.

The furnace was in good working order when blown out, but the boilers were getting thin, and as the dullness in the iron trade necessitated some stoppages, it was decided to blow this one out. The bosh measured, when blown in, 19 ft. 4 in., and when blown out, 22 ft. 2 in. The last full week's work was 247 9.

Has any other furnace in this country been in blast as long? C.

Mining in Wilkes-Barre.

WILKES-BARRE, PA., August 11, 1874.

TO THE EDITOR : Sir—I have devoted this day to visiting several collieries for the purpose of furnishing information to the readers of the JOURNAL. My first visit was to the Luzerne Coal and Iron Co's Prospect Shaft, which is located about a mile from this city. The dimensions of this shaft are 12×44 ft, and it is sunk to a depth of about 600 ft. When it reaches the great Baltimore vein it will have four hoistways and an airway. From the bottom of the shaft, gangways are being driven in various directions, breasts opened, and all preparations being made for an active business as soon as the second opening required by law is ready. This opening, called the Oakwood Shaft, is now down about 500 ft., with about 200 ft. more to go. The dimensions of this shaft are 30×12 ft., which will give two hoistways and an airway. There is a large breaker in readiness to prepare the coal, and it is thought that full operations will be begun about the first of next March.

The Baltimore vein at this point is of remarkably fine quality. It is divided into two beds by about 25 ft. of sand-stone ; the top bench being about 10 ft. thick, and the bottom 5½ to 6 ft. In sinking to this vein, three seams of coal were passed through ; two of these were unworkable, and the other about six to eight

feet thick. The Prospect Shaft has no water whatever, but is, without doubt, the most fiery mine in this country, explosions occurring once or twice every day; but, thanks to the very efficient ventilation, they are seldom of a serious character. About 25,000 ft. of air per minute are driven into each gangway of the mine, and no work beyond driving gangway and airway is being done. A five inch rubber hose conducts water from a reservoir on the surface, near the head of the shaft, to its bottom, where iron pipes are attached and carried to the face of each gangway; a rubber hose is used in extinguishing the flames brought about by the explosions. It became necessary to order a rubber hose, as the head (600 ft.) was so strong that it broke the joints of iron pipes.

The machinery used is of the finest and latest type. There are two engines of 312 horse power each, attached to a conical drum 12 ft. in diameter at the ends, and 9 ft. in the center. They were made by G. W. SNYDER, of Pottsville. The rope used is an inch and a half iron wire.

After receiving the above information, I was kindly invited by the Superintendent to accompany the engineers and himself into the mine, and without thinking that for every revolution of the engine I would descend 36 ft., I accepted the invitation. We then went on to an open cage, and I was told to take a good hold; and it was well for me that I did so, otherwise I believe the cage would have reached the bottom first. I remarked that I thought it a pretty good speed, when they informed me that they *could* let me down the 700 ft. in 19 seconds. To add to the kindness of the Superintendent, he gave me an invitation to accompany the party to the "fiery regions." I begged to be excused, saying: Mining Engineers may go there, but 'I want to go home'; whereat they placed me upon the cage, bade me good bye, and away I went with the same inclination of the cage to get there first.

My second visit was to the shops of the Lehigh Valley Railroad, which are furnished with a very superior assortment of the latest improved tools and machinery brought from various sections of the country. These shops, at the present time, are only intended for repairs; they expect to enlarge them, when some new work has to be turned out, as is being constantly done at the other shops of the company.

My third visit was to the Delaware and Hudson Company's Conyngham shaft, which has been sunk to a depth of about 600 feet, and abandoned until the results of a boring, now taking place, are known. At about 400 feet, a tunnel has been driven from the shaft, westerly to the Hillman seam, upon which a slope is being driven across the measures, from the bottom of which an airway and sump is to be continued around the nose of an anticlinal, easterly, to the bottom of the Young Slope. The pitch of the Hillman vein, as found in this working, is about 60°. The dimensions of the shaft are 42×10 feet. It will be divided into two hoistways, a pumpway, an airway, and a hoist for the men. It is lined with the very finest masonry, laid in cement, for a distance of about 30 feet, until the solid rock is reached. A bore hole is being put down, but as the contractors are bound to secrecy, I was unable to learn from them the results of the boring. By a miner, who has been observing their work, I was informed that they had reached a depth of about 1200 feet, and they are to continue it as soon as a new rope is secured and the rods drawn up, the old rope having broken with about 15 tons of rods in the hole. From this I would infer that the Baltimore seam had not yet been reached.

My fourth visit was to the Young Slope, which is driven about 300 feet in the Hillman vein, here, as generally elsewhere, found to be of a very superior quality, and quite regular; at this distance the slope struck boulders and gravel, and lost the vein entirely. Water was found in great abundance, and work was immediately discontinued. The slope is now filled with water. Upon the good indications a large breaker was erected with powerful engines, (built by the Dickson Manufacturing Company,) for runing the breaker and doing the hoisting. The engine foundations are of marble brought from Vermont. The breaker has no coal to prepare now, but should there be any mined at the Conyngham shaft it will be prepared here.

W. W. KENRICK is sinking a shaft for the Delaware and Hudson Canal Company, near the old Baltimore works; the water is so abundant that a hole is being put down into the old workings, by a diamond drill, to let the water through.

My fifth visit was to the fire at the old Baltimore mine. This appears to be getting worse. Last week, after a general consultation, it was decided to adopt the course pursued by the Lehigh and Wilkes-Barre Coal Co., at the Kidder Slope, viz: to enclose it in a wall of clay, and drive steam into the mine. A large body of men are engaged on the surface, in filling up the crevices caused by the "falling in," while three shifts are worked at fighting the fire on the inside. Car load after car load of clay is being used on the inside as a wall, but great trouble has been occasioned by the fire finding its way through the wall and continuing its course. The entrances to the old Baltimore mine, known by all visitors to this valley, are being closed up by the falling of the overhanging rock. By continuing up the creek about 200 ft., and following the outcrop of the vein, a timid being may witness the burning of the coal without meeting danger. It may here be seen burning as brightly as in an open grate, although upon a much larger scale. This fire, as before mentioned by the Journal, originated by coal falling upon some underground boilers, another proof of the danger of their use. The company, realizing this, have taken the boilers out of the Black Diamond Slope, and are forcing steam down from the surface.

The fire at the Kidder Slope of the Lehigh and Wilkes-Barre Coal Co. is supposed to be out, but as a matter of precaution, steam will be forced into the mine until the end of the year. The company is determined to have no more boilers in their mines, and as a proof of the fact, the Diamond Drill Co. started, on Saturday, to bore a nine inch hole at the Sugar Notch Colliery, for the purpose of conveying steam to the underground machinery and permitting them to remove the boilers now in the mines there.

G.

Questions.

"T. S. M.," AUGUSTA, GA.—1. I see a quotation of Georgia Manganite in your Journal, can you tell me what this is? Is it crude or native Manganese ore, or has it undergone some treatment? If it has been treated, can you give me the process?

"J.," SCRANTON, PA.—2. What is the least rise I should give my drainage levels, in order to carry the water off easily, and what is the best grade to give to my main gangways.

The *Daily Miners' Journal* of Pottsville comes to us much enlarged and improved in appearence. It is one of the best provincial newspapers in the country, and one of the most welcome of our exchanges. It deserves the success it is evidently attaining.

COAL TRADE REVIEW.

Import Duty on Coal.

Anthracite free. *Bituminous*, per ton of 28 bushels, 80 lb. to the bushel, 75c., gold.

All *slack*, or *culm*, such as will pass through a half-inch screen, per ton of 28 bushels, 80 lb. per bushel, 40c., gold.

Not otherwise provided for, per ton, 40c. gold.

NEW YORK, Aug. 14, 1874.

The Production of Anthracite Coal for the week ending Aug. 8, 1874, was as follows:

Tons of 2240 lb.	WEEK. Tons.	YEAR* Tons.
Wyoming Region.		
Delaware and Hudson Canal Co	33,409	1,422,824
Delaware, Lackawanna and Western R.R	35,141	1,486,287
Pennsylvania Coal Co	29,254	763,556
Lehigh Valley R.R.	14,168	593,950
Pennsylvania and New York R.R.	937	37,925
Central Railroad of New Jersey	41,902	782,657
Sold at the mines by L. & W. C. Co.	389	11,396
	155,900	5,097,895
Lehigh Region.		
Lehigh Valley R.R.	58,418	1,871,859
Central Railroad of New Jersey	23,455	619,065
†Danville, Hazleton & W. B. R.R.	608	19,231
	82,481	2,510,155
Schuylkill Region.		
Philadelphia and Reading R.R.	138,473	2,832,403
Shamokin and Lykens Valley	30,167	500,750
	168,640	3,333,153
Sullivan Region.		
Sullivan and Erie R.R.	525	21,444
Total of all the regions	406,846	10,962,647

* Year beginning Jan. 1.

† From the Penn. R.R. Co.'s report, Aug. 6th.

The Production of Bituminous Coal for the week ending Aug. 8, was as follows:

Tons of 2000 lb.	Week. Tons.	Year. Tons.
Cumberland Region, Md.		
Cumberland and Pennsylvania R.R.	67,105	1,347,404
Cumberland Branch R.R.	5,818	158,838
Barclay Region, Pa.		
Barclay R.R.	6,502	194,352
Broad Top Region, Pa.		
Huntingdon & Broad Top R.R.	509	135,737
The following reports are to Aug. 1st.		
Blossburg Region, Pa.	....	446,366
Clearfield, Region, Pa.		
Snow Shoe	566	37,207
Tyrone and Clearfield	8,258	353,918
Allegheny Region, Pa.		
Pennsylvania R.R.	2,013	129,782
Pittsburgh Region, Pa.		
West Penn. R.R.	2,505	116,473
Southwest Penn. R.R.	35	4,464
Penn. and Westmoreland gas coal, Pa. R. R.	7,396	540,601
Pennsylvania R.R.	4,933	252,004
Kanawha Region, W. Va.		
Chesapeake and Ohio R.R.	2,138	85,302
Block House Region, Nova Scotia.		
Consigned to the Provinces	209	6,286
" " United States	2,187	7,811
" " Cuba	....	360
Picton Region, Nova Scotia, to July 25th.		
Consigned to the United States	4,135	23,061
" " West Indies	....	3,422
" " Canada	6,087	43,669
" " Other provinces	2,503	27,682
Monthly reports to July 1st.		
St. Louis Region.		
Belleville and Southern Illinois RR.		126,048
Ohio and Mississippi RR.		72,768
Illinois and St. Louis "		72,885
St. Louis, Vand., Terre Haut and Ind. RR.		50,000
St. Louis and Southeastern RR.		46,280
Cairo and St. Louis (narrow gauge) RR.		14,702
Ind. and St. Louis RR.		9,670
Toledo, Wabash and Western RR.		1,054
Chicago and Alton RR.		4,216
Iron Mt. RR. (semi-Anthracite from Ark.)		675
Rockford, Rock Island and St. Louis RR.		1,470
By Illinois River		1,320
" Ohio and Cumberland River		12,515
Warrior Region, Ala.		
South and North Alabama Railroad		9,773
Cahaba Region, Ala.		
South and North Alabama Railroad		1,977
	June.	Year.
Saw Mill Run Railroad	....	64,598
Castle Shannon Railroad	....	69,180
Cleveland and Pittsburgh Railroad	....	128,210
Pittsburgh, Cincinnati and St. Louis RR.	42,515	328,485
Erie and Pittsburgh Railroad	34,320	119,696
Pittsburgh, Fort Wayne and Chicago RR.	17,592	114,971
Monongahela Nav. Co., Coal	....	1,740,231
" " " Coke	....	45,075
P. C. & St. Louis R. R. Coke	190	742

The Production of Coke on the line of the Pennsylvania Railway and branches, as per report for the week ending Aug. 1st:

Tons of 2000 lb.	Week. Tons.	Year. Tons.
Tyrone and Clearfield	36	401
Allegheny Region, Penn. R.R.	....	....
West Penn. R.R.	140	29,707
Southwest Penn. R.R.	3,456	224,264
Gas Coal, Penn. R.R.	210	22,880
Pittsburgh Coal, Penn. R.R.	336	41,086

The production of Anthracite for the week ending August 8th was as follows: Wyoming Region 155,200 tons, being 41,707 tons more than the preceding week. In the Lehigh region, 82,481 tons, or 357 tons less than the week before, and in the Schuylkill region, 168,640 tons, being 7627 tons less than the preceding week.

The total production of Anthracite from all the regions was for the week 406,846 tons, as against 373,780 tons the preceding week, and 447,156 tons for the corresponding week last year. From January 1st to August 8th there were produced 10,962,647 tons, as against 11,416,547 tons for the same period last year. The figures of last year's production are taken from the Pottsville *Miner's Journal*.

The Lehigh and Wilkes-Barre Coal Company increased its output for the week from the Wyoming region about 40,000 tons.

For the year, the output on the line of the Philadelphia and Reading Railroad Company, has been 2,510,155 tons.

The Delaware and Hudson Canal Company has decreased its output thus far this year nearly 300,000 tons. The Delaware, Lackawanna and Western has mined nearly 300,000 tons less than last year. The Pennsylvania Coal Company has mined 37,633 tons more than in the same period in 1873.

The Blossburg region has produced 115,535 tons less than in 1873, and generally the decrease in the output throughout the bituminous regions has been in the same proportion.

The receipts at Port Richmond were 72,000 tons; shipments, 45,000 tons; and balance on hand 109,000.

The receipts at Greenwich, Philadelphia, were: bituminous 3692 tons, and gas coals 6087 tons; shipments: bituminous 3436 tons, and gas coals 3797 tons; balance on hand: bituminous 3284 tons, and gas coals 4299 tons.

The production of Cumberland coal from January 1st to August 8th, inclusive, was 1,506,242 net tons of 2000 lb., as compared with 1,580,494 net tons for the corresponding period last year. The production for the week was 72,923 tons, as compared with 60,988 tons for the corresponding week in 1873. This shows an increase of 11,935 tons for the week, and a decrease for the year of 74,252 tons.

The receipts of coal at Buffalo for the week were, by lake, 3419 tons. The shipments for the same period were 6270 tons by Lake.

Receipts at Locust Point for week were 27,500 tons Cumberland, and 4000 tons gas. This is a slight falling off compared to week previous.

Anthracite.—There has been no ripple on the sluggish stream of the Coal trade during the past week, at least so far as any greater brakness in sales or movement of coal is concerned. Another of the middlemen, Mr. NICHOLSON, has failed, with liabilities of some $75,000, it is said; but this was not so unexpected as to create much comment. The fact has been evident, since the Coal Companies' Programme was made known, that the occupation of the middlemen is gone; even in good times the close margin left them by the Companies is insufficient to make the business profitable, and in these hard times it is insufficient to cover the greater risk in business.

Notwithstanding the curtailment in the production of anthracite which we have noted above, stocks appear to accumulate; and when one of the coal papers tells us of "the notable absence of surplus coal at the wharves and afloat," it must either be intended as a grim sarcasm, or a mere stringing together of words to fill out a paragraph. We have already stated the production of anthracite for the week to be 406,846 tons; at this rate we would produce 21,000,000 in the year; is this curtailment, when there is coal enough now on the market to supply every demand fully, and leave stocks in a good condition if not a ton more were mined for two or three weeks? Under these circumstances, there can be no question about the necessity for further reducing production; and this, our Philadelphia correspondent tells us, is already anticipated on the part of the Philadelphia and Reading Company.

As the great depression in business throughout the country still obtains, it becomes more and more evident that, had it not been for the united action of the large coal mining and transporting companies, the anthracite trade would long ago have been completely demoralized; while, as it is, the demoralization has been confined to a small class of middlemen; and not only the trade generally, but we believe consumers, also, have been benefited by the stability brought into this industry. That it was wise to have increased the price of coal in the very face of a great financial crisis, is more than doubtful; and we believe this is now admitted by the heads of the Combination. Except a great improvement in trade should take place before the close of the season, which we have now no grounds for anticipating, the probability is that next year's prices will rule lower than present rates, and it is certainly for the interest of the Combination, not only to foster the revival of manufacturing industry, but also to conciliate public opinion by moderating the price of coal.

Bituminous.—There has been no evidence of revival in this branch of the coal trade during the week; but little beyond filling old contracts is being done, and prices have got down to such a point that there is little, if any, margin for profit. Some manufacturers in the Eastern States have still several months' supply on hand, though in general consumers are carrying very light stocks in coal as in everything else. We note further sales of Consolidation Company's Cumberland coal for shipment to Canada. This is doubtless for smith's use, for it could scarcely compete in price with the West Pennsylvania coals in the Canadian lake markets. We note, also, the arrival of 500 tons Provincial gas coal from Sydney on vessels' account, and of two cargoes already reported as *en route*, of 750 and 520 tons of Scotch coal, consigned to Messrs. SKIDMORE & SON.

The James River Coal Company has sent some of its bituminous coal to Cuba on trial, and is receiving highly satisfactory reports from the consumers of their fuel in Boston, where it was recently introduced.

Wholesale Prices for August of Anthracite f.o.b., at the Tide Water Shipping Ports per ton of 2240 lb.

	Lump.	Steamer.	Grate.	Egg.	Stove.	Chestnut.
Wyoming Coals.						
*Lackawanna and Scranton at E'port & Hoboken	5 10	5 20	5 30	5 45	5 95	4 90
†Pittston at Newburgh	4 95	4 95	5 05	5 15	5 70	4 80
Wilkesbarre at Port Johnston	5 10	5 20	5 30	5 45	5 95	4 90
Plymouth, R. A.	....	....	5 30	5 45	6 05	4 90
Susque. Coal Co. at Amboy W.A.	5 10	5 20	5 30	5 45	6 05	4 90
Kingston at Hoboken	5 10	5 20	5 30	5 45	5 95	4 90
Lehigh Coals.						
Old Company at Port Johnston	6 05	....	6 00	6 00	6 15	5 20
Old Company's Room Run	5 55	....	5 55	5 55	5 90	4 90
Sugar Loaf at Port Johnston	6 05	....	6 00	6 00	6 00	5 05
Lehigh Coal Exchange	5 90	....	5 85	5 85	6 00	5 05
Honey Brook at Elizabethport	5 90	....	5 85	5 85	6 00	5 05
Spring Mt. C. Co. at Hoboken	5 90	5 90	5 85	5 85	6 00	5 05
Beaver Meadow at South Amboy	5 90	....	5 85	5 85	6 00	5 05
Schuylkill Coals at Port Richmond.						
Schuylkill white ash	4 60	4 70	4 80	4 95	5 45	4 00
Schuylkill red ash	...	....	4 95	5 05	5 50	4 25
Shamokin white and red ash	....	....	....	5 00	5 55	4 45
N. Franklin	....	....	5 40	5 40	5 45	4 25
Lorberry	....	....	5 75	5 75	5 75	4 35
Lykens Valley	....	....	....	6 40	6 40	4 95

* f. o. b. in New York Harbor.

† These are the rates for Pittston coal. Buyers having registered contracts will be charged 15 cents less than above prices.

Per ton.

Freight from Hoboken and Wehawken to New York..... 40c.
" " Elizabethport & Fort Johnston, to New York. 40c.
" " South Amboy to New York..... 45c.
" " Newburgh to New York..... 65c.
" " Port Richmond, "Phila." to N. Y. alongside 95c.
" " Rondout to New York by boat or barges of the D. & H. Canal Co. "delivered"..... 50c.

Retail Prices.

per 2000 lb. are as follows:

	Grate and Egg.	Stove.	Chestnut.
Pittston coal, in yard	$5 90	$6 10	$5 20
Delaware & Hudson, delivered	6 85	7 10	6 35
Scranton, in yard	7 00	7 25	6 55
Wilkes-Barre, delivered	6 85	7 10	6 35
Lehigh & Locust Mountain,	7 25	7 75	6 75
Schuylkill Red Ash	8 00		

Cargo Prices of Bituminous Coal.

Domestic Gas Coals.

	At the Shipping Ports.	Alongside in New York.
Per ton of 2240 lb.		
Westmoreland and Penn. at Greenwich, Phila.	$6 25	$7 65
" " at S. Amboy	7 00	....
Red Bank Cannel Pa., at Phil.	8 50	9 50
" " at S. Amboy	9 00	....
" Orrel, "	7 00	7 65
" " at Phil.	6 25	....
Youghiogheny, Waverly Co, at Baltimore	6 00	7 65
Despard, West Va. "	5 50	7 40
Murphy Run, W. Va. at Baltimore	5 50	7 40
Fairmount, W. Va "	5 50	7 40
Newburgh Orrel, Md. "	5 50	40
Cannelton Cannel, W. Va., at Richmond.	11 00	12 50
" Splint, " "	5 50	7 50
Peytona Cannel, " "	....	12 50
Sterling " Ohio	....	14 00
Straitsville, " Lyonsdale Cannel	....	11 50
At Sundusky, O	3 90	....

FOREIGN GAS COALS.

	Sterling.	Am. currcy.
Newcastle, at Newcastle-on-Tyne*	12/@13/6	7 00@ 8 00
Liverpool House, Orrel at Liverpool	29/	13 00
Ince Hall Cannel "	52/	18 00
" Gas, Cannel "	40/	15 00
Scotch Gas, Cannel at Glasgow, nominal.	28/	9 50
	Gold.	
Block House, at Cow Bay, N.S.	2 25	6 00
Caledonia, at Port Caledonia	1 87½	5 50
Glace Bay, at Glace Bay	2 00	5 75
Lingan, at Lingan Bay	2 25	6 25
Sydney, International and Reserve mines, at Sydney	2 25	5 75
Pictou, Albion and Vale mines, at Pictou	2 50	6 50

STEAM AND HOUSE COALS.

Broad Top, at the mine, $1 25; at Port Richmond, Phil	4 75@5 00	6 00@6 25
Cumberland, at Georgetown and Alexandria, Va.	4 30@4 40	6 50@6 75
Clearfield, "Derby," "Kitaning" and "Sterling," at the mines, $1 25; at Greenwich, Phil	4 75@5 00	6 25
James River, carbonite, at Richmond, Va	6 75	9 00
" bituminous, "	4 00	6 25

* Steam coals are quoted 1/ per ton above thes prices.

Retail Prices in New York.

Per ton of 2000 lb.

Liverpool House Orrel	$20 00@22 00
Liverpool House Cannel	....@25 00
American Block	16 00@ ....
Straitsville Cannel	16 00@ ....
Carbonate	12 00@ ....

Coal Trade of Philadelphia.

PHILADELPHIA, Aug. 12, 1874.

Reported by our special correspondent.

I can only report continued lethargy and dullness in all that pertains to the coal trade in this city, and in the mining districts of Schuylkill County that have their outlet to tide water by the Valley of the Schuylkill. In coal trade circles it seems to be understood that a suspension of transportation will take place either on Saturday, the 15th, or Saturday, the 22d, over the Reading RR., to continue until the first or the fifth of September, the ostensible reason given for it is "necessary repairs. The real reason is a block in coal, and limited sales. The same reports of plethoric stocks and dull sales come from all the Eastern markets. Those who are well informed on all matters pertaining to the coal trade, confidently predict that the supply marketed this year will fall short of that of last year by not less than one million of tons of anthracite.

Within the last few days quite an active trade has sprung up in the old established retail yards of this city, owned by men who have a regular trade they have supplied for years, and who take particular pains to deliver well prepared coal of a good quality. The company yards have found it a difficult matter to divert this trade into new channels; consumers cannot be induced to try experiments in this direction, for 50 or 75 cents a ton; they want good, clean coal, without any risk of its being "mixed," and will purchase it of a responsible person; they know the difficulty of fixing this responsibility on the servants of corporations.

Mining operations were resumed at the mines of the Lehigh Nav. Co., on the 11th; they had been idle for some time past. The dealers, who are holders of contracts for coal at the East, made in April and May, are extremely anxious to have deliveries made at the present low schedules for coastwise freights; they would have an advantage of at least 50 cents a ton in freight over most of the "stored coal" now piled up in Boston and elsewhere, and by their *early* contracts have made another saving of 30 to 35 cents a ton in price, which enables them to prosecute a successful competition with the companies' coal at circular prices. Many of the individual operators in anthracite coal in Schuylkill Co., whose occupation is gone, are turning their attention to the rich bituminous coal fields in this State, and in Maryland. They confidently predict that for steamship and manufacturing purposes it must supersede anthracite, and in some cases for domestic use.

Bituminous Coal, Wholesale.

Penn. and Westmoreland (Gas), f.o.b., Groenwich	5 25
Broad Top, (according to destination) f.o.b., Port Richmond	4 75@5 00
Clearfield f.o.b. at Greenwich, according to destination	4 75@5 00

Bituminous, Retail.

$6 00 in yard, per 2240 lb., cartage added.

Prices of Anthracite Coal for Aug., 1874, at Various Points.

Wholesale—Per ton of 2240 lb.

AT	Broken & Egg.	Stove.	Chestnut.
Mauch Chunk, Lehigh coal	3 50	3 75	3 25
" Wilkes B. coal	3 50	3 75	3 25
Port Carbon.*	2 75	3 15	2 40
† Schuylkill Haven*	2 83	3 23	2 48
‡ Port Clinton*	2 94	3 34	2 59
Carbondale	2 25	2 50	2 00
Pittston	2 50	2 50	2 25
Scranton	2 25	2 50	2 25
Wilkes-Barre	2 25	2 50	2 00

¶Specially reported by the Riverside Coal Co., Wilkes-Barre, Pa.

Per ton of 2000 lb.

Buffalo, N. Y., f. o. b.	6 40	6 85	6 35
Buffalo, N.Y. afloat	5 90	6 35	5 85
Rochester, " "	5 65	6 10	5 65
Weedsport " "	5 35	5 80	5 30
Syracuse, " "	4 95	5 40	4 90
Ithaca, N. Y., f. o. b. and afloat.	4 80	5 25	4 75
Charlotte, N.Y. f.o.b.	5 90	6 35	5 85
Auburn, " afloat.	5 25	5 70	5 20
Elmira, " "	4 60	5 00	4 75
Oswego, " "	5 90	6 35	5 85
Oswego, " retail delivered	7 00	7 00	7 45

Rates for coal on the line of the P. & N. Y. R.R. and L. & B. Junction per ton of 2240 lb. Broken and Egg, $3.05; Lump, Stove and Chestnut, $3.30.

* Broken coal for these points is 10 cents per ton above these figures.

† By Railroad and Canal.

‡ By Canal.

¶ Lump coal for these points ranges from 40 to 65 cents per ton above these figures.

Baltimore, Md.

Aug. 12, 1874.

Orders and shipments of Cumberland are unusually dull for the season, notwithstanding freights per colliers were never lower than at present. It indicates a continued stagnation in manufacturing eastward.

WHOLESALE PRICES PER 2240 lb.

Reported by our special correspondents.

ANTHRACITE.	afloat.	at depot.
Wilkes-Barre, "Lee," or "Diamond,"		
Lump, steamboat	$5 00	$5 60
Broken	5 20	5 65
Egg	5 52	5 95
Stove	5 67	6 10
Pittston and Plymouth.		
Lump, steamboat, and broken	....	5 40
Egg	....	5 70
Stove	....	5 85
"Boston" (free burning,)	....	....
Shamokin, red or white ash	....	....
Egg	....	....
Stove	....	....
Lykens Valley, red ash, all sizes	6 02	630

From wharf or yard, wholesale, 50@75c. additional. By retail, all kinds and sizes, per 2,240 lb, $7@8 00.

BITUMINOUS.

George's Creek and Cumberland f. o. b. at Locust Point for cargoes	4 75	....
West Va. Gas Coal f. o. b. at Locust Point	5 50	....
Kanawha Cannel, coarse	13 00	....
Tyrone	7 25	....
Ritchie Mineral of West Virginia	1 00	....

Boston.

Aug. 11, 1874.

From the *Commercial Bulletin*.

The market has been quiet the past week, though the ability of manufacturers to secure cargoes of anthracite at the July figures has made a better business prevail than in the earlier summer. Possibly the stiffening tendency of freights has hurried buyers somewhat. The yards are still full stocked, with the spring gone and summer nearly ended, and yet not a tenth of the usual anticipatory household demand has been chronicled.

The outlook for the latter months is one of extreme activity. Wants to be supplied for early winter will sweep the yards bare, when, on replenishing, the current monthly 15c a ton combination will occur, superadded to a demand on freights which will likely double the present low charter rates.

We notice a Richmond charter, three trips to New York, at $2 00, and one trip to Boston at $2 25. Coastwise freights are, however, a trifle stiffer. We have two charters from Georgetown to Boston, through six bridges, at $1 95, and nothing lower from Philadelphia than $1 50. There are a great many vessels refusing $1 50, and lying idle both here and at Philadelphia. There is no profit in sailing at the price, as instance a 300 ton cargo at $1 50 bringing $450, out of which 38c a ton is paid for wharfage and trimming, making $336. As one-half goes to the owner and one-half to the captain, the former paying insurance and the latter crew wages and provision accounts, a trip not coming in for less than 20 days, it is plain that at least the skipper's $168 leaves him no personal earnings.

Foreign coals are slow. There have been arrivals of 2,000 tons, all previously sold, but the inquiries for new contracts have been very few.

CARGO PRICES TO TRADE.

Reported by our Special Correspondent.

Lingan coal	$ 5 75	Westmoreland	7 75
Caledonia	5 10	Waverly Co. Youghiogh'y	7 75
Pictou	6 15	Cannelton Cannel	13 50
Block House	5 60	Cumberland	5 90@ 6 80
Red Bank Cannel	10 00	Anthracite	6 50@ 7 00

Burlington, Iowa.

Aug. 8, 1874.

Specially reported by Messrs. WIGHTMAN & CUMMINGS wholesale and retail dealers and shippers of coal.

Prices remain unchanged,

Per ton of 2000 lb.

Lehigh Lump	$15 00	Illinois Smithy	$6 00
Lackawanna	11 00@11 50	" Steam	3 75
Blosburg Smithy	13 00	Connellsville Coke	12 50
Pittsburgh "	10 00	Illinois "	10 00

Buffalo, N. Y.

Aug. 12, 1874.

Reported by our Special Correspondent.

Trade continues dull, both in the anthracite and bituminous, though in the former we think there is a slight improvement. The prices advanced in accordance with the programme, but we hear of concessions by outside parties to effect sales, where coal was bought prior to the advance. The prices for soft coal continue low, almost "ante war" rates, nor is the demand large. Gas companies bought early and higher than the present rates, and are stocked heavy with contract coal. Manufacturers are all running light, and the demand from them for fuel for steam is accordingly light and limited to the cheaper grades, mostly the slack and nut. We hand you present quotations for soft coal and coke.

Per ton of 2000 lb.

	Slack.	Nut & Slack.	Nut.	Lump
Connelsville coke				6 50
Sterling cannel				6 00
Red Bank "				5 75
Youghiogheny coal for gas				5 50
Briar Hill coal		3 25		5 25
Fairmount "		3 25	3 50	4 25
Catrish "		3 25	3 75	4 50
Stoneboro "	2 75		3 50	

Briar Hill coal, and Stirling and Red Bank cannels, at $8; all other coals $1 per ton above wholesale prices.

Anthracite f. o. b. vessel. Retail prices $1 per ton additional, delivered.

Grate	6 25	Stove	6 70
Egg	6 25	Chestnut	6 20

Chicago, Ill.

Aug. 10, 1874.

Specially reported by Messrs. RENO & LITTLE, Coal Merchants.

The retail trade is a little better; the following are the present prices:

Retail prices per ton of 2000 lb. delivered to buyer.

		BITUMINOUS.	
Lehigh Lump	$10 50	Briar Hill and Erie	7 50@ ....
Lehigh prepared and car load lots	9 50	Walnut Hill (W. Va.)	6 50@ ....
Lackawanna, Wilkesbarre and Pittston,*	8 75	Midway (West Va.)	6 50@ ....
Grate, egg, and chestnut	9 25	Cannel	8 00@ 9 00
Stove or range		Blossburg	8 00
		Indiana Block	6 00
		Hocking "Brooks"	6 00
		Wilmington and Illinois	3 00

*75 cents off these prices for car load lots to country dealers and manufacturers.

Cincinnati, O.

August 12, 1874.

Specially reported by Messrs. A. BUCHANAN & CO., wholesale and retail dealers in coal and coke.

Please quote prices same as last report.

Per ton of 2000 lb.

	Bush.	Ton.
Youghiogheny, or Pittsburgh, afloat	11 c.	$2 86
Pomeroy coal	7½ c.	1 95
Cannel coal	18 c.	4 68
Semi Cannel	10 c.	2 60

The following are retail prices delivered:

Youghiogheny	15 c.	$3 90@$
Pomeroy	12 c.	3 12@
Cannel	22 c.	5 72@
Kanawha Semi Cannel	14c.	— 3 64
Authracite		— 11 00
Foundry coke	12c.	—
Soft coke	8c@10c.	—

Cleveland, O.

Aug. 10, 1874.

Reported by our Special Correspondent.

I have no change in prices to note. If possible, the coal market is even in a more depressed condition than has yet been this season. No demand whatever for coal. Contracts made early in the season are about all filled. Lake freights on coal must have an upward tendency, owing to the fact that the new crop of grain is not yet ready to move east. Quotations remain as follows:

Per ton of 2000 lb.

Youghiogheny, l'p, f.o.b.	$4 65	Straitsville	$3 50
Youghiogheny, nut	3 60	Columbiana	3 75
Briar Hill, (Church Hill)	4 45	Strip Vein	4 00
" " (Brookfield)	4 30	Mountain Blossburg (blacksmith)	6 00
Massilon, according to quality	$3 60 to 3 85	Darlington and Sterling Cannel	4 60
Hocking Valley	3 75		

Council Bluffs, Iowa.

Aug 10, 1874.

Reported by our Special Correspondent.

Trade at this point is quiet. We change a few quotations as follows:

Per ton of 2000 lb.

ON TRACK.

Blossburg (blacksmith)	$14 20	Wyoming	14 00
Anthracite	15 00	Missouri	6 00
Iowa	4 50	Kansas	6 00

RETAIL.

Blossburg	$16 00	Wyoming	$12 00
Anthracite	16 00	Missouri	8 00
Iowa	6 50	Kansas	8 00

Detroit, Mich.

Aug. 12, 1874.

Specially reported by Messrs. ROBINSON & KEYS, dealers in all kinds of coal.

Trade continues dull, with but few inquiries for stocks. Lake freights improving will undoubtedly advance prices before long, when we may look for a much better trade. We quote same as last week:

Per ton of 2000 lb.

Lehigh Lump, per ton	$10 50	Blossburg	8 50
Lehigh " prep. sizes	9 50	Briar Hill	7 50
Wilkes-Barre, Grate and Egg	8 50	Willow Bank	7 00
Wilkes-Barre, Stove and Nut	9 00	Erie	7 50
		Massilon	7 00

Denver, Col.

RETAIL PRICES.

Per ton of 2000 lb.

Canon	$6 50	Boulder Valley	$4 75
Marshall	5 50	Euner	5 50
Murphy	5 50	Black Diamond	5 50
Baker	5 00		

Erie, Pa.

Aug. 11, 1874.

Reported by our Special Correspondent.

Wholesale, per ton of 2,000 lb.

No changes in the market at this point.

Anthracite f.o.b. vessels.

Lump	$6 60	Stove	$6 65
Grate	6 10	Chestnut	6 05
Egg	6 10		

Bituminous f.o.b.

Briar Hill	$4 40	Beaver	$4 25

Retail, per ton of 2,000 lb.

Anthracite.

Lehigh, chestnut	$8 50@$9 00
" prepared	8 75@ 9 25
Lykens Valley, stove	9 50@10 00
Lykens Valley, chestnut	8 00@ 8 50
Schuylkill and Wilkesbarre	7 50@ 8 00
Blossburg (Smithing)	7 50@ 8 00

Bituminous.

Chenango Valley (Ormsby), lump	$6 00
Mahoni ng Valley (Briar Hill), "	5 00
Nut, all kinds	4 00
No. 1 slack	3 06
Bituminous, by car loads to factories	5 35

Indianapolis, Ind.

August 10, 1874.

Specially reported by Messrs. H. MCCOY & CO.

No change in market to report. Please continue former quotations.

Per ton of 2000 lb.

BITUMINOUS.

Best Block coal	$2 90	Indiana cannel	6 50
Best Highland	2 40	Hocking Valley	3 00
Block Nut	1 65	Youghiogheny	5 42
Highland "	1 65	Blossburg (smithing)	7 30
Block slack, per car load	1 15 00	Piedmont "	7 75
Peytona cannel per ton	8 50	Gas coke, per bushel	9½c

ANTHRACITE (Lackawanna).

Grate	$8 55	Chestnut	8 55
Egg	8 55	Stove	8 55

Retail, per bushel of 70 lb.

Block	14c.	Peytouia Cannel	32c.
Highland	12	Indiana "	28
Highland Nut	9	Youghiogheny	25
Block "	9	Blossburg	27
Slack	7	Piedmont	30

ANTHRACITE.

	per ton.		per ton.
Grate	$10 50	Stove	$10 50
Egg	10 50	Chestnut	10 50

Louisville, Ky.

Aug. 11, 1874.

Specially Reported by Messrs. BYRNE & SPEED.

The market remains as last quoted. Retail prices are unchanged:

Pittsburgh, per load of 1900 lb	$3 50
Pomeroy	3 00
Buckeye Cannel	5 50
Peytona Cannel	6 00
Nut and Slack	2 75
Kentucky lump, per load	2 75
" nut, "	2 25
" Slack "	1 30
City-made Coke, per bushel	12c
Kentucky on cars at wholesale per bush.	8½c
Anthracite, per ton	$10 to $10 50

Milwaukee, Wis.

Aug. 11, 1874.

Specially reported by Messrs. B. P. ELMORE & CO.

Prices remain unchanged.

Retail prices per ton of 2000 lb.

Lehigh Lump	$10 00	Briar Hill, select	$8 50
Lehigh Prepared	10 50	Blossburgh	8 00
Lackawanna	9 50	Pittsburgh	7 50

New Orleans, La.

Aug. 8, 1874.

Specially reported by Messrs. P. & R. DEVERGES, Wholesale and Retail Dealers in Pittsburgh, Anthracite and Cannel coal.

We have no material change to notice. The stock afloat at Willow Grove Landing amounted to 205 boats and 13 barges and 2 hull, to the 1st instant. Consumption during the month of July, 26 boats and 1 barge.

We quote:

Pittsburgh coal, retail, per bbl	65c.
" wholesale	40c.
" per hhd	$6 00
" to steamboats, per box	50c.
" to manufacturers, per bbl	55c.
Anthracite, retail, per ton	$12 50
" who esale per ton	$9 00@9 25
Spadra (Arkansas) coal, retail, per bbl	75c.
Mt. Carbon, wholesale, per bbl	45c.
" " retail per bbl	65c.
Scotch Cannel, per bbl	1 00

Richmond, Va.

August 12, 1874.

Mr. GERVAIS STORRS, shipping agent of the Cannelton Coal Co., reports the following shipments and freights from his place for the week ending Aug. 11th, inclusive:

Cannelton Coal Co., 700 tons Cannel, to Bird, Perkins & Job, Agents, New York.

Cannelton Coal Co.,	143 tons	Semi-cannel, to	Washington.
Peytona Coal Co.,	463 "	Cannel,	New York.
C. and O. RR.	659 "	Spiint,	Boston.
Clover Hill Co.,	200 "	Bituminous,	New York.
" "	200 "	"	Wilmington, Del.
James River C. Co.	600 "	"	Boston.

I quote freights as follows to

New York	$2 00 to $2 15	Washington	$1 15 —
Boston	2 25 to 2 50	Wilmington, Del.	1 50 —

Pittsburgh, Pa.

Aug. 10, 1874.

Reported by our Special Correspondent.

Per ton of 2000 lb. and Bushel of 76 lb.

	per ton.		per ton
Youghiogheny coal	$2 15	Pittsburgh retail delivered per bushel	9½c@11½c
" coke	2 75	Anthracite all sizes	$7 00
Connellsville coal	2 25	" retail deliverd.	7 50
" coke	3 25		
Pittsburgh coal	$2 00		

San Francisco.

From the *Commercial Herald*. July 30.

The imports to this port include 2503 tons per *Knowsley Hall* from Newcastle, N. S. W., 1670 tons per *Dexter* from same. The cargo price for spot parcels ex-ship cannot be quoted at over $10. The bulk of recent receipts sold prior to arrival. Coos Bay continues to furnish constant supplies from the Eastport mine, which is of superior quality, and enters largely into domestic use: ex-ship, $10. The Renton coal from Washington Territory is being introduced here, but as yet we have had no opportunity to test its merits. The Seattle mines promise to do an increased business. The Bellingham Bay mines are doing a large trade; $8 50 ex-ship. The California Mt. Diablo mines, Black Diamond and others, continue to produce largely of steam coals, finding ready sale at $6 25@$8 25 per ton for coarse and fine—the latter screenings being preferred by all local factories to the lump. The *Aureola* from British Columbia, Departure Bay, has 1300 tons.

St. Louis, Mo.

Aug. 8, 1874.

Specially Reported by the COLLINSVILLE COAL AND MINING COMPANY.

ANTHRACITE.

Per ton of 2000 lb.

	City delivery.
Lehigh Lump	$13 50
Lackawanna and Wilkesbarre	12 50
Semi Anthracite	9 50

BITUMINOUS.

Per ton of 2000 lb.

	E. St. Louis.	City delivery
Washington Indiana—smithing	$4 00	$4 87
O'Fallon, Ills	2 00	3 00
Collinsville and Belleville, Ills	1 75	2 75
Indiana Cannel	6 00	7 00
Missouri Cannel		5 00

Retail, 25c. per ton additional.

Toledo, Ohio.

August 8, 1874.

Per ton of 2000 lb.

Specially reported by Messrs. GOSLINE & BARBOUR.

Retail.		Retail.
Wilkes-Barre and Scranton, Large and Small Egg	$8 00	Bituminous. Blossb'g and Cumberl'd, $8 00
Stove	8 25	Massillon Lump	6 00
Chestnut	8 00	Briar Hill	7 00
Lehigh Lump	10 00	Straitsville	3 75
		Hocking Valley	4 00

Halifax, N. S.

Aug. 10, 1874.

Reported by our Special Correspondent.

The prices of coal at Halifax have taken a downward tendency, and are as follows:

Prices per ton of 2240 lb. in gold.

Sydney (old mines)	$4 50	Little Glace Bay	3 50
Gowrie	3 50	Blockhouse	4 00
Victoria	3 75	Albion (at Railroad)	4 50

Montreal.

Aug. 12, 1874.

Reported by our Special Correspondent.

Please continue quotations.

Per ton of 2,240 lb.

Scotch Steam	$6 25@6 50	Cape Breton Steam	$5@5 50
Pictou "	6 00@6 25	Newcastle Smiths,	8@8 25

Anthracite at retail, 2,000 lb., delivered:

Egg	$8 00	Nut	$8 00
Stove	8 50		

Toronto, Ont.

Aug. 10, 1874.

Reported by our Special Correspondent.

The prices and terms of the Toronto Coal Exchange remain unchanged as follows:

ANTHRACITE.

	per ton.		per ton.
Broken	$7 65	Chestnut	$7 65
Egg	7 65	Lehigh	9 00
Stove	8 15		

BITUMINOUS.

Blossburgh	7 50	Screenings	5 00
Briar Hill	7 00	Soft Nut	5 50

Freights on Bituminous Coals from the Mines to Tide-Water Shipping Ports.

See our last issue.

Delaware and Raritan Canal.

Rates of the above, for August, may be found in our issue of Aug. 1st.

Coal Freights from the Anthracite Mines to the Principal Markets.

We refer to our issue of July 11th any one desirous of consulting the above.

Freights.

To River, Sound, and Coastwise Points.

These Freights are somewhat lower than quoted in our last; reference to the same, however, will indicate very nearly the present rates.

Towing.

Our issue of June 27th contains full information on the above.

REVIEW OF THE BRITISH COAL AND IRON TRADES.

Compiled from our exchanges dated London, July 29th.

England.—In the *North of England* and *Cleveland*, the demand for iron, and particularly for foundry grades, has increased perceptibly, and prices have advanced till No. 3 is quoted at 70/, and in some cases for early delivery even higher figures have been obtained. A brisk demand from the Continent is taking up stocks of all kinds, and there is a prospect of prices being maintained or perhaps further advanced. Forge irons have not gone up to any marked extent and are quoted 57/@58/ 6d., four months.

Finished irons are also looking up, owing to large inquiries for rails for home, colonial and foreign account.

A number of the Cleveland furnaces are still out of blast, and as the output of the ironstone miners is increasing since the miners went to work, the price of ore, particularly second grade ore, has fallen considerably, and will probably go still lower.

Coal.—The foreign trade in steam and gas coals, to the Baltic particularly, is quite brisk, and though it is claimed that prices are so low that there is little profit in mining, and that wages will probably have to undergo a further reduction, we believe that the Baltic and Mediterranean trades, which will continue active for some time and will be followed by the regular fall business, will keep the demand and prices at such a point that there will be no further reduction in wages for several months to come.

In *North Staffordshire*, the finished iron trade is in a very unsettled condition. Quotations for crown bars are still £10, but sales are made at lower prices. With large quantities of pig iron on hand, good gray forge is selling at 75/ per ton at the furnaces, and the best kind of furnace mine at 15/ per ton loaded up.

In *South Staffordshire*, pig iron is in languid demand, but prices are steady, owing to the very limited production. The quotations remain at £3@£3 5/ for common cinders; £5 10/ @£5 15/ for all mine, and £6 for Staffordshire gray forge. The demand for coal and slack is very small, but no change of price is expected for two or three weeks. West Dudley quotations are:—Second coal, 15/ 6d.; lumps, 14/ 6d.; slack, 7/ per ton.

In *South Yorkshire* and *Derbyshire*, the strike of the coal miners continues, the men refusing to accept the advice of the leaders of the National Association, which counsels the acceptance of a ten per cent. reduction, and arbitration of the 2½ per cent. additional demanded by the masters. Several new pits are being sunk, and as these commence to send out coal the chance of scarcity and high prices, such as were witnessed last year, becomes very remote. The present difficulties in the coal mines are seriously afflicting the iron and steel trades of the West Riding, which would show considerable activity were the supply of fuel abundant.

In *Lancashire*, there is an improvement in the iron market and the demand for pig iron is increasing. Prices for immediate delivery are firmer in Manchester. No. 1 is 83/ 9d. per ton; No. 3, 75/@78/ 9d.; No. 4, 73/ 9d. For forward contracts No. 1 is quoted 78/ 9d.; No. 3, 73/ 9d.; No. 4, 71/ 6d.; No. 4 forge, 65/ 9d. per ton. For manufactured iron prices are firmer. Crown bars are quoted at £10 delivered.

In coal the reduction in prices, which takes place the 1st of August, has held back orders for immediate delivery. The prices for delivery in Manchester will range about as follows: House coal, 14/@17/ 6d.@18/ per ton; furnace coal about 14/; engine coal, 10/ 6d.@11/ 6d., and slack, 8/@9/ per ton, being a reduction from 1/ 8d.@2/ 6d. per ton. The demand for coke is dull, except for best Durham foundry qualities, in which some makers are announcing a reduction of 2/ 6d. per ton.

South Wales.—Our advices to the 31st of July inform us that the last reduction of wages, to go into effect the 1st of August, has been put at 10 per cent. This makes a total reduction of 20 per cent, or 4/ in the pound. The men have not yet accepted, but probably will do so, as it is impossible to obtain paying orders at the present cost of manufacture. Business is dull and will continue so till the labor question is settled.

Scotland.—A decided improvement has taken place in the iron market during the week, and prices have risen about 6/, having sold up to 88/. Makers' brands are without material change. Gartsherrie No. 1, 105/; Coltness, 110/; Summerlee, 105/ and 85/; Eglinton, 83/; Glengarnock, 90 and 81. The iron masters, on the 29th, resolved to blow in three-fourths of the furnaces that had been damped out when the wages dispute began in March last. The general impression is that trade is going to improve.

Messrs. WM. COLVIN & Co., of Glasgow, under date of July 28th, report as follows:

"There has been a very good demand for pig iron, during the past week, chiefly for foreign shipment, and a decided advance has taken place in all descriptions.

"Warrants steadily rose until yesterday afternoon, when 88/ 3d. was paid, but this forenoon a reaction took place to 86/ 6d, at which one or two lots changed hands, but during the afternoon the tone became again very firm, and there were buyers at 88/ 6d. at the close.

"There is a marked scarcity of the favorite brands, and a serious reduction is still taking place in the stock in store.

"We subjoin approximate prices of the various brands:

"G.m.b. at Glasgow (deliverable alongside), No. 1, 91/ 6d.@ 92/ 6d.; No. 3, 86/ 6d.@87/6d.; Coltness, do., do., No. 1, 117/ 6d.; No. 3, ..; Summerlee, do., do., No. 1, 115/; No. 3, 90/; Carnbroe, do., do., No. 1, 100/; No 3, 90/; Langloan, at Port Dundas, No. 1, 115/; No 3, 90/; Glengarnock, at Ardrossan, No. 1, 100/; No. 3, 87/ 6d.; Eglinton, do., No. 1, 93/; No. 3, 87/ 6d."

In *coal*, prices are still downward with no prospect of a rise. Supplies are accumulating on account of the dullness in the home market, though there is considerable activity in the export trade. The following are official quotations, f. o. b., at the Glasgow Harbor Cranes:

Wishaw Main Coal, 8/ 3d.@10/ 6d. per ton; House coal, 9/@ 13/; Splint coal, 10/@11/; Steam coal, 12/@14/; Smithy coal, 17/@18/. At the Blantyre collieries the price of coal has been reduced to 6/ 8d. per ton, and dross to 3/ 4d. Notices of reductions in wages have been given in the Lanark and Hamilton districts. The reductions will probably be from 15 to 45 per cent, reducing wages from 6/ to 4/ per day. In some of the districts the men still continue to receive 6/. In general, the men are accepting the heavy reductions of wages demanded by the masters, but in some places very obstinate strikes are progressing.

IRON MARKET REVIEW.

New York.

Aug 11, 1874.

The indications of an improvement which we noted in this market a few weeks ago, have again been followed by a deep depression, and many of the dealers not only have no transactions to report, but they express gloomy anticipations for the future. There are large stocks of iron in makers' hands, and the demand for consumption is so small that the limited number of furnaces now in blast can fully supply it. There appears, therefore, no prospect of improvement in prices; on the contrary, many well informed parties believe prices of pig may even recede. Indeed, we can quote No. 1 Lehigh as $30@$31 against $30@$32 last week, not, perhaps, that there is a difference of $1 in the actual selling price of best brands, but that makers are becoming convinced that the lower figure is so generally and openly named that there is little use in even quoting a price which for some time past has been scarcely more than nominal. The vast improvements which the correspondents of the English papers on this side constantly report as having taken place, or, as just about to take place, in our iron market, are not apparent to the naked eye. We still continue to call attention to the necessity for a closer study of economy in all departments of our iron trade, and the request which we made last week for statistics of the work in our blast furnaces, will, if complied with, afford matter of comparison which cannot fail to be of practical advantage to those interested. We notice it stated in the papers that the contracts for the iron to be used in the Centennial buildings have been made with Philadelphia manufacturers at *a price $25,000 above that at which foreign iron could have been obtained.* Assuredly, if this be true, Mr. DOBBINS deserves an iron monument for his disinterested patriotism; for there are few contractors, however much they may advocate the theory of protection, who do not practice it as Artemus Ward who was ready to show his patriotism, by his willingness to sacrifice—some one else—on the altar of his country.

The uncertainty attending the results of the recent failure of Messrs. HOLMES & LISSBERGER is still overshadowing the market both in iron and copper. Large quantities of pig, rails and scrap iron and copper, held as security by banks, unsettle the market, even though not forced on it, from the uncertainty as to the course that will be followed by the holders who are forced into a line of business not their own, and whose game can scarcely be predicted with more certainty than that of an inexperienced chess or a whist player, who may or may not play "according to HOYLE"—of whose rules he is ignorant.

American Pig.—There have been a few transactions during the week, though the trade is not showing any improvement in tone. The reports of several large sales given by some of the newspapers appear to refer either to sales made in other markets or to accumulations of sales made during several weeks and already reported by us. A good deal of hypothecated iron held by banks is offered for sale, though the price is held firm at makers' prices.

We are reported sales of 500 tons mixed gray and mottled, at $25; 500 tons gray forge on private terms, and 400 tons of sterling gray forge on private terms. There are also some large sales of gray forge reported at $25, but of which we have not sufficient data to know whether they were recent transactions here or at some other point.

Scotch Pig.—There is nothing of note doing in this trade, and prices remain nearly as last week, with a slight decline in Eglinton. We quote: Eglinton, $33@$33 50; Carnbroe, $34; Glengarnock, $33@$35, with sales of 100 Glengarnock at $33 prompt cash. Our mail advices from Messrs. JOHN M. SWAN & BRO., of Glasgow, under date July 31st, give the quantity of pig iron in store at Glasgow at date 25 937, tons as against 44,859 the same date last year. There were on 31st July 81 furnaces in blast, 75 out of blast, and the total foreign shipments for the seven months were: Foreign, 15,069 tons against 256,501 tons last year; coastwise, 91,088 tons against 128,391 tons last year. Glasgow warrants were quoted at 87/ 3d, 2 5 No. 1, 3 5 No. 3, g. m. b. Freights to New York were quoted at 5/@8/.

Our *cable reports* to the 12th say, "Scotch market active, demand large, prices firm, amount of business large."

Iron Rails.—We note sale of 1,000 tons 50 lb. foreign rails at $50, gold. Sales of 2,000 tons English in two lots are also reported as having been made on Wednesday, but particulars are withheld. We quote American at $56@$60; foreign, $49@ $51, gold.

Bessemer Rails.—There are no transactions. Quotations remain nominally unchanged. American, $97; foreign, $90, gold.

Old Rails.—We note sale of 500 tons bridge rails at $31, cash. The hypothecated rails are held at $35 50, and we were reported a sale of several thousand tons, but we have reason to believe there has been no such transaction, but it is merely a rumor such as appear to fill the streets with regard to those hypothecated stocks. We quote $31@$35 50.

Scrap Iron.—We note sale of 150 tons domestic scrap on private terms; also a report of a sale of 1000 tons from yard. We quote nominally: No. 1 wrought, $34@$36; cast, $22@$28.

Spiegeleisen.—In the absence of business we quote nominally $35, gold; No. 1, foreign is quoted at £6 f. o. b. at Rotterdam. Best English makes £7@£7 10/, f. o. b. in English port.

Boston.

August 8, 1833.

From the *Commercial Bulletin.*

The iron market has enjoyed the presence of a number of large foundry men during the week, in town for the first time in a month, "because the cool days and nearness of fall suggest the probability of renewing their blasts." The amount of business resulting has been small, though, to start the thing, they seem to have secured a shading on the odd five and ten ton lots they wanted, and in conformity to actual business we lower Eglinton $2 per ton.

The stove makers have started up quite busily, but not with preparations for the usual amount of casting. House, factory, and store repairs are being made very freely, which on architectural work is somewhat pleasant. In the range of small castings for machinists and factories a better business is coming along, so that most of the large furnaces throughout New England can run a blast once or twice a week, while the small ones fire up daily.

There is small encouragement in bar iron and steel. The trade wants are wholly trifling job lots, and possibly the situation is best expressed by the remark of a prominent dealer, who has been on the road for two weeks, that two-thirds of the country forges are idle, and the carriage men have no heart for undertaking sleigh work.

We quote yard lots of American Pig Iron at $36 00@40 00 per ton, including No. 2 extra at $34@$36, and No. 1 at 36@39. We quote Eglinton at $38, Coltness Gartsherrie at $45@46, Charcoal at $45@55.

Chicago

Aug. 11, 1874.

Specially reported by Messrs. ROGERS & Co., dealers in Scotch and American pig iron.

We have to report our market for pig iron and rails dull and irregular.

No. 1 Coltness	$46 00@	....
No. 1 Gartsherrie	45 00@	....
No. 1 Summerlee	44 00@	....
No. 1 Glengarnock	42 00@	....
No. 1 Eglinton	38 00@	....
Warner's "American Scotch"	41 00@	....
Massilon No. 1 Foundry	37 00@	....
No. 1 Grand Tower Mo. ores (Bituminous)	35 00@	....
No. 2, " " "	32 00@	....
No. 1 Mill	30 00@	....
Union "A" 1 (Anthracite)	34 00@	....
Union "B" 1 (Anthracite)	32 00@	....
No. 1 Lake Superior (charcoal)	36 00@	....
No. 2 Lake Superior "	34 00@	....
No. 3 Lake Superior "	36 00@	....
No. 4 Lake Superior "	40 00@	....
Bessemer Steel Rails	95 00@	....
New Iron Rails	58 00@	....
Old Rails	30 00@	....

Cleveland

Aug. 11, 1874.

Specially reported by Messrs. C. E. BINGHAM & Co., dealers in pig iron and iron ore.

Our pig iron market is very dull. Present quotations are as follows:

No. 1, Anthracite Foundry	$33 00@34 00	—4 mos
No. 2, " "	31 00@32 00	—4 mos
No. 1, Bituminous "	31 00@	—4 mos
No. 2, " "	29 00@	—4 mos
No. 1, " Grey Forge	27 00@	—4 mos

No, 2, Close Grey	26 00@27 00	—4 mos	
No. 1, Massilon Black Band	35 00@....	—4 mos	
No. B-1 " "	33 00@....	—4 mos	
No. 2 " "	31 00@....	—4 mos	
No. 1, Lake Superior Charcoal	38 00@....	—4 mos	
No. 2, " "	37 00@....	—4 mos	
No. 3, " "	40 00@....	—4 mos	
No. 4 " "	42 00@....	—4 mos	
Nos. 5 and 6 "	44 00@....	—4 mos	
American Scotch, No. 1, Cherry Valley	34 00@....	—4 mos	
" " No. 2	32 00@....	—4 mos	

Cincinnati.

August 11, 1874.

Specially reported by Messrs. TRABER & AUBERY, commission merchants for the sale of pig iron, blooms, ore, etc.

We have no important change to note in our Pig Iron Market. Some of the charcoal furnaces have withdrawn their stocks, not being willing to accept present prices. We quote:

CHARCOAL.

Hanging Rock, No. 1, Foundry	$33 00@34 00	—4 mos
" No. 2, "	31 00@32 00	—4 mos
" Mill	28 00@29 00	—4 mos
Tennessee No 1, Foundry	31 00@32 00	—4 mos
Tennessee. No. 2 "	30 00@31 00	—4 mos
" Mill	27 00@28 00	—4 mos
Missouri, No. 1, Foundry	34 00@35 00	—4 mos

STONE COAL.

Ohio No. 1, Foundry	31 00@32 00	—4 mos
" No. 2, "	29 00@30 00	—4 mos
Ohio Mill	27 00@28 00	—4 mos
Missouri, No. 1, Foundry	31 00@32 00	—4 mos
" No. 2, "	30 00@31 00	—4 mos
" Mill	28 00@29 00	—4 mos

CAR-WHEEL.

Hanging Rock, C. B.	50 00@55 00	—4 mos
Tennessee "	45 00@48 00	—4 mos
Missouri "	45 00@48 00	—4 mos
Alabama "	45 00@48 00	—4 mos

BLOOMS.

Charcoal	85 00@ 95 00	—cash

SCRAP IRON.

Cast	80@ 90	—cash
Wrought	1 25@ 1 50	—cash
Rails	65@ 68	—cash

Indianapolis, Ind.

Aug. 11, 1874.

Specially reported by NELSON KINGMAN, broker and dealer in pig iron, etc.

The pig iron market is without material change. Sales confined to small lots for immediate use. I quote:

New Rails at mill	$64 00@66 00	
Old Rails "	31 00@32 00	
Hanging Rock Charcoal Pig No. 1 foundry	35 00@36 00	—4 mos
" " " " " 2 "	32 00@33 00	—4 mos
" " " " Mill	29 00@31 00	—4 mos

STONE COAL.

Indiana No. 1 Foundry pig Planet furn'e.	32 00@34 00	—4 mos
" 2 " " "	31 00@32 00	—4 mos
" 1 Forge "	29 00@ ....—	4 mos
" 2 " " "	27 00@ ....—	4 mos
Ohio No. 1 Foundry pig	33 00@34 00	—4 mos
" 2 "	31 00@32 00	—4 mos
" 1 mill	28 00@30 00	—4 mos
Merchant Bar, card rates	52 00@54 00	—3 mos
1st quality C. H. No. 1 Boiler Plates, per lb.	5¾@6 c.	—3 mos
1st " Com Sheet, for No. 24, W. G. "	4¾c.	—3 mos
1st " Charcoal Sheet " " "	6 c.	—3 mos
Best Bloom Galvanized Sheet, discount	20 per cent.	—cash
2d quality " " "	30 "	—cash

f. o. b. in Indianapolis.

Louisville.

Aug. 11, 1874.

Specially reported by GEORGE H. HULL, Esq.

There is more inquiry for hot blast irons, and prices are firm at quotations. Cold blast is dull. Red short mill is scarce, and prices have advanced. Quotations are revised as below.

The usual time, 4 mos., is allowed on the quotations below:

HOT BLAST—CHARCOAL.

No. 1 foundry, from Hanging Rock ores	$33 00@34 00	
No. 2 " " "	30 00@31 00	
No. 1, forge, " "	27 00@28 00	
No. 1, foundry, " Tennessee "	32 00@33 00	
No. 2 " " "	28 00@29 00	
No. 1, forge, " "	26 00@27 00	
No. 1, foundry, " Alabama "	32 00@33 00	
No. 1 " " Iron Mountain "	34 00@36 00	

HOT BLAST—STONECOAL.

No. 1, foundry, from Missouri ores	33 00@34 00	
No. 2, " " "	30 00@32 00	
No. 1, forge " "	29 00@30 00	

COLD BLAST—CHARCOAL.

Car Wheel from Hanging Rock ores	50 00@54 00	
" " Tennessee "	46 00@48 00	
" " Alabama "	48 00@50 00	
" " Georgia "	48 00@50 00	
" " Missouri "	46 00@48 00	
" " Kentucky "	48 00@50 00	

Milwaukee, Wis.

August 10, 1874.

Specially reported by Messrs. R. P. ELMORE & Co.

The condition of this market in both Coal and Pig Iron remains unchanged, both in price and inquiry after supplies. So we have no change to note.

The prices per ton of 2,240 lb. remain as follows:

Scotch ranges	$40 00 to $45 00	
No. 1, Lake Superior Charcoal	36 00 to 38 00	
" 2, " "	34 00 to 36 00	
" 1, " Anthracite	35 00 to 36 00	
" 2, " "	33 00	

Philadelphia, Pa.

August 13, 1874.

Reported by our special correspondent.

There is no change in the outlook of the iron interests of Pennsylvania. While there are some favorably situated furnaces gone into blast to make special irons, there are nearly as many that have blown out. The rolling mills whose chief business heretofore has been on railroad iron cannot be said to have "started up." Some of them commenced moderate operations on other kinds of iron, and some on ship-building iron. On the whole, the prospect looks much better, but a general revival of the iron interest is by no means assured for this season. Its growth must be gradual. The foundries, as a rule, have but limited orders, and are not expecting much for this fall. They all talk of more business next spring. One of the great mistakes of the iron men has been that they have relied almost entirely upon high duties to give them a monopoly of the home trade. This worked very well as long as railroad building was being conducted on the high pressure principle, and was taking their surplus stock, paying for it in bonds that are now entirely unavailable. As the ENGINEERING AND MINING JOURNAL justly remarks, the furnace men would promote the best interests of the trade by devoting more attention to lessening the cost of iron than in looking to others for help. This they should do now when the prospect of higher prices is a long way off in the future. An order was received in this city during the past week from California for one thousand tons of pig iron for foundry purposes. This is a new market, and is, I am informed, the first order received from the Pacific Coast. I have no change to note in prices. The market is without change from last report, most of the sales for any considerable lots being on private terms.

Pittsburgh.

Aug 11, 1874.

Specially reported by A. H. CHILDS, Esq., commission merchant for the sale of pig iron, blooms, ore, &c.:

The market is devoid of animation, and quotations are unchanged. For several weeks past both holders and buyers have been demonstrating that a change must speedily occur, each in accordance with their different views, but the market remains obstinately uniform in spite of the excellent reasons why it should do otherwise.

Quotations are:

No. 1 Foundry, anthracite or bituminous	$30 00@31 00	—4 mos
No. 2 " " "	28 00@29 00	—4 mos
Gray forge " "	27 00 ....—	4 mos
White and mottled " "	25 00@26 00	—4 mos

The following is from the *Commercial* of Aug 1:

There has been no material change in the pig iron market since our last report. The sales reported amount to about the same as last week, and prices are unchanged and may still be fairly quoted at $27 00, 4 months for gray forge, and $28 00 to $30 00 for foundry.

We have heard of transactions involving the sale of at least 3,000 tons, but are without particulars as to price and terms, therefore do not report them in our list.

The miners' strike in the Lake Superior ore region has ended, the miners going to work at the old rates.

There is considerable inquiry for forge iron, and some persons expect a much more active demand before many days.

We are reported the following sales:

ITUMINOUS COAL SMELTED FROM LAKE SUPERIOR ORES.

300 tons gray forge	$27 00—5 mos	
150 " a mixed lot	25 00—4 mos	
120 " gray forge	27 00—4 mos	
100 " "	26 00—cash.	
100 " "	27 00— 4 mos	
100 " No 2 foundry	27 00—4 mos	
80 " "	27 50—4 mos	
50 " close and mottled	24 00—cash.	
40 " No. 1 foundry	27 00—cash.	
30 " "	29 00—4 mos	
20 " "	28 00—4 mos	
10 " foundry	29 00—4 mos	
10 " "	30 00—4 mos	

ANTHRACITE.

100 tons gray forge	$27 00—5 mos	
100 " "	27 00—4 mos	
10 " No. 1 foundry	30 00—cash.	

MUCK BAR.

200 tons muck bar	$44 75—cash.	
250 " "	44 50—cash.	

CHARCOAL.

15 tons No. 1 foundry Hanging Rock	$38 00—cash.	

CONNELLSVILLE COKE.

200 tons gray forge	$26 00—cash.	
20 " No. 1 foundry	30 00—4 mos	
10 " No. 2 foundry	28 00..4 mos	

METALS.

NEW YORK, Aug. 14, 1874.

Gold Coin.—During the week past gold has ranged from 109¾ to 110¼ and closed yesterday at 109⅝.

Bullion.—Fine silver bar is quoted at $1 27@$1 28, gold, per ounce, and fine gold bar at par ($20 67, gold, per ounce.)

Copper.—The Copper market is unsettled on account of the uncertainty attending the action of the banks holding large stocks. Prices may be quoted at 19c.@20c. Some large sales are reported for foreign shipment, some at 19c.; and if the price were to fall to 18¾, large amounts would go abroad. At present the banks hold at 19¾, though what has been exported has not netted them this figure. Expectations of a decline to 18¼ are expressed by some dealers. Our prices will evidently be guided by the foreign markets; for it can scarcely be believed that there is any serious idea of making anything like a permanent combination, or corner, to control this trade, at present, though there are indications that might lead to that conclusion.

We learn from Messrs. VIVIAN, YOUNGER & BOND, of London, under date July 31st, as follows:—

"On the 28th instant advices came to hand by Cable, via Rio de Janeiro, that the charters for the first fortnight of this month were equal to 3,000 tons fine Copper, in the proportion of 1,600 tons Bars and ingot, to 1,400 tons Ores and Regulus. Pending this news the market had been inactive at about £76 to £76 10/ for good ordinary brands of Chili Bars, and £77 picked brands, with only a moderate business doing. Prices then gave way about £1 per ton, and at the close about 900 tons changed hands at £75 10/ to £76 cash, and £76 to £77 with extra prompts.

"Australian sorts continue to be neglected, owing to the recent competition of Lake Superior Copper, which it is understood has been offered again in considerable quantity at even under the price previously obtained for the 2,500 tons, and so far without success. It remains to be seen what will be the ultimate result of such a quantity being offered from time to time, which appears to be neither more nor less than a surplus of production over requirements in America.

"650 tons Chilian Ores sold at 15/ per unit.

"The demand for English is only moderate at about £90 for Manufactured. £82 to £83 Tough, £84 to £85 Best Selected.

"Best Selected Ingot, £84 to £86, in warehouse.

"Tough Cake and Ingot, £82 to £84."

Tin.—The market is very dull, quotations nominal. Straits 22½; English refined, 21½; L. and F. 21; Banca, 25½, all gold. Malacca Tin at Singapore, 24½ per picul.

Tin Plates.—Have been in good demand and large sales have been made during the week. We quote, I. C. Charcoal at $10@$10 50, gold.

Messrs. VIVIAN, YOUNGER & BOND report as follows from London: "The chief feature of the week has been the Banca sale, which took place on the 29th inst., when the Netherland Trading Company offered 22,180 slabs, all of which were sold at from 55⅛ fl. to 57 fl., giving an average price equal to 98/ per cwt. laid down here, being rather higher than was generally expected. The market has since improved, and Straits has been dealt in up to 96/, and Australian 93/ 6d. to 96/, as in quality. The English smelters have fixed the price of common Ingot at 97/."

Lead.—The notable feature in the lead market during the week has been the Government sale. Government yesterday accepted bids for about 500 tons at 5 6s gold, and has fixed the price, for the present, at this figure, at which it will sell lots of not less than 25 tons, and on the following terms: 10 per cent. down, and cash for the balance before delivery, to be paid for in gold at the rate ruling at 12 o'clock on the preceding day. The sale has not affected the market to any extent. Stocks have been very low for a long time, and when the Government price, 5 6s. is reduced to warehouse figures here it will be found to be equivalent to about 5 75, which is consequently our nominal quotation. As Government has about 11,000 tons for sale, it is probable that the price now established will be changed many times before the lot is disposed of. There is, indeed, no certainty whatever as to the course that will be pursued by the Government for even a very short period.

Spelter.—May be quoted dull at 6⅛@6¾c. for domestic. The stock of foreign in this market is estimated at a few hundred tons, prices nominally 6⅛@6¾, gold.

Zinc.—There have been some sales during the week though the market is inactive. Prices may be quoted for sheets at 8c@8¼c., gold.

Antimony.—Light demand and prices unchanged at 11½@12c. gold, for short casks.

Manganese.—There is a brisk demand for all kinds used by steel and glass manufacturers and linseed oil boilers and prices range advancing. N. B. Manganite 80 per cent—5c.; Ga. Soft Manganite, 4½c.; Va. Psilomelane, 3½c.; Saxony Pyrolusite, 7c.

Quicksilver.—In the English market the price is £21 10/@£22 per flask. In the New York market the demand is fully up to the supply, and the price is $1 50 per lb.

San Francisco Stock Market.

BY TELEGRAPH.

NEW YORK, August 13, 1874.

The following report from the San Francisco Stock Board is dated the 11th inst. With the exception of a slight decline in Belcher the market is firmer. Sales of Eureka C. V. were effected on the 6th inst. at $5 per share. The regular monthly dividend of the Belcher Mining Company has been declared payable on the 10th inst.. The amount is $3 per share. This is the lowest dividend declared by this company during the past year.

The report is as follows:

Savage	58¾	Imperial	8
Crown Point	68¾	Raymond & Ely	12½
Yellow Jacket	70½	Meadow Valley	7⅜
Kentuck	14	Eureka V. G. Bid asked.	—
Chollar Potosi	51½	Ophir	—
Gould & Curry	18¼	Hale & Norcross	—
Belcher	63		

Boston Stock Market.

BOSTON, August 13, 1874.

We give below the prices bid for a few of the prominent Copper Stocks at the closing of the Boston Stock Board. Compared with our last quotations, the market has advanced.

Alloues	8¼	Pewabic	—
Calumet and Hecla Co.*	124	Phœnix	—
Copper Falls	11	Quincy	30
Central	—	Ridge	—
Franklin	—	Rockland	—
Mesnard	—	St. Clair	—
National	—	Star	—
Petherick	—		

* Ex-Dividend.

American Institute of Mining Engineers.

OFFICIAL BULLETIN.

Announcements to Members and Associates.

I. The ENGINEERING AND MINING JOURNAL, which is the Organ of the Institute, and contains its proceedings, transactions and notices of meetings, will be sent to each Member and Associate on the payment of his annual dues. Back numbers cannot, as a rule, be sent.

II. Dues (ten dollars per annum) are payable on election and at the annual (May) meeting. Members and associates elected at the February meeting pay ten dollars only to May of the following year. Remittances should be made, as far as possible, by P. O. Order, payable to the Secretary.

III. The Council earnestly requests members to forward to the Secretary, for preservation, copies of all printed mining and geological reports, particularly pamphlets, which may fall in their way. It is believed that by this means a large amount of valuable fugitive information concerning different regions and properties in this country, may be caught and preserved.

THOMAS M. DROWN, Secretary, 1123 Girard street, Philadelphia, Pa.