Miners' Journal.

POTTSVILLE, PA.

SATURDAY, NOVEMBER 26, 1859.

☞ The circulation of the MINERS' JOURNAL is equal to the aggregate circulation of any THREE other English papers published in the County—and as it circulates among the best portion of the population, an advertisement inserted in its columns is, of course, worth as much to any advertiser as if it published in any three other papers in this county. Our terms for advertising are always as low as the lowest, and our job department is supplied with every variety of type, and our job printers are skilled in their business, and our prices are as low as those of any other office in the county.

Agents:

NEW YORK—O. H. Frost, Room No. 2, 110 Broadway.
PHILADELPHIA—Joy, Cope & Co., 5th and Chestnut streets.
ALBANY—D. N. Lakey, Esq.

Who are authorized to receive subscriptions and collect bills for the MINERS' JOURNAL establishment.

ADEQUATE PROTECTION To American Industry;

And not another Inch of Slave Territory, by Extension, Purchase or Conquest.

The above are, and will be the two leading Principles before the country, until they are victorious; and we nail them to the mast-head of the MINERS' JOURNAL, there to float until they wave in triumph above the National Capitol at Washington.

THE AUBURN AND ALLENTOWN RAILROAD.

IT MUST BE BUILT.

Success Certain with a Determined Effort.

The Committee appointed at the meeting held at the Pennsylvania Hall, in Pottsville, on Tuesday, the 22d inst., has entered upon its duties, and will hold meetings at the following places during the ensuing week, for the purpose of presenting a plan of organization for the County, in order that the necessary subscriptions required for the commencement of the Road, may be obtained. The meetings will be addressed by F. W. Hughes, Esq., and others.

We earnestly call upon all persons who feel any interest in Schuylkill County to attend said meetings, as a full presentation of facts, showing the great importance of the construction of said Road to the future prosperity of the business of Schuylkill County, will be made.

The meetings will be held as follows:

Monday Evening, Nov. 28, 1859, B. Christ's, Minersville.

Tuesday Evening, Nov. 29, 1859, Henry Weldy's, Tamaqua.

Wednesday Evening, Nov. 30, 1859, Koons' White Horse Hotel, Schuylkill Haven.

Thursday Evening, December 1, 1859, Jonathan Johnston, St. Clair.

Saturday Evening, December 3, 1859, Town Hall, Pottsville.

COMMITTEE:

Wm. Donaldson,	Richard Kear,
Wm. Milnes, Jr.,	John Donaldson,
Bernard Reilly,	F. W. Hughes,
B. Bannan,	John E. Graeff.

F. P. DEWEES, *Sec'y.*

November 25th, 1859.

☞ Mr. SHERMAN of Ohio, is prominent as a Republican candidate for the Speakership of the next House.

THE Lehigh Coal and Navigation Company have declared a dividend of three per cent. (equal to $1 50 per share).

FACETIOUS.—The Reading *Gazette* terms the Philadelphia *Ledger*, an independent paper! The *Gazette* does the *Ledger injustice* in its joke, for which the latter will hardly thank it.

WE observe that Dr. C. W. Moreand, of Huntingdon county, is named as a candidate for Sergeant-at-Arms of the next House of Representatives.—He is a formidable enemy to the Slave Democracy, and his capacity for the position is undoubted.

THE Democratic press is loud in denunciation of Seward, Chase, Howe, Giddings, &c., of complicity in the Harper's Ferry affair. Why are they not arrested? Are their accusers mere slanderers? Come up to your work, ye Democrats, ye Buchanan men, or confess yourselves shameless falsifiers.

THE New Jersey Central Railroad Company has declared a semi-annual dividend of 5 per cent.—The net earnings of the road however, during the past six months, have been equal to a dividend of 8 per cent. Good road in which to hold stock.—The proposed Auburn and Allentown Road will be just as good, when it gets fairly in operation.

TESTIMONIALS OF PROFESSIONAL ABILITY.—Mr. Alonzo Livermore, Civil Engineer, of Tremont, this County, who has had upwards of thirty years experience in his profession, has a large number of testimonials in regard to his professional capacity, which are as satisfactory as they are meritorious. Extracts from some will be found embraced in Mr. Livermore's Card in our advertising columns, to which we call attention.

SCOTT AND HARNEY.—Intelligence from the Pacific states that General Scott had reached Portland, Oregon, and that General Harney had left at once, taking offence at being superceded in his command at so important a juncture. If true, the fact is to be deplored, for conciliatory and united action at this juncture would expedite a settlement of the San Juan question with England.

SUNBURY AND ERIE RAILROAD.—Wm. Moorhead, Esq., President, and Charles Gibbon, Esq., Solicitor of the Sunbury and Erie Railroad have sailed for England. Their object is to negotiate three and a half millions of five per cent. bonds, which shall be one moiety of a mortgage of seven millions on the road. The other moiety is in possession of the State, as consideration for the canals sold to the Railroad Company.

THE gentlemen named so far, for the Opposition Gubernatorial nomination, are as follows:

Andrew H. Reeder, of Northampton.
Hon. Andrew G. Curtin, of Centre.
Hon. David Taggart, of Northumberland.
Hon. Thomas E. Howe, of Allegheny.
Hon. Gideon J. Ball, of Erie.
Hon. John Covode, of Westmoreland.
Hon. Levi Kline, of Lebanon.
Hon. George Scranton, of Luzerne.

THE TARIFF question, in view of the approaching session of Congress, is attracting attention.—Should the West claim and receive the Speaker, in the organization of the House, Pennsylvania will insist upon the chairman of the Committee of Ways and Means. For the position "Occasional," the Washington correspondent of the Philadelphia *Press*, has heard a number of names mentioned, among others Hon. Thaddeus Stevens, Hon. James H. Campbell, and Hon. J. Kennedy Moorhead.

COMPRESSED AIR LOCOMOTIVES.—The following sentence appears in the last published proceedings of the Franklin Institute:

"It is said that an air engine is being built for a Philadelphia passenger railway, by a competent engineer who has just completed a successful locomotive engine driven by compressed air, for a road in the mining region.

This alludes we presume, to Mr. Samuel Harrison, a communication from whom in regard to a compressed air locomotive which he recently constructed at the works of Mr. Snyder, we published in our last. This description of locomotive is admirably adapted to the propulsion of city passenger cars. *Noiseless* and cheap, it would supersede entirely, the necessity of using horses.

COAL SUPPLY OF GREAT BRITIAN.—The London *Practical Mechanics' Magazine* says that the Coal fields of Great Britian yield nearly 70,000,000 tons per year. A better idea of the immense commerce of England could not be formed than by stating the fact that at Manchester and its environs a motive steam power equal to 1,200,000 horses is constantly maintained, to support which there are consumed 30,000 tons of coal per day, or 9,500,000 a year. In the manufacture of salt alone, about 3000 tons are consumed per day, or 950,000 a year. The Transatlantic steamers from Liverpool and other ports consume 700,000 tons per year, and the manufacture of gas absorbs at least 10,000,000 per year. The export of coal from England reached, in 1858, 6,078,000 tons. It is estimated that England alone could furnish enough coal for the consumption of the whole of Europe for the space of 4000 years.

THE NEXT PRESIDENTIAL ELECTION.—The aggregate vote of the Presidential Election of 1836 was 1,500,023; in 1840, 2,410,983; in 1844, 2,700,690; in 1848, 2,886,030; in 1852, 3,054,164; in 1856, 4,022,059. There will in all probability be over five millions of votes cast in 1860 for electors of President of these United States; and of those five millions of votes, vastly more than a majority will come from the Freemen of the North, and be legally deposited for the man of their choice. If a majority of the legal voters of this Union prefer a Republican President to a Slave Democrat, why in the name of common fairness should not their predilections be gratified? And yet the whole South is rife with threats of a dissolution of this Union, just so soon as a majority of our people dare to elect a Republican President!! So long as the South can rule by threats or fraud, or political craft, all is very well; but the moment the North, where the majority live, take the government into their own hands, that moment the South tells us the Union will be dissolved! Let us try it on.

VIRGINIA EXCITEMENT.—The Old Dominion is acting ridiculously. An anonymous letter is received by the Governor, and forthwith a regiment is ordered out. A few haystacks are burned at Charlestown—probably by mischievous boys—and the Union is convulsed with excitement. An army is encamped at that place, and yet Virginia is trembling at an improbable invasion, which they say is threatened. What a farce!—Of the last excitement, the Washington correspondent of the Philadelphia *North American*, writes as follows:

Another excitement rages at Charlestown and Harper's Ferry, but this time, apparently, without the first particle of foundation. No single fact, or probability of a fact, has yet been published, and no private report or speculation has assumed a shape which justifies the extraordinary proceedings of the last two days. Large bodies of troops have been moved from distant points, and the whole region from Petersburg to Charlestown put in commotion upon the most ridiculous and unsupported rumors. With every allowance for the nervous state of feeling created by Brown's criminal incursion, and for the threatening indications of the recent and frequent fires about Charlestown—though they are just as likely to have happened from mischief or malice as any other cause—one cannot read the statements upon which the military were called out with any composure, or without some degree of indignation at these constant paroxysms, by which the public mind is kept at fever heat. The idea of a State and a Governor being startled from their propriety by an absurd anonymous letter, and a regiment of men mustered into service, upon the most incoherent and improbable report of an imperfectly overheard conversation, which is the substance of all these movements, is ludicrous, while it is decidedly discreditable.

If the effect of this excitement was confined in Virginia alone, and known but to those who are most immediately interested, there might be less cause for indignant resentment. Now it spreads over the Union, and at a time when the original invasion has already embittered sectional feeling. The result is that fuel is added to the fire, and *sensible* men and masses of men delude themselves with the idea that there is really some danger ahead. And this, too, in the presence of the fact that Brown's foray has been denounced by every responsible organ of opinion in the north, and that, at this very time, the *few fanatics* and abolitionists who are suspected of entertaining any sympathy with him are leaving their own *homes to seek a more secure retreat in foreign lands*. The suggestion of a meditated rescue, therefore, is so silly as to be childish. Does anyone seriously *believe that a few individuals* would venture upon such an experiment while a standing army is stationed at Charlestown, or, if they did, that they would sound the alarm and give the signal of their coming, by conflagrations? On the other hand, if such a design was seriously entertained, could a force be moved in these days from any point, while telegraphs and railroads intersect every possible route, without its being instantly communicated? In either case the idea is preposterous.

If Brown and his confederates had been turned over like other criminals, to the court and its officers, there would have been none of this confusion and uproar. But they must make him a State prisoner, and invest the town with all the accessories of war. As a necessary consequence the wildest rumors have been propagated, and currency given to stories which ought to send their authors or abettors to keep company with Gerrit Smith. While the people about Charlestown have been thus excited, selfish and unscrupulous politicians have seized upon this occasion as a means of advancing their own sinister ends. They are most anxious to keep up the inflammation, because it may be useful for a party purpose. It is encouraged and aggravated particularly now, for the purpose of consolidating the south in organizing the House, by forcing in all parties under an artful and sectional cry. This motive is transparent to every reflecting observer, and taken in connection with the scheme of the Administration, to get possession of the organization at any cost, no possible doubt can be entertained of the use to which it is being converted. Any sacrifice will be made to arrest the threatened investigation, because the exposures that must follow will overshadow all such claims as this, and become the absorbing topic of the Presidential contest.—That is precisely what the managers do not want. They live by slavery agitation, and Harper's Ferry affair happens at a time when their stock of explosive humbugs was about exhausted.

THE ORGANIZATION OF THE HOUSE.—"Independent," the Washington correspondent of the *North American*, writes in regard to this matter:

"It is ascertained, beyond doubt, that several members of the northern opposition will not go into a strict republican caucus, who are still prepared to support any fair and conservative candidate that may be nominated by it. If a free conference, embracing the northern and southern Opposition, and such of the anti-Lecompton democrats as would participate, could be brought about, there would be no delay or difficulty in organizing the House. What is wanting is a frank and manly meeting of these elements, face to face, and a plain and rational interchange of views. A basis could be effected in an hour which would be perfectly satisfactory to the country, and at the same time equitably recognize every interest which agreed to co-operate. There is no necessity for concealment. Such arrangements are better made without secrecy and in the face of day, so that no improper motives may be charged and no suspicion incurred."

PEN, PASTE AND SCISSORS.

☞ Deaths in Philadelphia last week, 162.

☞ Ex-President Pierce is residing at Concord, N. H.

☞ It is said that the Great Eastern steamship is a failure.

☞ There are now 19 steam fire-engines in the city of Philadelphia.

☞ John C. Fremont subscribed $500 towards Broderick's Monument.

☞ Vermont paid from her state treasury, last year, $500 for killing bears.

☞ Lauer's Artesian Well, at Reading, has reached a depth of 1335 feet.

☞ It becomes probable that Mr. McLane will soon send us a treaty from Vera Cruz.

☞ Scarlet fever is prevailing in Berks and other counties, to an alarming extent.

☞ The clipper ship Mastiff from San Francisco for Hong-Kong, has been burnt at sea.

☞ The Democrats of Wisconsin fought on the Douglas platform, and have been defeated.

☞ The monument to Henry Clay, at Lexington, Kentucky, is completed and ready for the statue.

☞ Col. Ben. Shelby, a prominent Kentucky lawyer, is about entering the ministry of the Baptist Church.

☞ It is estimated that 40,000 persons witnessed the enthusiastic reception of Gen. Scott at San Francisco.

☞ The Hon. Henry D. Moore, of Philadelphia, is named as the People's candidates for State Treasurer.

☞ Old Brown was born in Torrington, Ct., May 9th, 1800, and is now consequently 59 years and 6 months old.

☞ It is stated that Mr. Belmont is about to depart for Europe to take the position of head of the Rothschild's banking house.

☞ Near Quebec, on Saturday evening, a man was rescued from perishing in an immense snow drift into which he had wandered.

☞ R. P. Pepper, Esq., of Woodford county, Ky., has sold his celebrated horse "Duster," to a gentleman in New York, for $1,000.

☞ A monument is to be erected over the grave of Minister Mason at the Richmond, Va., cemetery. He is buried near President Monroe.

☞ In the Northern part of New York State the people are enjoying very good sleighing. In some of the counties the snow is a foot deep.

☞ No one ought to send a marriage notice to an editor without a dollar, or at least the name of the bridegroom as a cash subscriber. Don't forget.

☞ The dogs killed in Cleveland, Ohio, are sold to a glove manufactory in Litchfield, Medina county, where the skins are made into kid and buckskin.

☞ Cook, Brown's friend, who is under sentence of death, declared in Hagerstown, Md., that he was a Democrat and had always voted with that party.

☞ The present number of chaplains in the U. S. service is 43. Of these, 28 are Episcopalians; 6 are Presbyterians; 5, Methodists, and 4, Congregationalists.

☞ Col. Hoe, the inventor of the cylinder press, has had his leg broken. If he is confined long, he will invent some mode of locomotion that will quite supercede legs.

☞ It is proposed in New York to get up a testimonial for Miss Foulke, of Harpet's Ferry, Va., who so bravely interfered to protect the life of Thompson, one of the insurgents.

☞ The Utah officers now at Washington, inform the President that they must resign their places, unless there is some change in his policy. Brigham Young rules as much as ever.

☞ Some of the religious papers are taking grounds against the present plan of rotating the services of the clergymen of Washington city in opening the proceedings of the House and Senate.

☞ *Found at last*, a remedy that not only relieves, but cures Consumption and its numerous satellites, which revolve about it in the coughs, colds, influenza, bronchitis, &c. This remedy is Dr. Wistar's Balsam of Wild Cherry.

☞ Buy none unless it has the *written* signature of "*I. Butts*" on the wrapper.

☞ Allan A. Hall, editor of the Nashville (Tenn.) *News* in an affray last week, shot and killed Mr. Poindexter, the editor of the Administration organ, the *Union* at Nashville. The bitterness between the newspapers in Nashville has been kept up for many years, and that city has been celebrated in fact, for its street-fights, from the days of General Jackson to the present time.

☞ A New York correspondent of a Charleston paper says that the leading fur manufacturers of the former city have been busily working up, during the past summer, skunk skins, exclusively intended for the foreign market, where the skunk and his remarkable properties are unknown.—Large quantities of them go to Europe, and they are highly prized there under various fictitious and fancy names.

☞ *Large Shipments.*—It is astonishing to see the large amount of McLEAN'S STRENGTHENING CORDIAL that is shipped off daily to different parts of the country. It is scarcely three months since this article was first introduced, and now, judging from its rapid sale, it is known and appreciated all over the Western country.

Every druggist, dry goods or grocery merchant visiting our city should be sure to obtain a supply of this Cordial. It is just the thing required to strengthen and invigorate the weak and debilitated.—*St. Louis Democrats*

☞ Hon. Edward Stanley, late of North Carolina, but now of California, is said to be about to enter the ministry of the P. Episcopal church.

☞ California dates to the 28th ult. have been received at St. Louis. The tide of emigration is turning towards Carson Valley, owing to the rich discoveries of gold recently made there. The quantity found at a place called Golden Hill realizes from $500 to $2,500 per ton. Silver ore, in great amount, continues to arrive at San Francisco from Carson Valley. H. P. Hann, has been appointed United States Senator, to fill the vacancy caused by the death of Senator Broderick. Business at San Francisco was beginning to take a start, but prices ruled, as yet, rather low.

☞ The steamship Canada arrived at Halifax on Saturday with five days later news from Europe. Hon. Charles Sumner and General Van Rensselaer and lady are among the passengers. It was asserted that England will join the Congress, and that the French and English Governments are completely agreed on a basis for the settlement of the Italian question. It was vaguely reported that Garibaldi, at his interview with the King of Sardinia, declared that Italy was betrayed, and that he would head a revolution. The King protested against such a proceeding. The Great Eastern had arrived at Southampton.

LITERARY SOCIETIES.

POTTSVILLE LITERARY SOCIETY.—Order of exercises, November 29, 1859:—Reader—F. P. Dewees; Lecturer—W. B. Sipes; Question for debate—"Would the re-opening of the foreign slave trade be beneficial to the South?" Affirmative—J. A. Hazen, J. E. Conyingham. Negative—J. Ellis, W. R. Potts.

On next Tuesday evening, Nov. 29, the Society will meet in the basement of McCool's Church, Mahantango street. The entrance is on Third street, and different and better than it was when the Society met there some winters since.

ST. CLAIR LITERARY AND SCIENTIFIC ASSOCIATION.—The exercises on last Tuesday evening were: Reading by H. C. Jackson—Subject, "Why the little Frenchman wears his hand in a sling." Lecture by F. A. Herwig—Subject, "The Conquest of Mexico." No debate.

The exercises for next Tuesday evening will be: Reading by John Cathers, Lecture by D. Martin; Debate on the question, "Should a Homestead Law be passed by Congress?" Affirmative, Herwig and Watkins. Negative, Herbert and Stoker.

SILVER CREEK LITERARY ASSOCIATION.—The exercises of last Tuesday evening, were reading by John Beach, Jr.—Subject, Oliver Cromwell.—The question, "Is a Republic the best form of Government?" was discussed by R. Winlack and James Foley in the affirmative, and Wm. Winlack and C. Taylor in the negative. Decision in the affirmative.

Exercises for next Tuesday evening, reading by Samuel Major. Question for discussion, "Are the ladies capable of as high mental cultivation as gentlemen?" Affirmative, J. Foley, J. Worley, R. Winlack and J. Buchner. Negative, Wm. Winlack, John J. Dovey, C. Taylor, and D. F. Bottler.

SCHUYLKILL HAVEN LITERARY ASSOCIATION met on Thursday evening. P. C. Detweiler in the chair. The reader and essayist being absent, the question, "Has war taken in the aggregate sided or retarded human progress?" was discussed by P. C. Detweiler and A. L. Hesser in the affirmative, and Isaac and Geo. Paxson in the negative. Decision in favor of the affirmative.

Exercises for next week are:—Reading, by G. B. Allen. Essayist, J. W. Koons. Question for discussion, "Ought representatives to be bound by the will of their Constituents?" Affirmative, J. W. Koons and J. K. Worts. Negative, G. B. Allen and J. H. Heins.

(Correspondence of the United States Coal and Mining Journal.

OBSERVATIONS ABOVE AND BELOW GROUND IN EUROPE.

Causes influencing the Cost of Mining Coal in different Seams—Wages at the President Mine—Analysis of Cost of Mining a Ton of Coal at the President Mine—Machinery for Separating Coal from Slaty Impurities.—Letter No. 13.

The various seams at the President Mine are known to the workmen and on the books of the Company by the fanciful names which were given to them at the time of their discovery. The seams are worked at the neighboring operations under entirely different names. This irregularity of nomenclature arises from the want which existed until within a few years of a knowledge of the sequence of the coal measures. Tables are now being published which will to a certain extent correct this error by tracing out and recognizing under its particular name each seam it occurs in the various mines. By the aid of these tables the miner can directly, upon striking any known seam, know the distance to the next seam, and the nature of the strata which intervene.

The seven seams which are worked here vary in thickness between 18 and 98 inches, and the ease with which they can be worked bears a remarkably simple proportion to their size.

The following table will be interesting as showing the relative amount of work necessary to take coal from seams of various thicknesses:

Name of Seam.	Thickness in inches.	Amount taken out by 1 miner in 8 hours.
Dickelemy,	98	41
President,	45 to 50	25
Louise,	47	21
Francis,	36	20
Helene,	24	16
Sanneuschein,	36	16
Baukschen,	18	7

This table which is the result of extended experience, is used as the foundation for calculating the amount which the miner shall receive per scheffel—a Prussian measure for coal—holding about a hundred weight. Those who are employed in a seam where the average is but 7 cwt. per 8 hours, receive three times as much per cwt. as those who are employed in the "Louise" seam for instance, where the average product is 21 cwt. in the same time, and so on in inverse proportion to the average number of hundred weight taken out. The "putters" are paid the average amount of wagons they transport, their wages being reckoned by the distance they have to travel. Although the proportion between the thickness of the seam and the amount possible to mine in a day, is quite similar in different seams, it will be observed that in some cases the variation is important. Some of the circumstances which beside the thickness influence the amount taken out are, the hardness of the coal and the direction of its joints. The facility or weakness of the roof and floor which directly affects the number of props required and consequently of the seam. The thickness seems to be best adapted for a large production of coal with the least labor lies between 5 feet 8 inches and 6 feet. Very important also is the direction of the joints, since it is found by experience that when the work is driven perpendicular to their plane the miner is able to affect nearly twice as much as when he attacks the coal in the direction of their plane.

In the western part of Pennsylvania this distinction between the "face" and the "butts" of the coal is clearly understood, and in portions of the great Pittsburgh seam the miner is able to take out between three-fourths and four-fifths as much more when he works against the face as when he proceeds in a direction at right angles or against the butts. The most difficult direction to "drive" in that region is "half and half" or at an angle of 45° to the joints.

It will be observed that in the plan for taking out coal, which I detailed in my previous letter from this place, the work of mining naturally divides itself into two kinds: first, driving the headways and gangways, mere openings, the taking out the pillars being reserved by these various passages. In the first an average of 10 cwt. is produced by one man in a shift of 8 hours; in the second, 30 cwt. during the same time.

The miners are paid by the amount of labor performed, but long observation has shown the capacity of an average workman, and the wages are proportioned to the amount of skill required.

The following table shows the average amount of money paid for each species of work, for a *schiakl* of light hours in the current year:

	Cents.
Hewer,	60
Putter,	35
Men engaged in drawing up the shaft,	40
Men engaged transporting shore timber,	42
Men engaged in repairing and attending pumps,	46
Men engaged in repairing and attending ventilation,	50
Average,	45 cents per 8 hours.

The following amount per shift, received by hewers in several coal basins, will be interesting for purposes of comparison:

	cents.		cents.
Newcastle, England,	82	Seraing, Belgium,	54
Dudley, England,	100	Saarbrucken, Prussia,	56

The miners of Westmoreland county, Pa., receive when they work by the bushel, about $1 50 per shift. An explanation of this difference it is proper to remark, that beside the greater cost of living with us, carminers are, as a general rule, more vicorous men than the average of those I have seen on the Continent, and they work more industriously.

The following is an analysis of the cost of the delivery (upon theslank" of one ton of coal, (2000 lbs.) being the average of all the seams for the year 1858.

Mining,	60
Transportation under ground,	26
Drawing (through shaft),	13
Transportation above ground,	04.2
Pumping water,	02.6
Ventilation,	02.4
Wood for propping &c.,	18.1
Other materials,	01.8
Wagons, tools, &c.,	01.3
Repair of tools, &c.,	06.3
Repair of machinery and buildings,	04.6
Direction, Government tax, &c.	31.4
Making a total cost of production per ton of	$1 02.9

not including interest on capital, which is 1,500,000 thalers, or about $1,035,000.

The large item occurring last in the table needs some explanation. It is principally made up of a direct tax of six scheffels in every hundred imposed by Government upon the gross product of the mine.

The imposition of this tax is ordered, nominally for the support of the Mining Bureau, but it is clearly far greater than is actually required to keep up that department, this establishment alone paying $9,000 per year. The manner in which the tax is assessed, causes much private complaint, the levy being made upon the gross product, and not upon the profit or income of the work. Thus it will be seen that those companies whose proportion with regard to market is unfavorable, and who are endeavoring by a large produce to compensate for their slight profit per ton, are pressed upon the heaviest. This is but one of the many instances I have had occasion to observe, where European Governments "protect" the enterprising spirit of their subjects.

The price, above which this Company cannot sell its coal, is fixed by law at 4 silver groschens 3 pfennigs, per scheffel, or $2 per ton of 2000 pounds. Now, taking the production at 70,000 tons per year, the clear profit of the mine would be $26,000, or not two per cent on the original capital stock.

This sum, however, is very materially increased by another source of profit, which is gentle, often an accompaniment of Westphalian mining operations. A greater part of the coal is coked by the Company in the immediate vicinity of the pit, and the coke disposed of to the railways and from manufactory establishments.

This operation, which is done in various ways, and which employs a large share of capital in this vicinity, I will speak of more at length in my next.

None of the smaller contrivances for facilitating the labors of the workmen struck me as having more practical value to an American public than a *molaten fan* which furnishes draught for ten fires in the shop for repairing tools. The fan is 30 inches in diameter, and 2½ inches through, the shell consisting of two cast iron plates, screwed together by flanges on the circumference. It can be heard little further than the hammering of the same speed, while as a machine for blowing it is said to excel the common fan which makes such an unpleasant humming on our river steamers and in our machine shops.

This desirable silence is obtained by curving the wings of the fan in a direction from the centre forward the air which is to be driven forward. It is the result of the mathematical deductions of a mechanic in Vienna, who has published a book upon the subject.

The coal upon arriving at the surface is immediately run over a surface of smooth iron plates to the edge of the platform, and there tumbled from the cars upon a floor 3 feet below. This floor is partly composed of a frame work of cast iron, where holes four inches square allow much the largest quantity of coal thrown upon it to fall through. What remains above is quite free from slate, and is sold under the name of "picked coal," or "lump coal." If, however, there is but little demand for this quality, the entire contents of the cars are broken up and passed through the 4 inch aperture.

All that falls below is conveyed into coke by the ovens of the Company. Two conditions are found to be necessary that an excellent article of coke shall be obtained: the coal must be brought to as fine a state as possible, and the slate with which it is adulterated must be taken out. Formerly the first of these conditions was unknown, but experiment have shown that when the coal enters the oven in powder not much bigger than a hazel nut, more regular, and better colored coke, which breaks into large pieces than that which is formed from the unprepared coal. Formerly a machine was employed for washing the coal, and thus taking out the slate, but this plan was found too expensive, and recently a machine has been adopted, which answers the double purpose of cleaning and breaking, and has so far, done its work to the satisfaction of the director. In separating coal from slate by washing, the well known difference of relative weight is taken advantage of. Into the difference of hardness possessed by the two substances is seized upon for the same purpose.

The coal after passing through the before-mentioned screen, is caught by two endless aprons, and carried to an elevator which throws it into the open end of a revolving sieve, with meshes one half inch square. The smaller pieces pass through, and are caught in carriages beneath, and are at once wheeled off to the coke ovens. The larger pieces, which reach the opposite end, are lifted into a hopper, which stands above a pair of cast iron rollers, 19 inches in diameter.

One of these rollers is firm, the other is fitted in a movable frame, and is only held in contact with the first by a gutta-percha spring. The slate and coal falling from the sieve slides over a short inclined table where from two picks out the largest pieces of slate. The mass now falls between the rollers, and the coal is crushed into a powder, while the slate being of a much finer texture pushes the rollers apart and falls through unbroken.

A vibrating sieve below allows the fine coal to drop into a car which is prepared for it, while it carries the slate and some coal into a separator from which the latter is cast away; the bituminous elements of the slate and the bits of coal which fall with it furnish a profitable feed for the boilers of the Company.

The use of a gutta-percha spring for holding the rollers loosely together has been attended with no disadvantages, and their adoption is considered a successful experiment. Each spring consists of three inches thick, eight broad, and about two feet long, acting by its contraction, (not by its expansion, as is the case with carriage springs) to draw the rollers together, against which it will be remembered I spoke of in a former letter, as being attached to the cages in Belgium, for the purpose of grasping the guides in case the rope breaks, and thus preventing a fall down the shaft. The rollers are also furnished with gutta-percha springs of half the size of the above. Several breakages have occurred in which they have proved themselves fully equal to the heavier springs of metal.

The revolving screen is constructed on a plan which I do not remember before to have noticed. It has the advantage of having no central axis, but instead a large circular aperture, into which the coal can be thrown without obstruction; and no interior braces to interfere with the coal in its advance to be screened. It consists of a cylindrical web of wire, about four feet in diameter, which occupies the middle of a wooden cylinder six feet in diameter. A heavy cast iron hoop runs around each end of the wooden cylinder, and the whole apparatus rests upon these hoops which roll upon a couple of flange wheels beneath. Motion given to the flange wheels is transmitted to the screen, and the amount of possible labor in a day, is quite similar in different seams, it will be observed that in some cases the variation is important. Some of the circumstances which beside the thickness influence the amount taken out are, the hardness of the coal and the direction of its joints. The facility or weakness of the roof and floor which directly affects the number of props required and consequently of the seam. The thickness seems to be best adapted for a large production of coal with the least labor lies between 5 feet 8 inches and 6 feet. Very important also is the direction of the joints, since it is found by experience that when the work is driven perpendicular to their plane the miner is able to affect nearly twice as much as when he attacks the coal in the direction of their plane.

In the western part of Pennsylvania this distinction between the "face" and the "butts" of the coal is clearly understood, and in portions of the great Pittsburgh seam the miner is able to take out between three-fourths and four-fifths as much more when he works against the face as when he proceeds in a direction at right angles or against the butts. The most difficult direction to "drive" in that region is "half and half" or at an angle of 45° to the joints.

It will be observed that in the plan for taking out coal, which I detailed in my previous letter from this place, the work of mining naturally divides itself into two kinds: first, driving the headways and gangways, mere openings, the taking out the pillars are reserved by these various passages. In the first an average of 10 cwt. is produced by one man in a shift of 8 hours; in the second, 30 cwt. during the same time.

The miners are paid by the amount of labor performed, but long observation has shown the capacity of an average workman, and the wages are proportioned to the amount of skill required.

The following table shows the average amount of money paid for each species of work, for a *schiakl* of light hours in the current year:

	Cents.
Hewer,	60
Putter,	35
Men engaged in drawing up the shaft,	40
Men engaged transporting shore timber,	42
Men engaged in repairing and attending pumps,	46
Men engaged in repairing and attending ventilation,	50
Average,	45 cents per 8 hours.

The following amount per shift, received by hewers in several coal basins, will be interesting for purposes of comparison:

	cents.		cents.
Newcastle, England,	82	Seraing, Belgium,	54
Dudley, England,	100	Saarbrucken, Prussia,	56

The miners of Westmoreland county, Pa., receive when they work by the bushel, about $1 50 per shift. An explanation of this difference it is proper to remark, that beside the greater cost of living with us, carminers are, as a general rule, more vigorous men than the average of those I have seen on the Continent, and they work more industriously.

The following is an analysis of the cost of the delivery (upon theslank" of one ton of coal, (2000 lbs.) being the average of all the seams for the year 1858.

Mining,	60
Transportation under ground,	26
Drawing (through shaft),	13
Transportation above ground,	04.2
Pumping water,	02.6
Ventilation,	02.4
Wood for propping &c.,	18.1
Other materials,	01.8
Wagons, tools, &c.,	01.3
Repair of tools, &c.,	06.3
Repair of machinery and buildings,	04.6
Direction, Government tax, &c.	31.4
Making a total cost of production per ton of	$1 02.9

This table which is the result of extended experience, is used as the foundation for calculating the amount which the miner shall receive per scheffel—a Prussian measure for coal—holding about a hundred weight. Those who are employed in a seam where the average is but 7 cwt. per 8 hours, receive three times as much per cwt. as those who are employed in the "Louise" seam for instance, where the average product is 21 cwt. in the same time, and so on in inverse proportion to the average number of hundred weight taken out. The "putters" are paid the average amount of wagons they transport, their wages being reckoned by the distance they have to travel. Although the proportion between the thickness of the seam and the amount possible to mine in a day, is quite similar in different seams, it will be observed that in some cases the variation is important. Some of the circumstances which beside the thickness influence the amount taken out are, the hardness of the coal and the direction of its joints. The facility or weakness of the roof and floor which directly affects the number of props required and consequently of the seam. The thickness seems to be best adapted for a large production of coal with the least labor lies between 5 feet 8 inches and 6 feet. Very important also is the direction of the joints, since it is found by experience that when the work is driven perpendicular to their plane the miner is able to affect nearly twice as much as when he attacks the coal in the direction of their plane.

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