

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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LONDON, SATURDAY, DECEMBER 11, 1875.

[WITH SUPPLEMENT.] PRICE SIXPENCE. PER ANNUM, BY POST, £1 4s.

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
Established 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Bonds (Foreign and Colonial), Railways, Miscellaneous, Insurance, Assurance, Telegraph, Shipping, Canal, Gas, Water, and Dock Shares.

BUSINESS negotiated in Stocks and Shares not having a general market value. BUSINESS in all COLLIERY and Iron Shares, and in the principal WAGON and MANUFACTURING COMPANIES of the NORTH of ENGLAND and SCOTLAND.

Mr. J. H. CROFTS, having now established CORRESPONDING AGENCIES in all the CHIEF TOWNS of the United Kingdom, is prepared to deal in the various LOCAL Stocks and Shares at close market prices.

Accounts opened for the Fortnightly Settlement. Monthly and Daily Price Lists issued.

Bankers: City Bank, London; South Cornwall Bank, St. Austell.

SPECIAL DEALINGS in the following, or part:—20 Almada, 11s. 3d.; 20 Asheton, 15s.; 20 Bog, 9s.; 20 Bampfylde, 15s.; 10 Bilson, £10½; 20 Cardiff and Swansea, £3; 25 Chapel House, £3½; 150 Clee Hill Colliery, 2s. 6d.; 20 Devon Consols, £5½; 15 Ding Dong, 20 Emma, 22s. 6d.; 10 East Caradon, £1 17s. 6d.; 50 Frontino, £1 16s. 3d.; 30 Flagstaff, 17s. 6d.; 20 Great Yor, £3 2s. 6d.; 20 Hington, 22s. 6d., x. d.; 50 Javali, 13s. 6d.; 10 Last Chance, 13s. 9d.; 20 Marke Valley, £3½; 20 Myndy Iron, £1½ dis.; 10 Palmer's Shipbuilding; 25 Parys Mountain, 13s.; 10 Pateley, £5½; 10 Pennerley, £1 7s. 6d.; 50 Penstruthal, 8s. 6d.; 50 Plympton, 20 Prince of Wales, 6s.; 10 Roman Gravels, £12; 10 Richmond, £8½; 10 South Condurrow, £5½; 50 Tylwyd, 15s.; 100 Thornhill Reef, 2s. 6d.; 10 Taverville, £10½; 10 Thorp's Gawber, £7½; 25 Van Consols, 30s.; 15 West Tankerville, £1¼; 15 Wheal Crebor, £2¼; 15 Wheal Grenville, £1¼.

BUSINESS in POSITIVE ASSURANCE SHARES.

* * Shares sold for forward delivery (one or two months) on deposit of 20 per cent.

Business on hand in all the leading TIN, COPPER, and LEAD Shares.

EGYPTIAN AND TURKISH BONDS.—SPECIAL BUSINESS and latest information. JAMES H. CROFTS, 1, FINCH LANE, LONDON.

RAILWAYS.—SPECIAL BUSINESS. Fortnightly accounts opened on receipt of the usual cover. JAMES H. CROFTS, 1, FINCH LANE, LONDON.

FOREIGN BONDS.—SPECIAL BUSINESS. Fortnightly accounts opened on receipt of the usual cover. JAMES H. CROFTS, 1, FINCH LANE, LONDON.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER,
44, THREADNEEDLE STREET, LONDON, E.C.
Transacts business in MINING and COLLIERY Shares of every description, ENGLISH and FOREIGN STOCKS, COLONIAL BONDS, RAILWAYS, BANKS, TELEGRAPHS.

FINANCIAL AND MISCELLANEOUS SHARES. And all Securities dealt in on the LONDON STOCK EXCHANGE. Purchases and Sales negotiated in Unmarketable Stocks and Shares. Accounts opened for the Fortnightly Settlement on receipt of the usual cover. References given and required when necessary.

A STOCK and SHARE LIST sent FREE on application. BANKERS—The NATIONAL PROVINCIAL BANK OF ENGLAND, E.C. SPECIAL BUSINESS in the SHARES of all the principal HOME and FOREIGN MINES at close market prices.

FOR SALE, at prices annexed:—
25 Chontales, 8s. 100 Malabar, 6s. 125 Parys Mount, 11s. 9d.
25 Colorado, £2 3s. 9d. 10 Neufchatel Rock, 4s. 6d. 50 Van Consols, £1 11s. 3
60 General Mining, £5. 10 New Stratford, £5. 40 West Maria, 7s. 6d.
100 Javali, 13s. 6d. 150 Penstruthal, 8s. 6d. 10 Wheal Grenville, £2¼

MINING INVESTMENTS. The Shares of several sound Dividend and Progressive Mines may now be obtained at prices which are very much in favour of purchasers, and investments made at the present time in this direction will, in all probability, yield very satisfactory results within a comparatively short period.

A carefully selected List of Shares, which are likely to have an early and important rise in market value, may be had on application.

WILLIAM HENRY BUMPUS, SWORN BROKER.
(Member of McLean's Telegraphic News Exchange.)

MESSRS. PLYNE AND ASHMEAD,
CITY MINING AGENTS,
LONDON MANAGEMENT OF COMPANIES UNDERTAKEN.
ACCOUNTS AUDITED, LIQUIDATIONS CONDUCTED.
6, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

FERDINAND R. KIRK, STOCKBROKER,
5, BIRCHIN LANE, E.C.
SPECIAL BUSINESS in—
Alltani Colliery. Eberhardt. Anglo-Cable.
Chapel House. Cardiff and Swansea. Direct Cable.
Cape Copper. Richmond. Lawe's Chemical.

Consols, Foreign Bonds, Railways, and every security quoted on "Change bought and sold." Clients giving the usual "cover" can open accounts for the fortnightly settlement. References given when necessary in most of the leading towns of the United Kingdom.

JOHN RISLEY (SWORN), STOCK AND SHARE BROKER,
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Business transacted at the following rates of commission:—Foreign Stocks, ¼ per cent.; and Mining Shares of £4 each and upwards, 1¼ per cent.; under £4, 1s. per share.

MESSRS. W. J. TALLENTIRE AND CO.,
STOCK AND SHARE BROKERS,
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Transact business in Stock Exchange Securities and Mining Shares of every description, either for immediate cash or the usual bi-monthly settlements, and also afford advice personally or by letter to executors, trustees, capitalists, and investors of every class in the selection of Securities for safe and profitable investment, their experience of the markets, extending over a period of more than sixteen years, together with special facilities for acquiring information, enabling them to act beneficially for clients.

They have established Corresponding Agencies in all the principal towns of the United Kingdom, and are prepared to deal in the various local Stocks and Shares at close prices. Orders per post or telegraph receive prompt attention.

INVESTORS SHOULD APPLY for a copy of Messrs. W. J. TALLENTIRE and Co.'s Circular for December, NEXT POST FREE. It contains valuable information on Foreign Stocks, Railways, and Mines.

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6, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.

MR. W. TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C.,
Deals in all descriptions of Stocks and Shares at close market prices.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,
20, BISHOPSGATE STREET, LONDON, E.C. (Established 19 Years),
can sell the following SHARES, at prices annexed:—
25 Alltani. 40 Flagstaff, 18s. 9d. 60 Parys Mount, 11s. 9d.
25 Asheton, 15s. 6d. 30 Frontino, 32s. 6d. 25 Pennerley, 22s. 6d.
60 Bog, 7s. 6d. 35 Gold Run, 16s. 3d. 50 Plympton, 6s. 9d.
30 Birdseye, £2 1s. 3d. 20 Hington, 19s. 60 Port Phillip, 14s. 3d.
25 Bedford Unit, 25s. 6d. 50 Javali, 14s. 25 Richmond, £8.
50 Chontales, 9s. 3d. 20 Ladywell, £2 8s. 9d. 25 Sweetland, £2 18s. 9d.
60 Cathedral, 24s. 40 Last Chance, 14s. 70 South Aurora, 8s.
40 Chapel House, £3½. 25 Marke Valley, £3 6s. 3d. 50 St. Patrick, 21s. 6d.
20 Colorado, £2 1s. 3d. 20 N. Quebrada, £4½. 30 So. Tolcarne, 15s.
70 Don Pedro, 8s. 9d. 60 Old Trebryget, 4s. 9d. 60 West Maria, 7s. 6d.
25 East Caradon, 22s. 25 Pateley Bridge, £5. 60 Western Andes, £4 11s.
50 Exchequer Gold, 30s. 25 Prince Patrick, £3½. 25 Wheal Agar, £2¼.
30 Eberhardt, £8½. 100 Prince of Wales, 3s. 3d. 30 West Godolphin.

SOUTH PRINCE PATRICK.—An offer wanted for 20 Shares.

INVESTMENTS IN STOCKS AND SHARES.—
BRITISH and FOREIGN STOCKS and SHARES BOUGHT and SOLD.
List of Prices and other information sent on application.

Bankers: The Alliance Bank (Limited), London.
MR. P. WATSON, 79, OLD BROAD STREET, LONDON, E.C.
(Close to Stock Exchange.)
FINANCIAL OPERATIONS NEGOTIATED.

MR. ALFRED E. COOKE, STOCK AND SHARE DEALER,
76, OLD BROAD STREET, LONDON.
(Established 1853.)

Mr. COOKE is a SELLER of the following SHARES, free of commission:—
20 Argentine. 65 Pateley Bridge. 15 Tankerville.
40 Blue Tent. 50 Positive Assurance. 10 West Tankerville.
10 Devon Consols. 40 Penstruthal. 50 West Maria.

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Bampfylde. Glaisdale. West Craven Moor.
Cakemore Colliery. Mynydd Gorddu. Western Andes.
Cathedral. Pennant Barytes & Lead. Western Andes.
Cedar Creek. 84, Patrick. Wye Valley.
Chapel House. Tylwyd.

Business transacted in all other Mines, Miscellaneous Shares, Railways, and Foreign Stocks on best possible terms.
Mr. COOKE issues daily a list of Stock Exchange Closing Prices, which will be forwarded on application.

MR. T. E. W. THOMAS, SHARE BROKER,
3, GREAT WINCHESTER STREET BUILDINGS, E.C.
Established 1857.

The following are the latest prices at which business could be done. Where the difference between the buying and selling price is wide transactions may be effected at an intermediate price:—

Buyers.		Sellers.	
Argentine Gold (prem.)	£ 1½.. £ 2	Penstruthal	8s. ... 10s.
Birdseye Creek	2 ... 2½	Plympton	6s. ... 7s.
Bog	6s. ... 8s.	Port Phillip	14s. ... 16s.
Carn Brea	37½ ... 38½	Richmond	£ 17½.. £ 18½
Chapel House	3 ... 3½	Roman Gravels	11½ ... 12½
Devon Great Consols	4½ ... 5	St. Patrick	15½ ... 16½
Dolomath	40 ... 42	So. Condurrow	5 ... 5½
Don Pedro	7s. 6d. ... 8s. 6d.	So. Roman Gravels	7s. 6d. ... 10s.
Eberhardt	3 ... 3½	Sweetland Creek	23½ ... 24½
East Caradon	1½ ... 2	Tankerville	10 ... 10½
Exchequer Gold	17s. 6d. ... 20s.	Tinroft	19 ... 21
Flagstaff	17s. 6d. ... 20s.	Unity Wood	1¼ ... 1½
Frontino	1½ ... 1¾	Van	28 ... 29
Gold Run	15s. ... 17s.	Van Consols	13½ ... 14½
Hington Down	17s. 6d. ... 20s.	West Chiverton	17 ... 18
Javali	12s. ... 14s.	West Maria (call pd.)	7s. ... 9s.
Marke Valley	4 ... 4½	West Tankerville	13½ ... 14½
New Quebrada	4 ... 4½	Wheal Agar	13½ ... 14½
New Rosario	5s. ... 7s.	Wheal Crebor	21½ ... 23½
Parys Mountain	11s. ... 13s.	Wh. Kitty (St. Agnes)	2½ ... 3
Pateley Bridge	5 ... 5½	West Godolphin	1¼ ... 1½
Pennerley	1½ ... 1¾		

Autumn Circular, containing selected Mining Investments for 1876, now ready, post free for One Penny stamp.

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has SPECIAL BUSINESS in South Condurrow, Prince Patrick, Wheal Kitty, Penhalls, and Chapel House Shares at close prices.

MR. THOMAS THOMPSON, JUN., 1, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.
Some valuable hints as to the purchase of mining shares will be found in Mr. Thompson's "Investment Circular" for Dec. now ready, post free, price 6d.

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Bankers: London and County Bank.

Messrs. H. and Co. have Special Business in Chapel House and Alltani Collieries Shares, also in the Shares of the Oregon Gold, and the Patent Ligno Mineral Paving Companies, and will be happy to give full particulars of the above desirable investments on application.
Deals at closest market prices in all kinds of Stocks and Shares.

MESSRS. HARVEY, JORDAN, AND CO.,
MINING ENGINEERS AND AGENTS, ACCOUNTANTS, AUDITORS,
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In connection with Messrs. TRAL, FOSTER, and Co., Georgetown, Colorado.
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GENERAL AND MINERAL ESTATE AGENTS, have ON SALE FREEHOLD and LEASEHOLD and REVERSIONARY PROPERTIES, also ELIGIBLE PROPERTIES, on which mortgages are required, Mineral Estates consisting of China Clay, Copper, Coal, and Lead. They have also shares in Lead and Mining Companies, progressive and dividend paying. Terms on application.

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MESSRS. H. HALFORD AND CO., ROYAL INSURANCE BUILDINGS, LOMBARD STREET, LONDON, are BUYERS of any number of SHARES in the WYE VALLEY MINE.
They are also BUYERS of GROGWINION SHARES.
Sellers should apply by letter, stating number of shares and lowest price.

MESSRS. J. TAYLOR AND CO., 86, LONDON WALL, E.C.,
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MINING ENGINEERS AND INSPECTORS.
Business done in all descriptions of Stocks and Shares.

MR. JAMES STOCKER, STOCK AND SHARE BROKER,
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SPECIAL BUSINESS in the following British and Foreign Mines, Colliery, and other shares at closest prices:—Argentine Gold, Bilson and Crump, Birdseye Creek, Bedford United, Bog, Carn Brea, Cathedral, Chontales, Cedar Creek, Chapel House, Cardiff and Swansea, Chicago, Devon Consols, Don Pedro, Eberhardt, Emma, Exchequer, Flagstaff, Frontino, Grogwinion, Gold Run, Gold (Welsh), Hington Down, Horrachos, Javali, Ladywell, Last Chance, Marke Valley, Mynydd Gorddu, New Rosario, New Quebrada, Parys Mountain, Pateley Bridge, Pennerley, Penstruthal, Plympton, Port Phillip, Phosphate Sewage, Richmond, Rica, Roman Gravels, Sweetland Creek, South Aurora, South Carn Brea, Tankerville, Tecoma, Unity Wood, Van, Van Consols, West Chiverton, Western Andes, West Tankerville, Wheal Grenville, Wye Valley.

FOR SALE, 280 Positive Assurance.
JAMES STOCKER, SWORN BROKER,
Buys and sells on commission every description of English and Foreign Funds, Railway Stocks and Shares of all kinds.
Foreign Bonds—Peruvian, Turkish, Egyptian, &c.
Bank, Gas, Shipping, Telegraph, and Miscellaneous Shares.
Fortnightly accounts opened for same.
Cheques sent in letter to be crossed London and Westminster Bank.
References given and required when necessary.

MR. CHARLES THOMAS,
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WEST GODOLPHIN.—Full particulars of this mine may be obtained on application. The shares are recommended for immediate investment or speculation.
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MESSRS. A. W. THOMAS AND CO.,
10, COLEMAN STREET, E.C.,
MINING AGENTS, AND STOCK AND SHARE DEALERS

Price Sixpence.
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FOR SALE, 60 Chapel House Colliery Shares, at £3½.
WANTED TO PURCHASE, a few Shares in Whitehaven Iron.

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Full information respecting these Mines forwarded on application.

RELIABLE INFORMATION given respecting Mines in the Isle of Man, Flintshire, and the neighbouring districts

MR. W. F. STANLEY, MATHEMATICAL INSTRUMENT MANUFACTURER TO H.M.'S GOVERNMENT, COUNCIL OF INDIA, SCIENCE AND ART DEPARTMENT, ADMIRALTY, &c.
MATHEMATICAL, DRAWING, and SURVEYING INSTRUMENTS of ever description, of the highest quality and finish, at the most moderate prices.
Price-list post free.
ENGINE DIVISION TO THE TRADE.
ADDRESS—GREAT TURNSTILE, HOLBORN, LONDON, W.C.

WEST GREAT WORK MINE (LIMITED).
WANTED TO PURCHASE, 200 SHARES, or ANY PART thereof.—Sellers must name number and lowest price to Messrs. W. J. TALLENTIRE and Co., 20, Change-alley, Cornhill, London, E.C.

WANTED, by the EBBW VALE STEEL, IRON, and COAL COMPANY (LIMITED), a Gentleman, to TAKE the TECHNICAL MANAGEMENT of the COMPANY'S IRON and STEEL WORKS. He must be a high-class Engineer, and possess a thorough knowledge of the Manufacture of Iron and Bessemer Steel.
Applications to be addressed to the Secretary, at 86, King street, Manchester, on or before the 27th December instant.

WANTED, a CLERK in a SVELTER WORKS. One having a knowledge of Assaying preferred. State age, where last employed, and salary expected.
Apply, "J. Y. H.," MINING JOURNAL Office, 26, Fleet-street, London.

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FOR SALE, TEN BRIDGEFIELD AND VICTORIA SALT SHARES; also ONE HUNDRED PRINCE OF WALES SHARES. All calls paid.
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FOR SALE, BY PRIVATE CONTRACT, ONE 22 in. cylinder WINDING ENGINE and CASE, with BOILER of 8 tons, on WHEAL MARY ANN MINE.
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CAPTAIN ABSALOM FRANCIS,
MINING AGENT, ENGINEER, AND SURVEYOR,
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MESSRS. J. M. LAWRENSEN AND CO.,
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SHARE AND MINE BROKERS,
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At a cost of from £160 to £500 per mile.

The Patent Double Line Incline, with the Loaded Car bringing back the Empty, is especially useful for mines &c., and bridges over torrents and canals.
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Only maker in the United Kingdom.

The Percy and Kelly Nickel, Cobalt, and Chrome Iron Mining Company, Limited,

MONT D'OR, NOUMEA, NEW CALEDONIA.

Registered under the Companies Acts, 1862 and 1867.

CAPITAL £120,000, IN 12,000 SHARES OF £10 EACH.

Divided into 6000 "A" shares and 6000 (fully paid up) "B" shares, the latter of which are taken in part payment for the property.

Until the 1st of October, 1878, the holders of the "A" shares will be entitled to a preference dividend of £10 per cent. out of the annual profits of the company, in proportion to the amounts paid by them, subject to which the holders of the "B" shares will be entitled to a like dividend, and the balance will be divided between the holders of "A" and "B" shares in proportion to the amounts paid up, or to be deemed paid up, on the shares held by them respectively. After the period aforesaid the holders of "A" and "B" shares will be entitled to a dividend out of the net profits of the company in proportion to the amounts paid up, or to be deemed paid up, on the shares held by them respectively.

The shares now offered to the public consist of 6000 "A" shares only, on which will be payable £2 on application and £3 on allotment; the balance, if required, in calls not exceeding £1 per share, at intervals of not less than six months.

Applicants desiring to pay up in full on their shares can do so, and will not only be entitled to a dividend on the amount, and avoid all further liability, but will also be allowed a discount of £5 per cent. on the full amount paid exceeding the application and allotment money.

Shares will be allotted by priority, immediately upon application; but in the event of no allotment being made all moneys received for shares on application will be returned in full.

Each Director will hold a qualification of £500 in the company.

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MAJOR W. STEWART RICHARDSON (46th Regiment), Limerick, Ireland.

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- The Right Reverend BISHOP JENNER, D.D., Sandwich, Kent.
- General H. ERSKINE HICKS (Director of the British Guardian Life Assurance Company, London), Hillgrove, Wells, Somersetshire.
- E. GILBERT HAMLEY, Esq. (Coroner for the Eastern Division of Cornwall), Bodmin.
- Monsieur E. HAUSSER, Engineer-in-Chief, Lorient, France.
- The Hon. MAR-ERSKINE, Moncton House, Ryde, Isle of Wight.
- C. LINDSAY CRUIKSHANK, Esq., Belturbet, Cavan, Ireland.

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- J. J. KELLY, Esq. (J. J. Kelly and Co.), Noumea, New Caledonia.
- JOHN WHITEHEAD, Esq. (Whitehead, McLaughlin, and Co.), Barrack-street, Sydney.

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- Messrs. LYSEN FRERES AND CO. ANTWERP.

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E. H. HARRIS, Esq., 14, Devonshire-square, E.C.

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J. H. IRVINE CRUIKSHANK, Esq., 47, Charing Cross, London, S.W.
C. S. NORRIS, Esq., 49, Rue de Grenelle, St. Germain, Paris.

CHIEF OFFICES,—47, CHARING CROSS, LONDON, S.W.
CITY OFFICES,—111, CHEAPSIDE, LONDON, E.C.
(W. H. WOODS AND CO., AGENTS).

EXTENT AND PARTICULARS OF PROPERTY.

This company is formed for the purpose of acquiring and working the Percy and Kelly Nickel, Cobalt, and Chrome Iron Mine, secured by a lease under the "Mining Statute Act" of New Caledonia and Dependencies, and situated at Mont d'Or, Noumea, New Caledonia. The lease is granted for perpetuity, from the 6th November, 1874, identical in terms with all mining leases granted in New Caledonia. The property is subject to a ground rental of £50 per annum.

This (as will be seen on reference to the plan) is one of the largest mining properties on the Mont d'Or Nickel, Cobalt, and Chrome Iron Fields, and has an area of 100 hectares, being equivalent to 250 acres (English). Its natural position is hardly to be surpassed. It is traversed (as will be seen by the accompanying report) throughout its entire length by broad belts of lodes, all auriferous. Ore of a very high average has been discovered on the surface, and in very large quantities, and Mr. Kelly reports that about 150 tons, averaging about 10 per cent., is now stacked, which the company will have the option of taking with any ore on bank at the time of completion of the contract, on paying to the vendors £24 per ton, being the lowest price offered by the Bank of New Caledonia, Paris, for 5 per cent. ore.

ASSAYS.

A quantity of ore taken from the mine of the same character as that mentioned above, and to be seen at the offices of the company, was submitted to the Rev. W. B. Clarke, LL.D., Prof. Liversidge, of the Sydney University; Dr. Leibus, of the Sydney Mint; and Mr. C. J. Latta, of Sydney; and to Messrs. Johnson, Matthey, and Co. (Assayers and Smelters to the Bank of England and Her Majesty's Mint), of Hatton Garden, London, and the following are their reports.

COPIES OF ASSAYS OF THE PERCY AND KELLY NICKEL MINE, MONT D'OR, NOUMEA.

The originals and certified copies, under statutory declaration, may be seen at any time at the offices of the company.

Johnson, Matthey, and Co., Assayers and Melters to the Bank of England, Her Majesty's Mint, &c. Assay Offices and Ore Floors, Hatton Garden, London, E.C., May 26, 1875. Favoured by the Rev. W. B. Clarke.

Assay by Dr. LEIBUS, Sydney Branch Royal Mint, 1874.

Silica	48.90	Earthy Pimelite (Klaproth)	
Magnesia	10.93	Silica	35.0
Nickel	6.45	Alumina	5.0
Sulphuric acid	0.83	Iron	4.53
Iron, alumina, and loss	15.13	Nickel	15.63
Water (loss on ignition) to reduce	17.75=100.0	Magnesia	1.23
		Lime	0.42
		Water, &c.	38.12=100.0

Assays by Professor LIVERSIDGE, of Sydney University.

Silica	47.0	Harz Pimelite (Buck)	
Ox. nickel	24.0	Silica	35.50
Iron	1.0	Alumina	23.04
Alumina	5.0	Iron	2.69
Nickel	5.0	Nickel	2.78
Magnesia	22.0=104.0	Magnesia	14.68
		Water	31.03=110.00

CERTIFICATE OF ASSAY.

We have examined the sample of nickel ore marked as under, and find the following to be the result—Mark of sample X. Peroxide of nickel, 5 per cent.; peroxide of cobalt, 0.75 per cent. JOHNSON, MATTHEY, AND CO.

CERTIFICATE OF ANALYSIS.

Assay Offices and Laboratory, 14, Devonshire-square, London, E.C., 6th October, 1875. GENTLEMEN,—I have examined the two samples of New Caledonia nickel ore forwarded on the 4th inst., and find the following to be the result:—No. 1 (serpentine) nickel, 9 per cent.; No. 2 (inner casing) nickel, 15.9 per cent. To the Percy and Kelly Nickel Company. E. HENRY HARRIS.

The cause of the high percentage of nickel in the serpentine is attributable to a vein of pure ore running through the sample. Royal Mint, Sydney, 10th June, 1874. Sir,—The specimen sent by you to be assayed for nickel was found to contain 6.19 per cent. (six per cent. and nineteen hundredths). C. E. LOISE. Mr. J. J. Kelly, Ocean-street, Double Bay.

I have analysed a specimen of nickel ore casing a vein of chrome iron, submitted to me, and find that it contains three and twenty-six hundredths (3.25 per cent.) per cent. of metallic nickel. ARCHD. LIVERSIDGE.

I have analysed the specimens of nickel ore submitted to me, and find that they contain seven and thirty-nine hundredths (7.39 per cent.) per cent. of metallic nickel. ARCHD. LIVERSIDGE.

I have examined the specimen of chrome iron submitted to me by Mr. J. J. Kelly, and find that it contains 32.11 per cent. of metallic chromium, or 46.80 per cent. of chromium sesquioxide. Also specimen of a brown serpentine accompanying the nickel ore, and find that it contains 7.8 per cent. (seventy-eight hundredths per cent.) of metallic nickel. Qualitative analysis of the nickel ore and serpentine: Substances present are oxide of nickel, magnesia, silica, iron, aluminium, calcium. The nickel ore is a silicate of nickel and magnesium, with certain impurities; and the serpentine is a silicate of magnesium, containing a small proportion of oxide of nickel. ARCHD. LIVERSIDGE.

Assay Laboratory, 26, O'Connell-street, Sydney, 26th June, 1874. Assay report of sample of nickel ore received from Mr. Kelly:—Assay, 21.38 per cent. of metallic nickel. Charge, £2 2s. Received, J. G. Latta. J. G. Latta.

Union Club, Sydney, 30th June, 1874. DEAR SIR,—In answer to yours of yesterday, received to-day, I herewith send you a note of the results furnished by the analyses of two of the specimens—viz., the nickel ore itself and the casing of the chrome iron vein. The analysis of the chrome iron will not be furnished till Monday. I find that the brown serpentine which occurs with the nickel ore does contain some nickel, but only in small quantities. If you would like to have a qualitative analysis of the nickel, that also I could forward to you with the chrome iron results. It might perhaps be in sufficient quantity to pay for extraction. I have sampled the ore itself, before the receipt of your former note; but even had I not done so I, of course, could not dress the specimens myself; they must be sent to me in the state in which they are to be assayed. ARCHD. LIVERSIDGE.

PROSPECTS OF THE MINE.

From the various samples assayed it appears that the average yield of nickel now being taken from a 10-ft. tunnel on the mine has been from 15 to 24 per cent.

Direct offers have been received (from the Bank of New Caledonia, Paris) to purchase ore from the mine, free on board at New Caledonia, on the following terms, for the period of one or five years, viz:—

Ore carrying 5 to 7½ per cent.	£24 0 0 per ton.
Ore carrying 7½ to 10 per cent.	32 0 0 "
Ore carrying 10 per cent.	40 0 0 "

The *Sydney Morning Herald*, Sept. 19, 1874, mentions a contract entered into by Mr. Pratch with Messrs. Tully and Co., of Mont d'Or Nickel Mine, adjoining the Percy and Kelly Mine, "to mine and deliver 3000 tons, at the rate of 150 tons a month, for £10,500," being at the rate of £3 10s. per ton.

It will be seen, on reference to the report of the Government Surveyor before mentioned, that he states that ore can be conveyed from the mine by a tramway 1800 yards long, on a favourable incline, to the water's edge, for shipment. Assuming the cost of mining and delivering free on board at New Caledonia to be £3 10s. per ton, and that 50 tons weekly can be raised of 5 per cent. ore, the lowest average, that at £24 per ton less the £3 10s. costs, leaves a margin of weekly profit equal to £1025, or at the rate of £50,000 per annum. The directors, however, carefully abstain from over- sanguine representations as to the prospects of the mine; at the same time they would state that trustworthy information, derived from a variety of sources, and confirmed by the reports of a very well known and experienced mining manager and engineer, printed with this prospectus, who has examined the mine, the originals of which can be seen at the offices of the solicitors to the company, has convinced them of the soundness of the undertaking. There are hundreds of tons of surface ore on the mine, which, it is believed, will pay handsomely for shipment to London until the company erects its own smelting works.

TERMS OF PURCHASE.

The purchase money of the property is £110,000, which the vendors, in proof of their belief in the success of the mine, have agreed, in lieu of payment of cash, to take as follows—£50,000 in debentures running for 15 years, at 10 per cent., payable out of profits, with the option to the company of redemption after 30 days' notice, and the balance—£60,000 in B shares, which, until Oct. 1, 1878, will not be entitled to any dividend till the A shares, in proportion to the amount credited on them, shall have received 10 per cent. out of the annual profits, after providing for the debenture interest, when the B shares are to take out of the remaining annual profits to the extent of 10 per cent., after which the A and B shares will share equally any balance of annual profits. On and after Oct. 1, 1878, the A and B shares will share equally in all annual profits, after providing for the debenture interest, in proportion to the amounts credited on the respective shares. No part of the purchase money, either in shares or debentures, will be paid to the vendors until the property has been inspected and approved of by a mining engineer, selected and approved by the directors for that purpose.

WORKINGS. The work done upon the mine up to the present time has been solely with a view of testing its value, and in every case most encouraging results have been and are still being obtained. Ore is now brought to bank at the lowest possible cost, and in large quantities, and by the end of November, 1875, it is estimated about 200 tons will be at bank. There are 15 miners now at work on the mine, bringing ore to bank.

MACHINERY. In connection with the mine an extensive and complete plant will be erected, provided with all the latest improvements and appliances for the treatment of the ore. The rich chrome iron and copper found to exist in connection with these nickel lodes will receive careful treatment. The mines are but 12 miles (by a good macadamised road and by water) from Noumea, and Noumea itself is easy of access from Sydney, New South Wales, there being a fortnightly mail steamer. Fuel is plentiful and cheap. The mine has been inspected by several mining authorities, who are unanimously of opinion that the property is one which will yield most valuable returns, if worked on the systematic and comprehensive scale proposed by the directors.

WORKING CAPITAL.

The whole of the subscribed capital—viz., £60,000, in 6000 "A" shares—will constitute a working capital, of which it is only proposed to call up £30,000, an amount deemed sufficient to provide for the cost of the machinery and plant, estimated at £10,000, and for opening up the mine on a comprehensive scale.

ORES.

Ores obtained from the mine can be seen at the offices of the company here, but it must be observed that these are purely surface ores.

MEMORANDUM OF AGREEMENT.

Memorandum of Agreement for the purchase of the property, dated 1st of October,

1875, and made between the vendors of the one part, and J. H. Irvine Cruikshank, Esq. (on behalf of the company), of the other part, can be inspected at the offices of the company.

APPLICATION FOR SHARES. Applications for the 6000 "A" or preference shares of £10 each, must be made on the form enclosed, with a remittance of £2 per share to the bankers of the company.

Forms of application, prospectuses, and plans can be obtained from the bankers, as also from the auditors, solicitors, engineer, secretaries, and from any of the directors and trustees.

The upper part of this sheet to be left with the Bankers on payment of the deposit.
THE PERCY AND KELLY NICKEL, COBALT, AND CHROME IRON MINING COMPANY (LIMITED),
Mount d'Or, Noumea, New Caledonia.

FORM OF APPLICATION FOR ALLOTMENT OF SHARES.
To the directors of the Percy and Kelly Nickel, Cobalt, and Chrome Iron Mining Company (Limited).

GENTLEMEN,—Having paid to your Bankers the sum of £..... I hereby request that you will allot me A shares in the Percy and Kelly Nickel, Cobalt, and Chrome Iron Mining Company (Limited), and I hereby agree to accept such shares, or any less number that may be allotted to me, and to become a member of the company; and I authorise you to place my name on the Register of Members in respect of the shares allotted to me.

Name (in full)
Address
Profession or Occupation
Signature
Dated this day of 1875.

(Addition to be filled up if the Applicant wishes to pay up in full on allotment). I desire to avail myself of the privilege to pay up the above shares in full on allotment, thereby entitling me to a discount of £5 per cent., and my application to be especially considered in the terms of the Prospectus.

THE PERCY AND KELLY NICKEL, COBALT, AND CHROME IRON MINING COMPANY (LIMITED),
Mount d'Or, Noumea, New Caledonia.

BANKERS' RECEIPT FOR DEPOSIT OF ALLOTMENT OF SHARES.
Received this day of 1875, from on account of the directors of the Percy and Kelly Nickel, Cobalt, and Chrome Iron Mining Company (Limited) the sum of £..... being the deposit of £2 per share on application for A shares of £10 each in the above undertaking.

For Messrs. MARTIN AND CO., Bankers, 68, Lombard-street, E.C.

Royal School of Mines.

PROF. SMYTH'S LECTURES ON MINING—No. V. (BY OUR SPECIAL REPORTER.)

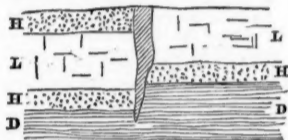
In the last lecture I pointed out some of the conditions under which metallic minerals are concentrated in particular parts of the lodes, and showed how irregular these were. It has been for many years past the object of the miners to endeavour to make out some rule by which to be guided; to see whether, and if so in what manner, they are affected by the dip or cleavage, &c., of the rocks they intersect. In some cases it is quite clear that these produce no effect on the vein, but in others we meet with a curious parallelism, which is of a different kind; and this more particularly when we look at the passage of lodes through those rocks which are so distinctly stratified that we may compare the condition of a lode in one set of beds from its condition in another and different set. In massive unstratified, and also in crystalline, rocks the matter is more difficult, and it is only here and there that we gain a sort of clue to them. I mentioned that the miners, as a general rule, believe that there is much more probability of finding the vein run continuous in depth than to any considerable distance in a horizontal direction; and in general if you have a shoot of ore at one level you may expect to find it continued at a lower level more or less vertically below. It is an interesting question as to how far the veins may be expected to hold good in depth; and what is the chance of the vein, or the ore part of it, being continued downwards. There are now a number of mines carried to a depth of 300 fms., and some few considerably deeper; and as a general conclusion from the observations thus accumulated, especially in the districts of Cornwall, Devon, Saxony, and the Harz, we may say of metalliferous veins that you can scarcely point to a single instance in which the bottom of a true lode has ever been seen; the workings have ceased from a number of other causes, and not from the fact that the end of the lode is reached. The deepest hole which has been bored into the crust of the earth is a coal mine at Gilly, near Charleroi, which has been sunk to a depth of 3411 ft.; the deepest mine open at present is at Pzibram, in Bohemia, which reached the depth of 1000 metres (over 500 fms.) in September, on which occasion a grand festival was held. The Samson Mine, on the south side of the Harz, is 420 fms.; the Tresavean Mine, in Cornwall, is 350 fms.; two other mines in the same county—Fowey Consols and Dolcoath—have attained about the same depth, the Dolcoath Mine being the only one of the three at present working.

The first noticeable thing in the following down of these veins is that they vary considerably in size and productiveness. Consequently, when the working of the mine depends on individual enterprise, or on a company, very frequently in coming to one of these unproductive parts the mine has been abandoned for a time; only, however, in many cases, if it has made a good name while it has been open, to be re-opened after a time, when perhaps labour is cheaper or machinery improved, by another person or company. Such, for example, was the case with the Samson Mine, which was closed about four years ago at an unproductive part, but very soon afterwards the discovery of another very rich deposit of argentiferous ores at some little distance below the limits of the former workings led to the workings being renewed. In old books veins were classed "true veins" and "gash veins," the latter being those which came to a wedge-shaped point below, which point was regarded as the termination of the lode, and under this idea many workings were abandoned at such points. I think that unless we meet with a change in the character of the rock which forms the sides of the vein it would be extremely difficult to point to any true instance of the veins being thus suddenly cut off. Of course, if the old idea were correct it would be injudicious to erect any considerable plant, or base any hopes on a long-continued working. There is a case of a vein on the flanks of the Mendip Hills which seemed to confirm that idea. It was opened 200 years ago for calamine and iron ore, and was said to come thus suddenly to an end; and I think there is in this case very fair evidence that it is so. On examining the nature of the district you find a surface of magnesian conglomerate, known as a material which not unfrequently yields iron ores. This rests upon a bed of carboniferous limestone, the conglomerate here being about 30 ft. or 40 ft. thick; the vein is continued through the conglomerate, but wedges off, and does not pass into the limestone except, perhaps, in the form of small strings. So that in this case the termination (or change) of the vein is coincident with a change in the rock in which it lies. The Tresavean Mine, mentioned above, was opened as a copper vein—at a time when it was not believed that copper existed in the granite—and yielded large quantities of ore, then from the lower levels not being so good as the upper ones, or from the vein being pinched, the mine was abandoned, although there was no appearance of the vein having been worked out. Of the Fowey Consols Mine, which I had an opportunity of seeing just before it was closed, the same may be said, and, in fact, if the depth were much smaller the vein would be regarded as a tolerably good one still. In these nips, squeezes, or hitches, therefore, the experienced miner will recognise a character which may last for a few inches, feet, or even fathoms, yet where the country around the lode is not considerably changed, may nevertheless be but temporary, and to be overcome by patient and persevering opening of the ground.

And now I will say something of the varying character of the ground, or country. In North Wales, for instance, many years ago a very productive lode in greenstone, or diorite, was worked, but was abandoned, on the idea that this was a gash vein; subsequent renewal of the workings, some few years ago, proved that the vein did not really terminate there, but on coming down to a mass of slaty rock it was found running through the rock as a number of

small strings. A similar character is very notorious of the veins of Derbyshire: these occur principally in the mountain limestone, and are comparatively regular; on following these veins down they come to a band of rock of more or less volcanic character—"toadstone" (so called from the German word *toad*, meaning dead), and this toadstone was said to cut off those veins entirely; but further researches have shown that the veins are carried forward through the toadstone, often obliquely, or, as miners say, they are "squinted" in one direction. If the working is carried through the toadstone to a second bed of limestone the vein is found to open out again, and in some cases they have thus been traced to a third bed of limestone. Unfortunately there is no regularity as to the thickness of the toadstone, and many cases have occurred of the abandonment of the workings after sinking some considerable distance into that rock without coming to its base. The same is the case in Yorkshire, and to a certain extent in Flintshire. In the great district of the North of England, from 120 to 130 miles long, you have phenomena very similar to those above described. The rocks in this district consist of alternations of beds of blue limestone, of yellowish grit or hazel, and of grey slaty beds, a kind of shaly clay. In passing through these rocks it will generally be found that the vein is richest in the limestone, in a less degree but still moderately productive in the gritstone, and then greatly impoverished in the shale, and very often this is accompanied by a slip, so that the vein is pinched together, and represented, perhaps, only by a few strings of calc-spar, with mere specks of ore. These veins will have to be carried downwards, and it will depend very much on where we take it as to whether we meet again with likely rocks. It is the well understood business of the miner in these districts to make himself a thorough geologist, so far as the character and the thickness of these different beds are concerned. Hence you will find the sections carefully drawn and retained, and if the man can identify one of these beds (since each has its local name), in a brook course, for example, or on the side of a hill, he will be able to form an opinion as to what beds and what veins he is likely to come into contact with. One particular band of limestone has been very productive, and hence it is important that the miner should be able to recognise such band. The question whether underlying beds are productive is not settled either in Derbyshire or Yorkshire, but it is a question on which the future prospects of those districts will depend. I might mention among these beds an extraordinary stratified mass, of great thickness, lying towards the bottom of the limestone, a basaltic mass called the great "whin sill," which the miners were generally afraid of encountering, on account of the impoverishment of the veins, or the difficulty with water, &c.; but two or three successful examples have shown that these fears are only prejudices, founded on insufficient data.

Fig. 5.



A great complication is introduced where we have a dislocation accompanying the vein, as in Fig. 5. You may find the lode filled with douk, which is troublesome to get through, and to get rid of the difficulty of water, so as to clear the ground. In the figure H represents the hazel, or grit; L the limestone; and D the douk, or plate, or shale. Where we have limestone on either side of the vein it will be very productive, but in the douk it thins out. The important question will be what is the amount of throw, and this can only be ascertained by an intimate knowledge of the rocks.

It has been hoped by some industrious persons that careful analyses of the "country" of the lodes would lead to practical conclusions, but up to the present I do not think any good results have flowed from this, partly from the following causes, that we shall find that the physical condition of the rocks has to be closely looked to, as well as their chemical composition. Thus, you may have two rocks both of which a geologist would call granite, yet one would be hard and angular, and the other softer, and more or less decomposed; the miners pronounce the angular one to be very unfavourable, the one with an earthy character to be "kind" or favourable. And if we look at the evidence given I think there can be no question about it; there is a great deal in this argument of the importance of physical condition, not as applying to granite only, but also to many other classes of rocks. In Cornwall and Devon the miners are always very apprehensive when they approach a different kind of rock from that in which they have been successfully working; they fear that the vein may cease to yield, or yield in less proportion, and this is not without reason. As a rule the tin ore is more especially found in the granite, and copper ore in the slate. If you look at this large map of Cornwall you will see that the whole of the mining districts are aggregated within a small belt of ground around these elevations of granite. The lodes will be found within a distance of from two to three miles from the edges of the granite, with the exception of a very few straggling mines which are but little productive; and these mines are nearly all of a totally different kind from the genuine copper and tin mines, producing iron, or lead, or zinc ores. As a general rule not many mines have been worked in the centre of the granite tracts, the chief aggregation is round the edges near the junction with the killas. The famous Comstock lode of North America has one wall of a dioritic rock, to which the name of propylite has been given, and the other wall is of a syenitic rock called andesite. The Mexican and Hungarian mines come near to this in point of character, and they consist frequently and in great proportion of dioritic rocks, in which, instead of bright lustrous crystallised particles, you find an earthy character about them. This is quite analogous to the case of the granites above mentioned, where, instead of the bright vitreous lustre of the felspar, it has an earthy appearance. A pamphlet was published some time ago by Capt. C. Thomas, of Dolcoath Mine, in which he insisted most particularly on the attention which ought to be given to these facts, especially in connection with ores of tin.

Turning to the clay-slate rocks, the same holds to a great extent. If you have a strong, durable rock, very readily fissile, you are not likely in that to meet with anything ore-bearing, and as you approximate to that so do you lose the probability of finding good ore. On the other hand, if you take a series of specimens of killas from different productive districts, you will find in general that they exhibit pale buff and grey tints, and have a sort of earthy character, very frequently with a little crystalline structure about them, which appears as you approach the granite. Where you see these characters it is very often the case that you may find the speciality in the copper ores to be, if they occur at all, to yield red and black oxides and carbonates, whereas if you follow them into the darker killas the ore not unfrequently changes into the more common one—copper pyrites, or yellow copper ore. I will mention one other remarkable case in Norway, in the district of Kongsberg. The district there consists of hard metamorphic slates, while in a north and south direction run what are called "fahlbands"—a hard quartzose schist, with mica and hornblende. These bands have generally disseminated through them a quantity of sulphides, iron pyrites in the largest quantity, sometimes zinc-blende and others. The "fahlbands" can be observed in walking across the country by their ochreous appearance, due to the decomposition of the iron pyrites. Veins run across the country in an east and west direction, and these veins, wherever they pass through the "fahlband," are argentiferous; and, although of a width of not more than 5 or 6 in., have been followed down to a depth of 266 fms.; but whenever they are followed into the harder schist of the country they produce nothing. These examples might be greatly extended if it were necessary, but I think I have mentioned sufficient to show you the general character of their teaching; and also we must bear in mind that the indications in different districts are not always conformable.

IMPROVED ANNEALING POT.—The invention of Mr. CHARLES WILLIAMS, of Carlisle, consists in constructing the pot and stand of a combination of wrought and cast iron in lieu of the usual material, and in disposing and shaping

such combined material, so as to form the pot (by preference of a rounded oblong form) with a combined arched and fluted top. It further consists in slightly dividing with hoop iron, and parting or breaking each side of the stand-flange when in the mould.

MINING AND STOCK EXCHANGE NEWS OF THE WEEK.

Messrs. F. W. MANSELL and Co. (Sworn Stock and Share Brokers) Pinners' Hall, Old Broad-street, write to us as follows:—

ARGENTINE: ST. JOHN DEL REY (Gold).—Why the opinion that Piqué, one of the prominent mines of the Argentine Company, is destined to successfully rival Morro Velho, the mine of the St. John del Rey Company? True, Piqué, a conspicuous feature in the extensive territory held by the Argentine Company, has been long known to the natives as "Gwalian"—Land of Gold—because of its renown for the wonderful quantity of the precious metal it has ever yielded. Equally true is it that Piqué is marvellously rich in gold, and that one of the old mines—La Misnata—not many years since gave ore holding 96 ozs. of gold and 4923 ozs. of silver per ton. But Morro Velho, which had also been previously worked by natives for more than a century, has since 1830 given gold to the value of more than 3,000,000*l.*, from an ore which up to 1870 had not exceeded about $\frac{1}{2}$ oz. per ton, and is now returning a profit of 15,000*l.* per month from an ore yielding a trifle over 1 oz. of gold per ton; 15,000*l.* per month is equal to 180,000*l.* per annum, upon a capital of 253,000*l.* What, then, can be the reasons why Piqué is likely to closely follow in the unexampled remunerative career of Morro Velho? These are the reasons:—1. The formations are analogous. At Morro Velho the gold deposits are in clay-slate, which is most productive where traversed by a compact mixture of quartz and iron pyrites, disseminated, more or less, regularly throughout its mass; these pyrites consist of arsenical, magnetic, and ordinary iron pyrites, carbonate of lime, dolomite, and brown spar are also found, and when the sulphurets are absent gold is seldom present. At Piqué the deposits of gold are in a dark-coloured clay-slate, running parallel and dipping with the limestone; there are large upheavals of granite and elvan, but whether the latter forms regular courses there is not sufficient data yet to determine; it is, however, certain that these elvan courses have a very favourable influence for productiveness, from the large amount of work done where they come in contact with the lodes.—2. The lodes are constitutionally similar. At Morro Velho the lode is well defined, though irregular in direction, dip, and dimensions; its inclination, or underlie, varies at different depths and different parts of its extent. The great metalliferous deposit, called the Cachoeira, Bahu, and Quebra Panella, is one continuous, very irregular vein, varying in width from 7 to 70 ft., and at one point reaching 100 ft. At Piqué the lode is very fluctuating in size, varying from a few feet to 60 feet in width; its general direction and dip are the same as the strata, north and south, dipping towards the west. At Morro Velho the most productive matrix for gold is in a mixture of quartz and pyrites, with varying quantities of slate; at Piqué the most productive matrix consists of auriferous gossan, pyrites, and quartz, interspersed in places with calcareous spar, barytes, manganese, silver-blende, iron, lead, and copper ores. At Morro Velho the gold obtained is usually alloyed with about 20 per cent. of silver; at Piqué the gold obtained holds chlorides of silver, but with other combinations which render it extremely rich in metallic gold, and there are large deposits of arsenical iron pyrites holding gold in proportion of not less than 1 oz. per ton. The auriferous ores make in "shoots" and "swells" in the lodes, sometimes entirely detached, and sometimes joining each other. The "shoots" on the Piqué main lode all dip south, those in the northern section of the mine being flatter, and containing better gold and less silver than those in the southern section; the "shoots" of ore in the east and west lodes, so far as can be ascertained, dip east.—3. The workings assimilate. Morro Velho, before it became the property of the St. John del Rey Company, had been worked by the natives for more than a century, and chiefly by open cuttings; at Piqué, and some of the other mines of the Argentine Company, the workings carried on by the Spaniards and natives for 300 years extend for upwards of three quarters of a mile in length from the top of the mountains, where the lodes crop out to the base, a height of 60 fathoms, and more in places, the lodes being worked away on the different shoots of ore like a honeycomb, pillars being left to keep open the ground, and the auriferous pyrites ores left standing, probably from ignorance of their value. How much below the base of the mountains these workings are carried is not known at any place except the Piqué. Persons conversant with the history of the mine say that the workings have been carried down until prevented by water from going deeper, and that the "Captain section" is rich in the bottom, but was stopped in consequence of the coming together of the workings. From the Captain section to the North Mine and beyond, a distance of more than a mile, the bottom of the old workings is not to be seen at one single point, except at the Piqué, the remainder being more or less filled up with the debris of the old workers. Piqué, like several of the other mines, had the reputation of being rich in the bottom; to test the truth of this the water was forked out, drivings extended, and holed to the bottom of the old workings, where the lode was found to be as rich as represented; at a depth of 43 fms. from surface the lode dips west, underlying about 4 ft. per fathom, and is exposed for a horizontal length of 14 fms. The commissioner has had parcels taken from the bottom (23 tons 8 cwts.) broken, weighed, sampled, assayed, and passed through the reduction works under his own personal supervision and inspection, and the results were 2 ozs. 8 dwts. 54 grs. gold and 4 ozs. 18 dwts. silver per ton. Besides the three primary reasons above enumerated, upon which the opinion is based that Piqué (with the north mine and the Captain section) is destined to successfully vie with Morro Velho, there are others of equal importance, giving Piqué an incalculable advantage. These are—the richness of the veins, the economy in working, and the amount of capital upon which dividends will be paid.—1. Richness of the veins. Morro Velho ore now yields an average of a little over 1 oz.; Piqué ore 2 ozs. of gold per ton.—2. Economy in working. Morro Velho ore has to be raised from a depth of 300 fms.; Piqué a depth of only 45 fms.—3. The capital. Morro Velho has to pay dividends upon a capital of 253,000*l.*; Piqué upon only 60,000*l.* Piqué has available at least 50,000 tons of ore that can be profitably taken away. Are these not the most convincing facts to support the opinion that Argentine and St. John del Rey will eventually be co-equal? Such are our reasons for recommending Argentine shares. To quote the words of the special commissioner, "The mines are no speculation, and require only to be put in thorough working order, and systematically laid out and energetically worked, to make them pay rich and lasting profits." (7, 7*½*.)

HYDRAULIC GOLD MINING.—In our last notice it was pointed out that some persons have argued the Big Blue Lead never was a river, but that this theory was untenable. The Big Blue Lead has all the marks which a dead river should have. It has a long course and width nearly uniform—a course nearly straight, some bends with eddies on the inner side; a peculiar quartz unlike any found in the neighbouring ridges, or in the streams to the eastward, and bands of quartz which no place now known to us could have supplied, and which came probably from a distant northern region now covered with lava; water-worn gravel, which must have been carried far, flat stones pointing down stream as a current would place them; strata, of course, and fine gravel, which must have been deposited in a stream; uniform descent and grade; coarse particles of gold which could not have been distributed so evenly over a wide channel excepting in a strong current; immense quantities of gold which required ages to scatter through a deposit 300 ft. deep; drift-wood unmistakably water-worn; trunks of trees with bodies up stream; tributary brooks, and a number of other evidences which would require more space for the description and explanation than could be spared. To say that the Big Blue is not a dead river is equivalent to saying that the bones of the mastodon never belonged to a living animal, but were found under geological influences exclusively. If this were the only dead river in California the proof would be less conclusive, but there are a dozen others which are marked with similar general characteristics, save the gravel is finer, the pebbles in the upper strata being generally not larger than a pigeon's egg, and have short courses or shallow deposits of gravel, and the quartz

forms a much smaller percentage of the gravel. In some of the dead rivers a large proportion of the boulders and pebbles is of lava and basalt, as if the streams had been formed after the commencement of the volcanic era. But different as is the material of the gravel the fluvial origin of the deposits is similar and indubitable in all of them when they are considered together.

BLUE TENT HYDRAULIC CONSOLIDATED (Gold).—Shareholders in the various gold-washing companies will receive with satisfaction the announcement from all sources (including our own private advices) that the approaching water season looks flattering. It has been years since there was so much activity in the gold-washing districts, and it is a pleasing fact that the demand for water will be greater than ever before. This is especially encouraging to shareholders in Blue Tent. Professor Price (the manager of Blue Tent), under date Nov. 15, writes:—"That he has prepared all the work necessary to commence operations on the South Yuba and Enterprise claims, and also that all necessary work has been prepared on the Blue Gravel claim." This is one more claim that had been reckoned upon: 3000 in. of water will be used this season, which is by no means up to the capacity of the canal. Professor Price says:—"The company can congratulate itself upon having a complete property—a large and extensive gravel bed of undoubted value, an independent and free source of water, and good and capacious outlets." These are the sole conditions necessary to establish a highly successful hydraulic mine. Professor Price further says—"The company have a first-class property." The most moderate estimates confirm the statement that 15,000,000*l.* of value exists in the area of the Blue Tent property. A prudent estimate also fixes the return at 40,000*l.* to 45,000*l.* per annum; the available flow of water is the practical limit to the average annual return. This description of property ought to attract the attention of careful and prudent investors, and the more so that it is not attractive to speculators. (4, 4*½*.)

RICHMOND CONSOLIDATED (Silver).—The run cabled this week of \$50,000 may be accepted as an indication of an improved grade of ore. That no dividend has been declared since May naturally gives a semblance of probability to the absurd rumours so freely circulated by those who have more interest in depressing the market price of the shares than in the welfare of the mine. While fully admitting great disappointment, prudence would dictate that shareholders should pause in forming a judgment until the balance-sheet shall be issued; this, no doubt, will display a much more favourable state of affairs than interested detractors would lead us to believe. (7*½* to 8*½*.)

EBERHARDT AND AURORA (SILVER).—We concluded our remarks last week with reference to this property as follows:—"If we felt ourselves justified in advising the purchase of these shares at 3*½*, the general developments since made, and the encouraging prospects now presented, warrant us still more in drawing favourable attention to the mines at the present time." The information since cabled fully confirms our anticipations. The profit for a run of 36 days amounts to 14,000*l.*, against an expenditure of 6000*l.* During that period 1652 tons of ore were milled; the pulp assay, 24,724*l.*, equal to 15*½* per ton, and bullion produced (20,000*l.*) equal to 81 per cent. As we mentioned last week, the mine continues to improve, and a new body of milling ore has been struck, presenting considerable promise. The satisfactory arrangement made at the debentureholders' meeting, on Tuesday, cannot fail to have a further improving tendency upon the market price of the shares, and at the same time freeing the available cash for dividend purposes. (8 to 8*½*.)

STOCK EXCHANGE GENERAL MARKETS.—An important indirect result of the Suez Canal purchase has been a considerable advance in nearly all foreign Government securities. Egyptian stocks have already risen to a higher price than that at which they stood for some months before the Turkish collapse. During October, after the Turkish announcement, even the best foreign securities were freely sold, although there was an increasing difficulty in finding good securities into which to exchange. So complete has been the change that holders are now fearful of losing by selling too cheaply, as they were a month ago of holding the very same securities. This indiscriminate hopefulness is quite as unreasonable as the previous indiscriminate distrust. More than once during the recent panic did we express our confident opinion that the better class of foreign securities, which remain undisturbed, or whose Governments showed that their finances were satisfactory, must again come into favour; that such securities had not been favoured in the past by investors without good reasons, and that these reasons would again prevail when indiscriminate distrust had passed away. Nothing is more remarkable than the elasticity of the securities of the best Governments after an interval of great depression, the latest illustration having been given by the recovery of France during the last few years. The depression is brief, and the recovery rapid. A vigorous national life, of which the Government is the representation, is the condition precedent of a perfectly sound Government security, while, of course, care must be taken as to the proportion of the debt of a country to its resources.

WEST CHIVERTON MINE.

The statement of accounts prepared for presentation at the general meeting of shareholders in WEST CHIVERTON MINE, on Thursday next, has been issued, and is of a decidedly encouraging character. The balance-sheet shows a profit of 2023*l.* 15*s.* for four months operations, being an improvement on the previous four months; add to the above 332*l.* 7*s.* 7*d.* balance after payment of the last (7*s.* 6*d.*) dividend, makes the sum of 2406*l.* 2*s.* 7*d.* to be dealt with at the meeting on the 16th inst. A 10*s.* dividend will absorb 1500*l.*, and leave 906*l.*, while 12*s.* 6*d.* per share will amount to 1875*l.*, leaving a balance to carry to the next account of 531*l.*, or 150*l.* more than last time. The merchants' bills have been very heavy, but this, as the secretary (Mr. GRANVILLE SHARP) explains, is to be accounted for by not computing July supplies with July labour cost in the last balance-sheet, also the whole of the coal that has been delivered is charged, although not all consumed. There is also an amount of 75*l.* incurred through having the books examined and an account made out for five years preceding Nov. 7, 1874, the date the present executive took office.

Excellent prices have been obtained for all the ores sold—the first-class silver-lead ore has realised from 17*l.* 10*s.* to 18*l.* 12*s.* 6*d.* per ton, and the second from 6*l.* 3*s.* 6*d.*, to 8*l.* 2*s.* 6*d.*, one parcel of 44 tons of leavings being sold at 2*l.* 12*s.* 6*d.* The blende fetched equally good prices, the first class realising from 4*l.* 7*s.* 6*d.* to 6*l.* 13*s.*; the second class, from 2*l.* 1*s.* to 4*l.* 1*s.*; and the lowest class, from 15*s.* to 1*l.* 12*s.* The shareholders can fairly congratulate themselves that the actual profit for the last four months far exceed the most sanguine expectations. The mine has also so much improved, in consequence of the miner-like way operations have been carried on during the 12 months, that the manager recently stated it was worth fully 20,000*l.* more than when he was placed in charge on Nov. 7 last year. This, together with the improved price for blende, of which the mine is in a position to make increased returns, appears to justify the opinion that the next four months will result even more favourably than the last.

WEST MARY ANN.—Some 12 months since operations were commenced in the West Mary Ann sett, which runs parallel with the old Wheel Mary Ann, which was long and successfully worked, no less than 71*l.* having been returned in dividends on each 8*l.* expended. As the setts almost join equally satisfactory results are anticipated from the new adventure, which is divided into 3000 shares, upon which 3*s.* 6*d.* has been paid. The mine is situated in the parish of Menheniot, most of the mines in which have proved highly remunerative. At the recent meeting the accounts showed a debit balance, the mine being at present in process of development only, of 24*l.* 13*s.* 2*d.*, to cover which and provide for the further prosecution of the mine a call of 1*s.* per share was made. As the costs are under 30*l.* per month this would provide for over three months working. Owing to the death of a shareholder 215 shares were not included in the last call, but as these will be re-allotted at the full amount paid—3*s.* 6*d.*,—if not at a small premium, only a temporary inconve-

nience is occasioned to the company. The agent's report will be found in another column.

MAGNETO-ELECTRIC BELL SIGNALLING APPARATUS.

The signals given by electric bells have generally been brought into action by means of batteries, but Messrs. SIEMENS BROTHERS, of Queen Anne's Gate, Westminster, state that that method has proved to give reasons for continual complaint on account of frequent interruptions, the batteries requiring so much attention and renewal from time to time. The result has been that, although electric bell signalling has been considered to have much to recommend it, it has not been generally adopted in the many branches where it would seem to be of great use. In a very large number of cases communication by bells is found to be a great convenience and assistance, and in the working of collieries for signalling up and down shafts, on self-acting inclines, &c., they are in very common use, and Messrs. Siemens Brothers contend that electricity has superior advantages as compared with the usual system of wires and cranks, although in many cases batteries are objectionable.

With a view to fulfil the requirements for reliable bell signalling by electricity between two distant points, Messrs. Siemens Brothers some years ago constructed a magneto-inductor in combination with a powerful alarm of two bells, each 4 in. in diameter. The inductor contains six permanent magnets, between which a Siemens's armature is made to revolve by means of a handle, thus generating currents which act upon the bells. This system, they maintain, does away with the difficulties and shortcomings of bells worked by batteries, as the magneto-apparatus is of constant and unchangeable power, is portable and protected against damp, and is not so liable to be damaged by rough handling as batteries are. By this arrangement the necessary provision for signalling both up and down a shaft can be made for little over 21l., and it is explained that to give a signal to the distant bell it is only required to turn the handle of the inductor at the place from which the signal is sent. This inductor, including its own bells, can be either fixed to a wall or adjusted in a transport case, and does not occupy more than 11 by 6 by 12 in. Where it suffices to transmit a signal in one direction only the cost of making the communication will, of course, be reduced by one-half, as the alarm bells can be separated from the inductor and placed at the receiving point, while the inductor stands at the sending end. The instruments are very compact and ornamental in appearance, and are so strongly made as not likely to get out of order.

EXPLOSIVES FOR BLASTING IN MINES.

The conclusive evidence that has been obtained that dynamite used as a blasting agent is more than three times as strong as the best quality of ordinary blasting powder exploded under the most favorable conditions has led miners to give far more attention than heretofore to the question of explosives applicable to blasting. As the high quality of Curtis and Harvey's blasting powder is known wherever mining operations are carried on, it will be well to take this as the standard for comparison, and to avoid fractions as far as possible, this standard powder may be assumed to possess 100 units of blasting force—10 grammes, then, of the powder is equal to the 100 units mentioned. The same firm also manufacture what they term "extra strong," and carefully made ballistic experiments have proved that this, exploded with a detonator, is capable of developing 165 units of force. This appears to be about the best result that can be got with gunpowder, but as there are half-a-dozen other explosives which are claimed to be applicable to blasting purposes, it will be interesting to know their relative strength, so that their price in the market being known the economy of using one or the other can be readily ascertained. The fulminate of mercury possesses 185 units of force, but is not applicable as a blasting agent. The other blasting explosives, if compressed gun-cotton and patent cotton gunpowder be excluded from the list, have all nitro-glycerine as one of their constituents, and frequently the other constituents seem to interfere with rather than assist the action of the nitro-glycerine.

Taking what may be called the new explosives in the ascending order of their force, it is found that a mixture of eight parts meal powder, with two parts of nitro-glycerine, has a strength of 295 units. Lithofracteur, with 55 per cent. nitro-glycerine, and 45 per cent. of other ingredients, is equal to 300 units. The patent cotton gunpowder develops 360 units of force. Dynamite and compressed gun-cotton each possess 415 units. A mixture of gun-cotton and nitro-glycerine in equal weights has a strength of 483 units. A mixture of 20 parts of nitro-glycerine with 80 parts of ammonium nitrate, and 64 parts of charcoal, gave out a force of 500 units; and pure nitro-glycerine proved equal to 590 units, being thus very nearly six times as powerful as good blasting-powder. Now, as the price of the powder which develops 100 units of force is 6d. per lb., it follows that if the units developed by other explosives be divided by 20 the quotient will give the number of pence which can be paid per pound for each, in order that the same amount of force may be obtained for the same price. Thus, the "extra strong" has 165 units of strength, so that if it can be purchased at 8d. per lb., or less, there is greater economy in using it, and so on with the rest.

Dynamite appears to be the best of the new explosives, not only because it possesses great force, but also because its combustion is so instantaneous and complete, for, as Mr. Nobel has remarked, of two explosives the more powerful one may, for want of quickness of combustion, be the less efficacious for blasting, and it becomes a matter of considerable importance to possess a ready means of overcoming the drawback of the slow action. That problem has been solved by adopting a special mode of firing explosives, known as the detonating ignition. It consists in applying a strong local explosion of a spark or flame, and it modifies in a remarkable degree the natural quickness of combustion exhibited by explosive substances. It is especially in connection with nitro-glycerine that this mode of ignition has led to remarkable results, and it was to suit the peculiar nature of that substance that it was invented. Nitro-glycerine, indeed, without that special firing, though it is an explosive, is no blasting agent, as it cannot be applied with any degree of certainty that it will go off. Not so when fired by a local explosion. It not only detonates without any confinement, but it affords an extraordinary facility for setting off substances which without its aid are absolutely innoxious.

With regard to the manner in which the detonator cap acts, Mr. Nobel admits that it is not easily explained, but mentions that some attribute it only to the heat produced by compression, some only to the heat of the gas given off by the fulminate of the cap, and others, again, to the dissociating power of a strong vibration. It is not, Mr. Nobel thinks, unlikely, at least in some instances, that all those influences are brought to bear on the explosion, but it would be very difficult indeed to compute the part contributed by each. There can be no doubt as to the dislocation of certain unstable compounds of vibration alone, since the slight shock which sets off chloride and iodide of nitrogen, perchlorate of ethyl, &c., cannot possibly raise their temperature even locally to the degree at which they explode. Even in the case of nitro-glycerine, which exhibits no such extreme sensitiveness, direct experiments have shown that very violent vibration can cause it to explode. But if vibration alone suffices to set off nitro-glycerine, it is still less doubtful that heat alone will do it. Not only does it detonate when raised to the temperature at which its constituent elements dissociate, but a minute charge of gunpowder, so slightly confined that the gas which it produces has a very feeble tension, never fails to make it detonate. It suffices, indeed, to apply heat in any shape, so that it acts upon a very large surface of nitro-glycerine, for then the gas evolved can no longer escape as quickly as it is produced, and the pressure, accumulating with immense rapidity, brings on the explosion. Nitro-glycerine preparations and gun-cotton cannot be brought to detonate by such means, but go off easily under the influence of a sharp local explosion, such as produced by a fulminate. Two opposite tendencies are here at work, one to set off the explosive, acting on it by heat, vibration, or whatever cause it may be, and the other to throw it away by the propelling impulse due to the expanding gas. Both must be extremely quick in operating, and it is, therefore, easy to

see how a slight, apparently insignificant, difference may turn the scale, and cause an explosion or misfire. For instance, in grinding chlorate of potassium and sulphur with care in a mortar, a series of small detonations take place, which do not spread, but a somewhat stronger blow or friction will set off the whole. Evidently in one case the propelling power is preponderant over the igniting tendency, in the other it is not. Even the quickest substance requires time to get heated, and unless the velocity implanted allows that time combustion cannot take place.

With reasonable care there appears to be no real danger in using either dynamite, compressed gun-cotton, patent cotton gunpowder, lithofracteur, or similar explosives, and where time is an object and there are facilities for deep boring, the rock being of more than ordinary hardness, the advantage of using them cannot be questioned, but opinions still differ as to the desirability of very strong explosives in weak rock, the very common view being that in those cases much of the power is lost. The grounds for such a supposition may, however, well be questioned, the reason of the apparent loss probably being that the miners are disinclined to use so small a charge as is sufficient. But, considering the units of force above mentioned, this difficulty may readily be overcome. Dynamite being rather more than four times as strong as ordinary powder, or as 415 is to 100, it follows that whenever a 3-lb. cartridge of ordinary blasting-powder would be used 2 ozs. of dynamite will be slightly more than sufficient, so that more than that quantity should on no account be used. The same calculation would apply for other explosives, and if it were generally made the result would be that all the explosives worthy of a place in the market would acquire their proper position.

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week there has been an improvement in the amount of business transacted, under the influence of which prices have generally improved. In shares of iron and coal concerns the only adverse movement is a fall of 2 in Nant-y-Glo and Blaina preferred shares, owing to the desponding state of affairs at the meeting. The following have each improved to the extent noted:—Benhar, 3/4; Benhar new, 3/4; Bolckow, Vaughan A shares, 3/4; Ebbw Vale, 3/4; Monkland preference, 3/4; Omnia and Cleland, 1s.; and Scottish Australasian, 3s. Chapel House is lower, at 3/4 to 3/4. Whitehaven Iron, 3/4, sellers. In shares of copper concerns there have been large dealings, the only adverse movement is a fall of 4s. on Huntington, owing to the report (given elsewhere) issued by the committee of investigation. Cape (36 3/4) is 3/4; Pannullo (1 to 1 1/4), 3/4; and Russia (3 1/2 to 3 3/4), 3/4; all higher. Tharsis (21) is 1/4 higher for the week, though it at one time touched 22 1/2, on various rumours, but chiefly owing to "bears" closing; Tharsis new shares has also improved. In home undertakings prices are:—Drakewalls lower, at 3/4, sellers. East Caradon, 1 1/2, buyers. East Wheel Grenville, 1s. 3d., sellers. Great Laxey, 15 to 16. Gunnislake (Clitters), 5 1/2, sellers. Hingston Down, 3/4 to 1. Killifreth, 3/4, sellers. Marke Valley, 3 1/2, sellers. Penstrulhal, 8s. to 9s. Prince of Wales, 3/4, sellers. South Roskear, fully 4 lower, at 1 1/2, sellers. Tyllwyd, 1 1/2, sellers. West Esgrair Lie, 1, sellers. West Maria, 3/4, sellers. Wheel Kitty (St. Agnes), 2 1/2, buyers. In shares of gold and silver mines, Richmonds have fallen 3/4. Argentine is again higher, quoted 7 1/4 to 7 3/4. Colorado Terrible Lode, 2 1/2 to 2 3/4. Don Pedro North del Rey, 3/4 to 3/4. Frontino and Bolivia, 3s. 3d., sellers. Mammoth Copperopolis, 3 1/2, buyers. New Pacific, 1/2, sellers. Rica, 2s. 6d. to 4s. Santa Barbara (late Par), 18s. 3d. to 20s. 6d. South Aurora, 3/4, buyers. Tecoma, 1/2, buyers. No change in oil shares. Uphall in request. In miscellaneous little doing. Scottish Wagon (all paid), 10 1/2 lower. Phospho Guano B is likewise easier, at 2 1/2, sellers, though at one time in demand at 2 1/2. A detailed list of the several days business follows:—

On THURSDAY a moderate business was done. Argentine, 7 to 7 1/2. Benhar, 10 1/2 to 10 3/4. Chapel House, 3 1/2, sellers. Frontino and Bolivia, 1 1/2, buyers. Gunnislake (Clitters), 5 1/2, sellers. Hingston Down, 3/4 to 3/4. Monkland per cent. guaranteed preference done at 5 1/2. Nant-y-Glo and Blaina (preferred) done at 3 1/2, closing 3 to 3 1/2. Omnia and Cleland done at 5s. Richmonds done at 8 1/2 and 8 1/2, closing 8 1/2 to 8 1/2. South Roskear, 5 1/2, sellers. Tecoma, 1/2, buyers. Tharsis opened at 19 1/2, then done at 19 1/2, advanced to 20, afterwards done at 19 1/2 and 19 1/2, closing 19 1/2 to 20; new shares, 13 1/4 to 13 1/2. Young's Paraffin done at 7 1/2, closing 7 1/2 to 7 1/2. West Maria, 3 1/2 to 3 3/4. Scottish Wagon (all paid) done at 10 1/2. On FRIDAY a large business was done. Argentine, 7 to 7 1/2. Benhar, 10 1/2 to 10 3/4. Chapel House, 3 1/2, sellers. Frontino and Bolivia, 1 1/2, buyers. Gunnislake (Clitters), 5 1/2, sellers. Hingston Down, 3/4 to 3/4. Monkland (ordinary) done at 4s. Pannullo, 1 to 1 1/4. Penstrulhal, 1 1/2 to 1 3/4. Richmonds done at 8 1/2 and 8 1/2, closing 8 1/2 to 8 1/2. South Roskear, 5 1/2, sellers. Tecoma, 1/2, buyers. Tharsis again largely dealt in, opened at 22 1/2, advanced to 22 1/2, fell to 22, recovered to 22 1/2, again fell to 21 1/2, rallied to 22 1/2, and closed 22 1/2 to 22 1/2; new shares done at 14 1/2 and 15, closing 15 to 15 1/2. Whitehaven Iron, 3 1/2, sellers. Young's Paraffin, 7 1/2 to 7 3/4. On SATURDAY a good business was done. Argentine, 7, buyers. Benhar, 10 1/2 to 10 3/4. Chapel House, 3 1/2, sellers. Frontino and Bolivia, 1 1/2, buyers. Gunnislake (Clitters), 5 1/2, sellers. Hingston Down, 3/4 to 3/4. Monkland (ordinary) done at 4s. Pannullo, 1 to 1 1/4. Penstrulhal, 1 1/2 to 1 3/4. Richmonds done at 8 1/2 and 8 1/2, closing 8 1/2 to 8 1/2. South Roskear, 5 1/2, sellers. Tecoma, 1/2, buyers. Tharsis again largely dealt in, opened at 22 1/2, advanced to 22 1/2, fell to 22, recovered to 22 1/2, again fell to 21 1/2, rallied to 22 1/2, and closed 22 1/2 to 22 1/2; new shares done at 14 1/2 and 15, closing 15 to 15 1/2. Whitehaven Iron, 3 1/2, sellers. Young's Paraffin, 7 1/2 to 7 3/4. On MONDAY a good business was done. Argentine, 7, buyers. Benhar, 10 1/2 to 10 3/4. Chapel House, 3 1/2, sellers. Frontino and Bolivia, 1 1/2, buyers. Gunnislake (Clitters), 5 1/2, sellers. Hingston Down, 3/4 to 3/4. Monkland (ordinary) done at 4s. Pannullo, 1 to 1 1/4. Penstrulhal, 1 1/2 to 1 3/4. Richmonds done at 8 1/2 and 8 1/2, closing 8 1/2 to 8 1/2. South Roskear, 5 1/2, sellers. Tecoma, 1/2, buyers. Tharsis again largely dealt in, opened at 22 1/2, advanced to 22 1/2, fell to 22, recovered to 22 1/2, again fell to 21 1/2, rallied to 22 1/2, and closed 22 1/2 to 22 1/2; new shares done at 14 1/2 and 15, closing 15 to 15 1/2. Whitehaven Iron, 3 1/2, sellers. Young's Paraffin, 7 1/2 to 7 3/4. On TUESDAY the market was quiet. Argentine, 7 1/4 to 7 1/2. Benhar shares done at 11, closing 11 to 11 1/4; new shares done at 8 1/2, closing 10s. 6d. to 10s. 9d. Chapel House, 3 1/2 to 3 3/4; Drake Walls, 3/4, sellers. Frontino and Bolivia, 3s. 3d., sellers; Gunnislake (Clitters), 5s. to 5s. 6s. Huntington shares done at 26s. London and Glasgow Engineering shares done at 21. Marke Valley, 3 1/2, sellers. Mammoth Copperopolis of Utah, 3/4 buyers. Monkland (ordinary) shares done at 4s. 6s. and 5s., closing 4s. to 5s. Omnia and Cleland, 2 1/2 to 3 1/4. Richmond shares done at 18s. 3d. to 18s. 6d. Rica, 2s. 6d. to 4s. Santa Barbara (late Par) shares higher, at 18s. 3d. to 20s. 9d. Tyllwyd, 1 1/2, sellers. Tharsis shares done from 21 1/2 to 21 1/4, and then from 21 1/2 to 21 3/4; closing 21 1/2 to 21 1/4; new shares done at 14 1/2. West Esgrair Lie, 1, sellers. Whitehaven Iron, 3 1/2, sellers. Young's Paraffin, 7 1/4 to 7 1/2. Scottish Wagon (all paid), 10 1/4 to 10 1/2.

HUNTINGTON COPPER AND SULPHUR COMPANY (Limited).—The report of the committee of investigation appointed by the shareholders of this company to examine its affairs has been issued. Accompanying it are three appendices, the engineer's, and the accountant's reports. Appendix No. 1 is a statement of the six months' working from January to June, 1875. It shows the cost per month, embracing all charges against the ore from the time it is lifted at the mine till it is delivered in the form of precipitate to the purchaser in this country under the heads of (a) works' cost, (b) raw ore, and (c) carriage, freight, &c., at the rate per unit, the quantity of copper produced, the price realised, the amount thereof, and the balance of profit or loss, which thus brought out is a loss for the six months of 12s. 4d. Appendix No. 2 is an abstract of monthly return cost from January to June, 1875, under 15 different heads, with the cost per unit of copper under each of them. Appendix No. 3 is a comparison of Capt. Rodda's estimate (as given the last annual report), with the actual results of the six months' working from January to June, 1875, showing that Capt. Rodda had made a mistake of no less than 3s. 11 1/2d. per unit in the calculations by which he arrived at the favourable report in his report called special attention to copper mining; as they are by Mr. E. Gaujeot, a gentleman of reputation in copper mining; his length, however, precludes more than a few extracts being made from it here. He says—"I do not think the mine has ever paid, but could be worked to pay if brought to a capacity of 15,000 tons at least per annum, and by utilizing all of the minerals, copper, sulphur, &c. The property was never such as to warrant any, or all, of the statements given in the prospectus. There is an old burrow of some 5000 tons of called 1 1/2 per cent. ore, which is valueless, as it would cost more for labour for picking it over than it is worth (it may here be stated that the committee of investigation in their report called special attention to this paragraph, as they have reason to believe that this is the identical heap referred to in the prospectus as an important asset, containing about 900 tons of pure copper). It would take another expenditure of \$100,000 for rebuilding of extraction works, opening the mine, sinking, exploring, and for machinery, dwellings, &c., before you could bring the mine to a fair production, supposing the ground would hold out, and your extracting works in use again. Estimating the mineral property worth 25,000 sterling, and as it would cost \$100,000, or 20,000 sterling, to bring them to a capacity referred to above, you have a capital of 45,000, or 50,000 sterling, upon which I think a dividend could be made if the product could be brought up to 20,000 tons annually."

The accountant's report is a careful and exhaustive document, showing how fallacious have been the statements made in the prospectus, and how disastrous the results which have hitherto attended the operations of the company. The results of it, briefly summarised, are—(1), ore passed through the extracting process has yielded an average of a fraction over 4 per cent. of pure copper; (2), position of the company on April 30, 1875, worse than shown in the balance-sheet by 7603s.; and (3), during the six months from Jan. 1 to June 30 of the current year, the cost of mining the ore, converting same into precipitate, and transporting to this country, has averaged 17s. 9 1/2d. per unit of copper; while the price obtained for same has been 16s. 2 3/4d.

The following extracts may be made from the committee's own address to the shareholders:—"The loss, as above shown on the working, has been caused chiefly by the extracting works, the mine having been proved to contain quantities of copper ore, which can be raised under ordinary circumstances at \$1.50 per unit, or 3s. 2d. per ton of 4 per cent. ore, and the committee have reason to believe this cost could be considerably reduced. The loss sustained in the extracting works has been caused mainly by the difficulty in manipulating the ores by the wet process, owing to their hardness and the small percentage of sulphur they contain, which loss, no doubt, has been enhanced by the unsuitable site on which the works were erected, the defective construction of the works themselves, and mismanagement. It is a question of the gravest moment for the consideration of the shareholders and

the future board whether these works should be reconstructed. Other processes may be found suitable to this class of ore; and as nothing can be done during the winter, it would, perhaps, be as well to delay coming to any definite decision at present." The committee then detail some particulars in reference to the formation of the company, which is very disparaging to the directors, especially Mr. Bain, the Chairman. Mr. William Henderson has throughout ignored the committee entirely, but in reply to an application to him from the law agents of the committee, his London solicitor wrote them that he never received any promotion money whatever, and calls attention to the following statement in the prospectus:—"It is proposed to utilise the whole of the sulphur contained in the poorer ore and treated at the mine, and for this purpose to make arrangements with Mr. Henderson and his partners to adopt the most improved processes, when fully and completely developed, that for the advantage thus accorded by Mr. Henderson to the company, and from the benefits the company would derive from his technical skill and experience (which have been unceasingly devoted to the company—quite distinct from the duties of a director—at great inconvenience, with very considerable loss of time, and without any other remuneration) the vendors paid him 10,000l. The law agents of the committee of investigation, in their reply to the letter, point out that the clause in the original prospectus, to which Mr. Henderson's solicitor attached so much importance, merely relates to a possible future arrangement with Mr. Henderson and his partners, which was never entered into. The committee do not find any evidence that Mr. Henderson has unceasingly devoted to the company his technical skill and experience, and certainly the company has not derived benefit from them. They repeated their demand for the 10,000l., and interest thereon, but no further communication having been received from Mr. Henderson or his solicitors, the directors, on the recommendation of the committee, have requested the law agents to take legal proceedings in the matter. The committee, in concluding their report, say—"It is perfectly evident that even after making every allowance for the inflated value of 1872, the property of the company was never worth anything like the sum paid for it. Had the original directors taken any ordinary precautions at the proper time this would have been abundantly evident to them, and much money would thereby have been saved to the shareholders. Whether any and what procedure should be adopted against any or all of the parties connected with the formation of the company the committee leave for the consideration of the shareholders themselves." Not the least interesting statement in the committee's report is the one that the public applications for the company's capital of 200,000l. amounted to no less than nearly two millions sterling, or ten times the requisite amount.

On WEDNESDAY a good business was done. Benhar, 11 1/2, buyers; new shares done at 10s. and 10s. 6d. Bolckow Vaughan, "A," 4 1/2 to 4 3/4. Cape Copper remain at 36 1/2; an interim dividend of 20s. per share has been declared. Don Pedro North del Rey, 3/4 to 3/4. Ebbw Vale, 1 1/2 to 1 1/4. Frontino and Bolivia, 3s. 3d., sellers. Gunnislake (Clitters), 5 1/2, sellers. Huntington opened lower at 26s. 9d. and 21s., closing 21s. to 22s. London and Glasgow Engineering, &c., done at 21. Monkland (ordinary), 4s. to 5s. Nant-y-Glo Blaina (preferred) remain about 30. The Chairman at the meeting to-day did not refer to the Chancery suit in which the company is interested; he said the question now facing them was whether they should take unremunerative orders, or close up the works; and the board unhesitatingly adopted the former course, so long as they were able to have the alternative. In 1873, they raised 395,000 tons of coal; in 1874, 435,000; and in 1875, 560,000. Omnia and Cleland done at 5s., closing 5s. 5s. 6s. Phospho Guano, "B," lower at 2 1/2, sellers. Richmonds done at 8 1/2, closing 8 1/2 to 9 1/2. This week's cablegram says—"Week's run, 850,000; sunk 30 ft. in good ore mine looking well." South Aurora, 3/4, buyers. Tharsis opened at 22 1/2, but declined to 20 1/2, after this business was done at 21 1/2, but the market was again flat, down to 20 1/2; at the close a recovery took place to 20 1/2, closing 20 1/2 to 21; new shares done at 14 and 13 1/2, closing 14 to 14 1/2. Young's Paraffin done at 7 1/2 and 10s. Scottish Wagon done at 10 1/2.

The following are this week's prices of some stocks, shares, &c., occasionally dealt in on this market, but not quoted (with few exceptions) on any of the Scotch Stock Exchanges:—Iron, Steel, and Coal Companies: Andrew Knowles and Sons, 24 to 24 1/4; Bolckow, Vaughan, & Co. "B," 42 to 42 1/2; Britannia Ironworks, 10; Cardiff and Swansea Steam Coal, 2 1/2 to 2 3/4; Chapel House Colliery, 3 1/2 to 3 3/4; Consett Iron Ore, 20 1/2; Gauley Kanawha Coal, 5, sellers; Great Western Colliery, 12 to 12 1/2; Gellygdy Colliery, pref. 9, sellers; Ifon Rhyh Colliery, 3 1/2 to 3 1/4; Leigh and Wilkes Barre 6 per cent. first mortgage, guaranteed by Central Railroad of New Jersey (U.S.), 92 to 94; Llynvi, Tondy, and Ogmore Coal and Iron, 23 1/2 to 24 1/2; Llynvi Valley Colliery, pref., 9, sellers; Mersey Steel and Iron, 4 1/2 to 5; Mynydd Iron Ore, 2; Newport Abercrom Colliery, 4 to 5; North Londsdale Iron and Steel, 6 to 6 1/2; Powell's Elanwit Colliery, 3 1/2 to 3 3/4; Scottish Australasian new shares, 3 1/2 to 3 3/4; Ulverston Mining, 10 1/2 to 11; West Cumberland Iron and Steel, 11 1/2 to 11 3/4; Whitehaven Iron, 3 1/2, sellers.—Copper, Lead, Tin, &c., Co.; Bedford United, 1 to 1 1/4; Benberg Lead, 3 1/2 to 4; Bowden Hill Manganese, 3/4, sellers; Cook's Kitchen, 6 to 6 1/2; Copiapu Mining, 3 1/2; Denbigh Consols, 2, sellers; Dolcoath, 40 to 42; Drake Walls, 3/4, sellers; East Caradon, 1 1/2 to 2; East Wheel Grenville, 1s. 6d., sellers; Elgar, 1, sellers; Great Laxey, 15 to 16; Great West Van, 3 1/2 to 3 3/4; Gunnislake (Clitters), 5 1/2 to 5 3/4; Hingston Down, 3/4 to 3/4; Killifreth, 3/4; Old Colaroch Lead, 10, sellers; Marke Valley, 3 1/2, sellers; New Consols, 1 1/2, sellers; New Pembroke, 3/4, sellers; New Queensland, 3/4; Hendre Lead, 3 to 4; Pary's Mountain, 3 1/2 to 3 3/4; Penstrulhal, 8s. to 9s.; Prince of Wales, 3/4; Plymington Lead, 3/4; Rio Tinto, 6 1/2; Snowbrook, 5, sellers; South Curdruir, 6 1/2 to 6 3/4; South Roskear, 1 1/2, sellers; Van, 28 to 29; West Bassett, 4 1/2 to 5 1/2; West Esgrair Lie, 1, sellers; West Maria and Fortescue, 5s., sellers; West Polk, 16; West Wheel Frances, 5 1/2 to 5 3/4; Wheel Bassett, 8 to 10; Wheel Kitty (St. Agnes), 2 1/2, buyers; Wheel Mary Hutchings, 3 1/2; Yorks Peninsula 15 per cent. guaranteed preference, 10 to 11; Scottish Australasian Gold and Silver Companies: Almaden and Triton, 3 1/2 to 3 3/4; Argentine, 7 1/4 to 7 1/2; Australasian Mines Investment, 3 1/2 to 3 3/4; Bayo Consols Silver, 5, sellers; Battle Mountain, 1 to 1 1/4; Cedar Creek, 3 1/2 to 3 3/4; Chontales, 3 1/2 to 3 3/4; Colorado Terrible Lode, 2 to 2 1/2; Don Pedro North del Rey, 3/4 to 3 3/4; Eberhard and Aurora, 7 1/2 to 7 3/4; Eschequer, 3 1/2 to 3 3/4; Frontino and Bolivia, 3s. 3d., sellers; I.X.L., 3; Gold Run, 18s., sellers; Javali, 3 1/2 to 3 3/4; Malpasso, 3 1/2; New Pacific, 3 1/2; New Zealand Kapanga, 3 1/2 to 3 3/4; Pastorena United, 3 1/2; Port Phillip and Colonial, 3 1/2 to 3 3/4; Rica, 2s. 6d. to 4s.; Santa Barbara (late Par), 18s. 3d. to 20s. 9d.; South Aurora, 3/4; Swainland Creek, 2 1/2 to 3; Tecoma, 3/4, buyers; Thornhill Reef, 3/4; U. Mexican, 3 1/2 to 3 3/4; Welsh "The," Gold, 3/4; Winter's Freehold, 3 1/2, sellers.—Miscellaneous Companies: Aberdeen Lime, 7 1/2; Bede Metal and Chemical, 3 1/2; British Agricultural Association, 2, sellers; ditto 7 per cent. preference, 5, sellers; Conglog Slate and Slab, 10, sellers; General Sewage and Manure, 4 to 5; Langdale's Chemical Manure, 5 1/2, sellers; Lawe's Chemical, 7 1/2 to 7 3/4; ditto 7 per cent. preference, 10, sellers; Native Guano, 3; Newcastle Chemical, 3 1/2; North Cornwall Kaelin, 3 1/2, sellers; Phospho-Guano A, 7; ditto B, 2 1/2, sellers; Thames Chemical, 5, sellers. J. GRANT MACLEAN, Stock and Share Broker, Post Office Buildings, Stirling, Dec. 9.

HOLLOWAY'S OINTMENT AND PILLS—COLDS, COUGHS, SHORNESS OF BREATH.—These corrective remedies are infallible for these pectoral complaints, which neglected often end in asthma, bronchitis, or consumption. The Ointment well rubbed upon the back and chest, penetrating the skin, is carried directly to the lungs, whence it expels all impurities. All the blood constantly passes through the lungs, and there all noxious particles tending to produce disease can be quickly, thoroughly, and permanently neutralised, rendered harmless, or ejected from the system. In influenza and all chest complaints early curative measures are imperiously demanded; one day's delay may cause a protracted illness, one week's neglect may consign the diseased to destruction.

Table with columns: Date, Mines, Tons, Price per ton, Purchasers. Includes entries for Dec. 2 - Great Laxey, Dec. 3 - Glan Clwyd, Dec. 6 - South Darren, Dec. 9 - Talargoch, Maesyreddu, Costin Llys, Prince Patrick, Halkyn Deep Level, Rhosomer, Roman Gravels, etc.

Table with columns: Date, Mines, Tons, Price per ton, Purchasers. Includes entries for Dec. 5 - Talargoch.

Table with columns: Date, Mines, Tons, Price per ton, Purchasers. Includes entries for Nov. 25 - Pedn-a-drea, Dec. 4 - ditto.

Table with columns: Date, Mine, Tons, Price per ton, Purchasers. Includes entry for Dec. 6 - South Darren.

RICKARD AND GLEDHILL. MINING ENGINEERS AND ASSAYERS, 3, BLOMFIELD STREET, LONDON WALL, E.C. BRYDON AND DAVIDSON, ENGINEERS, WHITEHAVEN. IRON AND BRASS FOUNDERS. MAKERS of all kinds of BOILERS; PUMPING, WINDING, and HAULING ENGINES, and MINING MACHINERY generally. AIR COMPRESSORS, CRANES, CRAB WINCHES, MORTAR MILLS, PUMP PIPES, &c. CASTINGS OF ALL KINDS.

SULPHATE OF BARYTES FOR SALE.—Fine powdered, beautifully white; also in the Rock or Crude State, fresh from Lime and Metallic Oxide. Samples on application to—RUTHWAITE BARYTES MINING COMPANY, Nov. 17, 1875. WHITEHAVEN.

Meetings of Public Companies.

PONTGIBAUD SILVER-LEAD MINING AND SMELTING CO.

The annual general meeting of shareholders was held in Paris on Nov. 30, when the reports and accounts for the year ending June 30 were received and approved. The profits for the twelve months had amounted to 32,047. After deducting from this amount the sums written off plant and the royalties, &c., the net profit for the year was 24,462, or about 1240, more than the preceding year.

THE EMMA MINE COMPANY.—An adjourned meeting was held, on Wednesday, in the Cannon-street Hotel; Mr. M'Dougal in the chair. There were very few persons present.—The Chairman said the present board of directors knew nothing of the affairs of the company, and they had been unable to come to any sort of knowledge of the business.

WHEEL RUSSEL MINE.—At the four-monthly meeting, held at Tavistock, Mr. F. W. Harding presided. The accounts for the 15 weeks to Sept. 3 showed that 37 tons of copper ore had been realized 1235.9s. 5d.; 8.9 dits. per ton.

[For remainder of Meetings see to-day's Supplement.]

FOREIGN MINES.

ST. JOHN DEL REY.—Telegram, dated Rio de Janeiro, Dec. 3: Produce ten days, second division of November, 18,000 dits.—7168s. Yield, 8.9 dits. per ton.

DON PEDRO.—Telegram, Dec. 9: The produce for the month of November amounts to 4350 tons, and that there is still a deficiency of surface water retarding sinking.

Letter from mine captains, Nov. 9: The water is still in fork at the bottom of the mine, but there is not surface water sufficient to commence sinking. All work in the mine going on as usual. On the 8th inst. we changed one of the iron rods at surface.

RICHMOND CONSOLIDATED.—Cablegram from the mine at Eureka, Nevada.—Hall, London: Week's run, \$50,000. Sunk 30 ft. in good ore. Mine looking well.—RICKARD.

Nov. 17: Since my last the ore body struck in the 600 drift is opening out well; we have opened on it 24 ft. in length and 12 ft. in width; on the hanging wall side we have struck limestone, but in the back it is opening out wider as we rise on it.

EBERHARDT AND AUORA.—The directors announce that they have received from the mines tons of silver, value 27000.

BERDEYER ORES.—Mr. G. S. Powers, Nov. 16: It commenced raining here the 15th inst. at this date it is pouring which will give plenty of water for all mining purposes at least for considerable time without further rain.

BLUE TENT.—T. Price, Nov. 15: The ditch being now finished, we are busy at work upon the mine, preferring following work: Have shifted and placed pipes in order for attaching the banks in both South Yuba and Enterprise; flumes placed in condition for work; are now blasting out and gravel on bed rock in South Yuba; placed pipes on the blue gravel claim, as we intend to wash here this season as well.

ALMADA AND TIRITO.—Extract from letter from Mr. Breach, Sept. 9: Providencia: We have commenced to sink the winze from the 20 to the 32, mentioned in my letter last week, in a place that in driving the 20 gave indications of ore, and below which we had ore in the 32. The ground is very easy; in fact, it requires timber.

Extract from letter from Mr. Breach, Oct. 14: Doelle Ores: In consequence of the diminution in the quantity of green ores, pending discovery, the mill now has to run part of the time on black ores only, and green smalls for concentration, and I believe we can keep it fully employed until the black ore in the Mina Grande is opened out for stopping; the present output of black ore is limited by the power of the engine underground, and with the exception of the Purisima ores and the ore from the new east lode, all has to be wound up the Tirito shaft.

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In three weeks, or a little more, we shall commence a slope in the back of the 32, and prove the ground; as it is immediately over the ore we cut in driving the 32 there is a chance of its going up some little distance. The new east lode, over the Tunnel level, continues to get more solid as we drive on it; we are not cutting into it from the tunnel, but are not yet in payable ore, being apparently on the extreme north point of the lode.

I have good hopes of this being an entirely new and distinct lode; we have driven on it 17 ft. in length by 8 ft. wide, and it proves as we go. In the Purisima the prospects are fair, and the black ore improves. The black ore in the extreme north end of the 10 back, and about 12 feet below the tunnel, has now gone to the east, and is almost in a line with the new lode, with which I think we shall find it connected.

The green ore in the same back we have left off stopping, as the tunnel is directly over it, and we have taken all we can in prudence slope away.—Mina Grande: We last week holed in the 12 to the winze, and are now driving to the north with all speed. The ore we cut in the winze and level proves to be a vein of petanque metal outside the ore part of the lode, and ranging in width up to 7 or 8 in. we have driven through it, and are now driving through spar, similar to that found next the ore in the tunnel, so that we expect at any moment to cut the ore body.

In the tunnel end we have still the same promising spots of ore; the appearance of the ground leads us to suppose that where we now are the lode is pinched, and on the surface at a corresponding point it is very plainly to be seen to be so, and I think we shall have to drive further to give the lode room to open out before we may expect to meet with ore in payable quantity. I had omitted to make mention of the fact that we have driven under the Podio level, and that in the month of July and August we worked under the Podio level, and that in the month of July and August we worked under the Podio level, and that in the month of July and August we worked under the Podio level.

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may be frozen up if it continues much longer. The samplings have amounted to 251 tons.

LINARES.—Dec. 1: Pozo Ancho Mine: The lode in the 100 east of Warnes engine-shaft is large and strong, yielding 1 ton lead ore per fathom. The same level west is moderately easy for driving, but yields no ore to value. The lode in the 85, west of Crosby's shaft, is small, and the ground hard. The lodes in the 75 and 65 west of Pell's engine-shaft are small, and produce no ore to value.

The lode in the 55, east of Taylor's engine-shaft, is in a regular and promising lode, worth 1 ton per fathom. The lode in the same level east is small, producing 1/2 ton per fathom. The lode in the 55, east of the same shaft, is in a promising lode, yielding 1 ton per fathom. In Pell's engine-shaft, below the 10, the men are making excellent progress. No. 203 winze is holed to the 55; the lode yields 1 ton per fathom. In No. 202 winze the lode is very wide, with occasional stones of ore. [No. 204 winze, below the 55, is going down in a promising lode, yielding 1 1/2 ton per fathom. The lode in No. 205 winze, below the 55, is small and very compact, producing 1 ton per fathom. The weekly returns were kept up very regularly in the past month, and the stopes are now yielding moderately well. The machinery is kept in good condition, and the works at surface are being kept on very regularly. We estimate the raisings for December at 200 tons.

QUINOTOS Mine: The 80, west of Taylor's engine-shaft, continues in an unproductive lode. From the cross-out in the 45, south of Cox's shaft, the men are driving east and west on a small unproductive branch. The lode in the 80 east of Taylor's, has improved in the bottom of end, and yields 1/2 ton per fathom. The lode in the 65, east of Addis's shaft, is strong and regular, but contains no lead of value. The 55, east of this shaft, is in a large and promising lode, with good lumps of ore, worth 1/2 ton per fathom. The 65, west of San Carlos shaft, also is in a powerful lode, but without ore at present. The lode in the 80, west of this shaft, is very much improved, yielding 1 1/2 ton per fathom. The same level east continues poor, and is very hard for driving. The 65, east of San Carlos, is in a strong lode, consisting of calcareous spar and good stones of ore, worth 1/2 ton per fathom. In the 55, east of Judd's shaft, the lode is small and without lead. The 45, east of this shaft, is in very hard ground, the lode small, with occasional stones of ore. No lode or branch has been met with in the 22 cross-out, north of Judd's. Taylor's engine-shaft, is now deep enough for a 90, and the men will put out a cross-out winze, below the 65, is going down in a fine shoot of ore, worth 3 tons per fathom. We estimate the raisings for December at 150 tons.

ALAMILLOS.—Dec. 1: The 30, west of San Francisco shaft, is in a large and promising lode, worth 1/2 ton of lead ore per fathom. The lode in the 50, east of the 85, east of Taylor's engine-shaft, is in a regular and promising lode, worth 1 ton per fathom. The 85, west of San Adriano's shaft, is in a strong and promising lode, with fine stones of ore, worth 1/2 ton per fathom. The lode in the 50, east of San Victor shaft, is improving very satisfactorily, and yields 1 ton per fathom. The 60 cross-out, south of this shaft, has reached the lode; it is of moderate width, but contains no ore at this point. The 40, west of San Carlos shaft, is without ore at present. The 30, east of air-shaft, is again opening profitable ore ground; worth 1 ton per fathom. The 40, east of air-shaft, and the 50, east of Crosby's, are both unproductive. In the 50, east of Judd's shaft, a strong cross-course has been met with, and we have not yet found the lode on its east side. In the 60, east of this shaft, the ground is hard, and the lode of no value. In the 70 cross-out, north of Judd's shaft, the granite is very hard; it will take two months more to reach the lode. In Taylor's engine-shaft, below the 85, the granite is very hard for sinking. The San Enrique shaft will be holed to the 85 in the present month. In the Martinez winze, below the 30, the lode is small and unproductive. The lode in Lule's winze, below the 25, continues unproductive, and the granite hard for sinking through. In Juan's winze, below the 25, the lode is very regular, and yields good stones of ore, but not enough to value. The lode in Davey's winze, below the 20, is now producing 1 ton per fathom. The stopes yielded moderately in the past month, and are now without any alteration worthy of notice. The ordinary operations at surface are being kept on very regularly, and the machinery throughout the mine is in good condition. We may estimate the raisings for December at 200 tons.

MENZENBERG.—R. K. Roskilly, Dec. 8: Setting Report: Dickinson's Engine-Shaft: The 45 cross-out, to drive west of shaft, to six men, at 3/4 m. or 3/4. 15s. per lachter (6 ft. 10 1/2 in.); the rock here has a very promising appearance, being composed of siliceous graywacke, which within the past day or two has become more favourable for driving; good progress has been made during the week, and the end is now 52 fms. west of shaft. The 45, to drive south of cross-out, to two men, at 30 m. or 1/10s. per lachter; the lode in the end is fully 5 ft. wide, composed principally of quartz and spots of copper ore intermixed—a very kindly lode, and promising an improvement. The 45, to drive north of cross-out, to two men, at 30 m. or 1/10s. per lachter; the lode is 4 ft. wide, consisting of spar, gossan, and spots of copper ore. The sawyers are busily engaged in sawing timber for the shaft; this we shall put in on Thursday, and as soon as the same is completed we shall immediately commence to cut flat at the 45, in order to make the necessary preparations for sinking the shaft below that point; this work will be carried out with vigour, as well as the driving of the ends herein mentioned. The engine and pitwork are in good condition, and working well.

FORTUNA.—Dec. 1: Canada Inco's: In the 110, west of Judd's shaft, the lode has decreased in size and value, now yielding 1/2 ton of lead ore per fathom. In the 80, east of San Carlos shaft, we have intersected the lode east of cross-course, and below the 110, east of Taylor's engine-shaft, is in a regular and promising lode, worth 1 ton per fathom. The lode in the 130, east of San Francisco shaft, is in a regular and promising lode, worth 1 ton per fathom. The 50 and 40, east of San Francisco shaft, are unproductive. The 90, east of Addis's shaft, is opening good stopping ground, worth 1/2 ton per fathom. The lode in the 80, west of Kennedy's shaft, maintains its size, and yields a little lead. In the 90, west of this shaft, the lode produces 1/2 ton per fathom. The lode in the 90, east of Lowndes's shaft, is small at present; we expect it will improve on getting free from the cross-course. In the 80, east of Car's shaft, the lode is very much improved within the last few days, and now produces 1 1/2 ton per fathom. The lode in the 120, east of Aguerre's shaft, below the 25; the lode is yielding 1/2 ton per fathom. At San Pedro shaft, below the 25, the granite is hard for sinking through. The lode in Sancho's winze, below the 25, has improved, and now yields 1 ton per fathom. Enrique's winze below the 80, is going down in a good lode, worth 1 1/2 ton per fathom.—Los Salidos Mine: There is no change to report in the 120, west of Buenos Amigos engine-shaft. The lode in the 110, west of San Carlos shaft, is small, containing no lead to value. The lode in the 130, west of Taylor's engine-shaft, is large, containing quartz and lead ore, and letting out water freely. The lode in the 130, east of this shaft, are below the 110, east of San Francisco shaft, is in a regular and promising lode, worth 1 ton per fathom. There is no alteration to report in the 100, east of San Miguel shaft. The 35, west of Swaffield's shaft, has improved a little, and is now worth 2 tons per fathom. The 45, west of this shaft, has also improved, and produces 2 tons per fathom. The lode in the 55, west of Palgrave's engine-shaft, still continues small and worthless. The same level east is in a small lode, worth 1/2 ton per fathom; the ground is hard for driving. At Buenos Amigos shaft, below the 120, the granite is still hard. The lode in Aguerre's shaft, below the 25, is small, and the ground very troublesome for sinking. Marcell's winze is holed to the 55, and the lode improved a little, yielding 1 ton per fathom. Castro's winze, below the 45, is suspended, in consequence of a great increase of water. We expect to hole Diego's winze to the 120 daily.

LANEY.—Dec. 2: In Judd's shaft the water has been got out, and sinking below the 100 metre level resumed; the rock is hard, siliceous limestone, and progress is slow. The 100 north is suspended for the present, the end showing no ore. The 100 south has intersected the cross-course, and it is probable the lode will be found to be thrown 12 ft. west. In the ventilation winze, sinking below the 100 south, loose blocks of crystalline dolomite are dropping in from the east side, and a general change appears imminent. The 80 metre level south is passing through stiff calc of unpromising character. In the cross-out west, from the 60 south, the cross-course is closed up to a divisional line in hard limestone. In No. 4 stopes, in back of the 60 south, a little ore continues to hold up in the middle of the stopes, worth 1/2 ton of lead and 1 ton of calamine per fathom. Some paying ground, producing 1/2 ton of lead per fathom, has been met with towards No. 2 stopes, in bottom of the 60 south. The adit end, on the same level north, shows soft marly rock, with stiff clay. The ore returned for the past month is 15 tons of lead, 6 tons calamine, and 6 tons mixed ore, and it is expected that the present month will show nearly the same quantities.

COPPER ORES. Sampled Nov. 24, and sold at Swansea, Dec. 7.

Table with columns: Mines, Tons, Produce, Price. Lists various mines like Borehaven, Cape Ore, Betts Cove, etc., with their respective tonnage and prices.

TOTAL PRODUCE. Borehaven 280, Union Ore 131, Cape Ore 49, ditto 49, ditto 48, ditto 48. Total 1411 tons.

COMPANIES BY WHOM THE ORES WERE PURCHASED. P. Grenfell and Sons, Nevill, Druce, and Co., Vivian and Sons, etc.

NO SALE ON DEC. 21. TOTALS AND AVERAGES. 21 dwt. Produce, Price. Per unit. Standard. Wholesale 1411, 10 1/2, £ 8 5 2, 15s. 6d., £102 14 0.

PERUVIAN TIN ORE SOLD IN LIVERPOOL on Dec

to work the fourth week yesterday; there were four men commencing the month's bargain. In the Lyde level four men; the full corps only worked a fortnight of the month.

NORTH TREKERRY.—R. Pryor, Dec. 7: The lode in the stopes on Highbarrow lode, and in the shallow adit level west of Doctor's shaft, continues just as when last reported.

OLD TINCROFT CONSOLS.—James Pope, Dec. 8: The 30, west of Diamond shaft, is driven about 45 fms.; lode at present worth for tin 6s. per fathom. The 20 is driven west 55 fms., lode at present 20 in. wide—good stamping work. The 10 is driven west 55 fms., lode worth at present 8s. per fathom. As soon as our stamping machinery is completed, which will be about the end of the year, we shall commence driving the different levels, as well as stopping the backs, which, from present appearance, will yield large quantities of tinstone.

OLD TREBUCKET.—W. Hancock, W. T. Bryant, Dec. 8: Setting Report: In the 90, south of shaft, contract not out; lode 4 ft. wide, worth about 6s. per fm. A stope in the back of the level by four men, one month, to have 30s. per fathom, and 10l. per ton. To drive the 80, south of the shaft, by six men, two months, to carry a portion of the lode at 11l. per fathom, to work from Monday morning one o'clock to ten o'clock Saturday night; this end is still hard and troublesome; the ore-bearing part of the lode has not been taken down for the last 3 fathoms, nor will it be till we are further advanced; we broke into it yesterday near the end, and it produced good stones of silver-lead. The No. 2 winze under this level is 90 ft. deep, and is now suspended on account of the water, and the level below (the 90), still some 20 fms. behind it, the winze is worth about 15s. per fathom. The 70 to drive south of shaft by four men, one month, at 6s. per fathom; worth about 5s. per fathom. The No. 1 stope in the back of the level the contract not out; worth 25s. per fathom. No. 2 ditto contract not out; worth 20s. per fathom. No. 3 ditto by six men, one month, at 3s. 10s. per fm.; worth 22s. per fathom. No. 4 ditto by six men, one month, at 3s. 15s. per fathom; worth 25s. per fathom; the latter to be paid for fixing stall. No. 3 winze under the level contract not out; worth 10s. per fathom. We have set another winze in this level, which we shall call No. 4, to four men, at 10l. per fathom; worth about 40s. per fathom. To drive the 60 south of shaft by four men, the month, at 8s. per fathom; lode 3 ft. wide, producing occasional stones of ore, and of a kindly appearance. We have 25 men on tribute in different parts of the mine, on tributes varying from 1s. to 18s. per ton for first quality ores, and 8s. per ton for No. 2. Trammings, filling, landing, and other contracts such the same as for last two months. As soon as the tributes have got up their work at Macey's shaft we shall commence cutting it down and securing it from surface, so as to make it a good shaft for all purposes; the men who are going in are at present employed clearing the 30 fm. level from footway winze, so as to ascertain whether it is driven under the shaft. The Burry Port and Co.'s parcel of ores is all delivered at Wadebridge. We hope to sample on Wednesday next about the same quantity of ores as last time.

PARYS MOUNTAIN.—T. Mitchell, Dec. 9: The ground in the 90 cross-cut south has become very hard the last day or two, and is at present rather difficult for cutting. No change worth noticing in any other part. We have been unable to proceed with clearing the precipitate pits in this week, on account of the hard frost; our surface hands are, however, engaged preparing ochre. Since my last, we have weighed off three lots of copper ore, about 270 tons, also about 80 tons of sulphur.

PATELEY BRIDGE.—C. Williams, Dec. 8: There has been no change to notice in any of the underground bargains during the week, with the exception of the west cross cut in the 20, where the vein has slightly improved, and presents kindly indications for further improvement. Our smelting works are in full operation. You shall be fully advised on all points next week.

PEDNAN-DREU, UNITED STATES.—Wm. Tregear, Wm. Pridoux, J. Pope, Nov. 27: Pump: We have resumed the 160 cross cut north, and the ground is very favourable for driving. In the 160 west end the branches produce stones of tin, but we think it advisable to open north and south all the breadth of the lode. In the 150 west end the lode (Martin's) is worth 8s. per fm. In the 140 west end the lode (Martin's) is worth 12s. per fathom. In the 130 west end the lode (Martin's) is worth 10s. per fathom.—Cobbler's: In the 120 west end the lode (Martin's) is unproductive, and the men are removed to drive on the lode opened in the rise above 100, under Critchley's shaft. In the 110 west end the lode (north) is worth 20s. per fathom. In the 90 west winze the lode (north) is worth 10l. per fathom. In the 90 west end the lode (north) is worth 9s. per fathom. In the 80 west end the lode (north) is worth 20s. per fathom. The 70 west end has opened a good piece of tin ground, worth 15s. to 20s. per fathom, and being a long distance behind the 80 and the 60 we have found it expedient to suspend the driving, and to let the ground be stepped away by the tributes from above and below. In the 60 west end the lode (north) is worth 15s. per fathom. In the 50 west end the lode (north) is worth 8s. per fathom. In the 40 west end the lode (north) is worth 8s. per fathom. We are cutting down and timbering this shaft towards the 90 with all possible dispatch, now completed to about the 70. The 140 rise has been communicated with the 130, and the men set to rise above that level, there being now 26 fathoms to communicate with the 90. In the 90 north nothing of importance interested here. In the 47 east the lode produces good stones of tin. We sold on Thursday 15 tons 10 cwt. 0 qr. 8 lbs. of black tin.

PENHALLS.—S. Bennets, W. Higgins, Dec. 4: The 70 east south cross-cut is without much change. In the 69 east the lode continues to open very satisfactorily. It is not quite through, but is seen 6 ft. to 8 ft. wide, and worth 12s. to 15s. per fathom. The 45 east is worth 10s. per fathom. The 45 east is worth 17s. per fathom, and the 40 west 8s. per fathom. The various other points of operation, together with the stopes and tribute pitches, remain much the same as for some weeks past. We are now fixing a new cylinder to the drawing-engine, the old one being completely worn out.

PENNANT (Lead and Barytes).—Nov. 9: The carbonate of barytes in the new pit is turning out remarkably well; it is 2 ft. 6 in. wide, of splendid quality, and as far as it is possible to ascertain at present there is a large quantity to be got, and this at a low rate, being 10 cents per ton; this is by far the best discovery we have yet had, but, in my opinion, not anything like what we may expect when we get below the level. The other bargains are as last reported, and when we are furnished with proper machinery for dressing the property will become valuable.

PENNERLEY.—W. T. Harris, J. Debridge, Dec. 8: Engine Shaft: In the 130 west the lode has been taken down, and is 6 inches wide, of carbonate of lime and a little lead ore. The lode in the 120 west is 1 1/2 ft. wide, worth for lead ore 20s. per fathom, and very encouraging; in this level driving east no lode has been taken down during this week; fair progress is being made. The lode in the winze sinking below the 100, on Warm Water lode, has been improved, now worth 2 1/2 tons of lead ore per fathom. In the cross-cut driving north, at the 25, we are within about 2 ft. of cutting the lode, which we hope to prove this week. There are in this section of the mine five stipes at work, producing on an average 1 1/2 ton lead ore per fathom.—Potter's Pit: The shaft sinking below the 75 is making usual progress. This level (the 75) driving west is speedy for progress, and the lode yields good stones of lead ore. Nos. 2 and 3 winzes, sinking below the 65, are without change, producing 2 1/2 and 4 tons respectively. The lode in the 45 west is more promising, and at present is yielding good stones of lead ore. The lode in the 40 west, on the Warm Water lode, is producing occasional stones of lead ore. This portion of the mine are yielding lead as for some time past. The severity of the weather is much against dressing operations.

PENSTRUTHAL.—W. Teague, Dec. 6: I am pleased that our tin is coming up to the estimate, 10 tons per month. Everything going on satisfactorily, and the lode in Highbarrow shaft is presenting better appearances. The elvan is leaving 1s. as I anticipated, but the value has not improved to any extent as yet. There is every indication of an early improvement. The 48 fm. level east, on the copper lode, is looking better, producing good stones of rich ore, but not sufficient to value. All other places are without alteration.

PLYNIMMON.—J. Garland, Dec. 9: I am very sorry to inform you that, owing to a continuance of the severe frost, the water continues to rise in this mine, being now up to the roof of the 12. We are still enabled to work in the stope in back of the 12, which now produces 1 ton of lead ore per fathom. The driving of the cross-cut north of the adit level, towards the north lode, is being kept on by a full party of men, and good progress being made.

PRINCE OF WALES.—J. Andrews, J. Pryor, Dec. 8: Setting Report: The following was our setting on Saturday: To drive the 77, west of engine shaft, by six men, at 12s. per fathom; lode 6 in. wide, yielding a little muddle and copper ore. To drive the 55 east west, by six men, at 13s. per fathom; lode 20 in. wide, composed of quartz, capel, and muddle, and a little copper ore. A pitch in the back of the 77, east of shaft, by two men, for one or two months, at 14s. in 1l. A pitch in the back of the 40, west of shaft, by two men, at 14s. in 1l.

RELISTAN CONSOLS.—J. Curtis, Dec. 9: Duke's shaft is now 5 ft. below the 24; the lode is 3 ft. wide, with stones of muddle, copper ore, blende, and a little tin, but nothing to value.

RHEIDOL.—John Ridge, Dec. 4: The lode in the 30 west is still of a most promising character; the part carried (5 ft.) is composed of slate, spar, carbonate of lime, and a good mixture of lead and blende, 3 ft. wide, with a very kindly appearance for improving. The rise in the back of the deep adit level will yield 25 cwt. of blende per fathom.

ROMAN GRAVELS.—Arthur Waters, Dec. 9: Setting Report: The 95 to drive north of old shaft cross-cut, by four men, at 14s. 10s.; the lode is worth 25s. per fathom. The 95 to drive south of Dorricott's shaft, by six men, at 16s. per fm.; the lode is twiced by the cross-course, and at present worth 20s. per fm. The No. 1 stope in the 95, north of Tittley's shaft, by four men, at 7l. per fm., worth 40s. per fathom. No. 2 stope, north of ditto, by four men, at 7l. per fm., worth 40s. per fathom. No. 3 stope, north of ditto, by four men, at 6l. 15s. per fathom, worth 28s. per fathom. The stope in the 95, south of the above winze, by four men, at 7l. per fathom; the lode is worth 50s. per fathom. No. 1 stope, in the same level, south of Dorricott's winze, by four men, at 6l. 10s. per fathom, worth 40s. per fm. No. 2 stope, south of ditto, by four men, at 6l. per fathom, worth 28s. per fathom. No. 3 stope, south of ditto, by four men, at 6l. 10s. per fathom, worth 20s. per fm. No. 4 stope, south of ditto, by six men, at 6l. 10s. per fathom, worth 14s. per fm. No. 1 stope, in the same level, north of the above winze, by four men, at 6l. 10s. per fathom, worth 60s. per fathom. No. 2 stope, north of ditto, by four men, at 6l. 15s., worth 70s. per fathom. No. 3 stope, north of ditto, by two men, at 6l. per fathom, worth 28s. per fathom. The 80 to drive north of shaft cross-cut, by four men, at 14s. per fathom—a wide lode of spar, with stones of ore, but not to value. The 80 to drive south of Corfield's, by six men, at 16s. per fm.; the lode is 3 ft. wide, worth 20s. per fathom. No. 1 stope, in the 80, south of the above winze, by four men, at 6l. 15s., worth 40s. per fathom. No. 2 stope, south of ditto, by

four men, at 6l. 10s., worth 40s. per fathom. The stope in the 80, south of Bishop's winze, by six men, at 6l. 10s., worth for lead 28s. per fathom. The stope north of the winze, by two men, at 6l. per fathom, worth 20s. per fathom. The stope in the 80, south of Blakemore's winze, by four men, at 6l. 10s. per fathom, worth 28s. per fathom. The stope in the 80, north of Powell's winze, by four men, at 6l. 5s. per fathom, worth 28s. per fathom. The stope in the 80, south of winze, on east lode, by four men, at 6l. per fm.; the lode is worth 25s. per fathom. The new south engine shaft, below the 80, by six men, at 28s. per fathom, now down 5 fms. 3 ft. The 65 to drive south of Stokes's winze, by four men, at 14l. per fathom; the lode is now worth 20s. per fathom, and improving. No. 1 stope, in the 65, south of Overton's winze, by two men, at 5s. per fathom, worth 40s. per fm. No. 2 stope, south of ditto, by four men, at 5l. 15s. per fathom, worth 40s. per fathom. No. 3 stope, south of ditto, by four men, at 6l. per fathom, worth 40s. per fathom. No. 1 stope, in the 65, south of Stokes's winze, by four men, at 6l., worth 28s. per fm. No. 2 stope, south of ditto, by two men, at 6l. 5s., worth 14l. per fathom. The weather is still severe, but no snow has fallen for the last two days. We have today sold 200 tons of lead ore, realising 2952l.

ST. AGNES CONSOLS.—William Vivian, Dec. 9: In the 72, driving west of south cross cut, the lode still continues to improve, and is 2 1/2 ft. wide, worth 9s. per fathom for tin. In the same level driving east the lode is 2 1/2 ft. wide, very kindly in appearance, producing rich stones of tin. In the 72, driving east of north cross-cut, the lode is 3 ft. wide, worth 7l. per fathom for copper and tin. There is no further change to notice since last week.

ST. ANNE'S.—J. H. Waters, Dec. 8: The cross-course in driving the 90 yard cross-cut north has again opened out into fine conical soft ground for 2 ft. 6 in. wide, composed chiefly of gossan and clay; an east and west joint of 2 in. wide has just been cut, and a little lead ore found. I judge from present appearances we shall have a very important change here soon. The 120 cross-cut north progresses satisfactorily, without, however, any change worthy of note.

SOUTH CONDURROW.—W. Rich, W. Williams, H. Abraham, Dec. 7: The tin lode in the 60 cross-cut north is not yet fully cut through, but so far as seen it is worth 10l. per fathom. In the 60 cross-cut west we are driving north with the view to intersect the great lode, which is shifted to the north by means of the West Basset lode; there is an increase of water running from the end, and we think the lode is near. The 70 west is disordered by a small perpendicular branch crossing it. The 75, east of King's, is worth 12l. per fathom. The 82 east is worth 10l. per fathom. The 82 west is worth 10l. per fathom. The 93 east is worth 8s. per fathom. The 93 west is worth 12s. per fathom. The rise in the back of the 93, near the cross-cut, is worth 12s. per fathom.

TANKERVILLE.—A. Waters, Dec. 9: The stopes throughout the mine are quiet, and the millmen give us in my last general report. The winze below the 152, now down 3 fms. 2 ft., has considerably improved for lead this week, and it is evident that we are boring down into a magnificent course of ore. The lode and ore course in the 152, over the winze, is 15 to 16 ft. wide, but the indications below the said level show a wider and richer lode than anything seen overhead. The cross-cut south from the bottom of Watson's shaft, in the 107, is now into the hanging-wall of the lode, but it will take a week or so to cut through to the footwall of it. Being anxious to see what the lode is made of, we have bored into it 4 ft. 3 in., and are not yet through the ore course; the first 2 ft. of the boring passed through nearly solid lead, and the remainder was in rich leadstuff and spar mixed; the bottom of the hole, as stated above, being in ore of rich quality. We have had a rich lode throughout the sinking from the 152 to the 167, and looking at the great course of ore in the 152 winze, above mentioned, I do think there are better days in store for the company. We have to-day sampled 150 tons of lead ore, for sale next week.

TREBUCKET.—Hosking, Wm. Goldsworthy, Dec. 8: In the 56 cross-cut, north of the engine-shaft, we intersected branches of capel and quartz, which appears to be the south part of the lode; we hope to see more of it in a day or two; the cross-cut is being pushed on as fast as possible, the men working Saturday nights and early on Monday morning; the ground is still hard, and letting out more water. The lode in the 44, east of the cross-course, is producing stones of copper ore, and worth 6s. per fathom for tin—a kindly looking lode, and the ground favourable for driving. We have cut through the lode in the 44, west of the cross-course, and put the men to stope; the lode is 4 ft. wide, and worth 7s. per fm.; stoping by four men, at 6s. 6d. per ton, worth 20s. per fathom. The lode in the stope above the 44, west of the engine-shaft, and east of Phillips's winze, is 7 ft. wide, and worth 13s. per cubic fathom. The lode in the stope below the 34, east of the cross-course, is 6 ft. wide, and worth 10s. per fathom. There is no change in the 34 east end. In consequence of the severe frost we have broken the top part of the education pipe of the stamping-engine; this will cause some delay, as we are now replacing it by putting in the condensing work of the old pumping-engine, which is the right size. We hope to get to work on Friday.

TYLLWYD.—J. Paull, Dec. 9: The men in the 30 cross-cut have not been able to work their full time during the last week, in consequence of the engine-wheel being idle by severe frost. The ground in same looks very promising, and we have nice spar and spots of lead in the joints crossing the end. Very good progress is still being made in the 20 cross-cut, and some soft joints are often seen, with carbonate of iron and a little lead ore near the end; water issues freely from the end, which is an indication of the lode not being far ahead. Our surface operations are almost at a stand-still, owing to the severe frost. Stopes much as usual. We have stoped a little below the level, on south-west lode, where we find the lode 3 ft. wide, containing very good lead ore. This we consider speaks well for our 20 fathom level coming under this point, which is being pushed on towards same with all possible dispatch. This is a very important point, as we shall have 20 fms. high of stoping ground over same.

TYLLWYD.—James Roach, Dec. 9: The 40 fm. level, east of main shaft, on north part of lode, still consists of carbonate of lime, a little blende, and spots of lead ore, presenting good indications for early improvement. At a depth of 7 fms. 5 ft. under the 25, we are now cross-cutting the lode standing south of Murray's shaft, and I am glad to say we have already driven through lead worth 25s. per fathom and upwards. Still lead in breast of cross-cut; this proves almost to a certainty that we have a fine lode of lead ore in the bottom of the mine for a great length. All other work without alteration since my last advice.

WEST MARY ANN.—J. Steens, Dec. 8: About the time of our general meeting in May, last, commenced to sink on the side of the hill, and when down a fathom or two opened on a good-looking blue elvan, having gossan branches running in a north and south direction, and producing occasionally stones of lead ore. Our hope was as we went down that both the ground as well as the branches would still further improve in depth, but in this our expectations were not fully realised, inasmuch as the elvan became harder, and rendered our sinking both slow and expensive. We are down about 13 fathoms, and during the last 2 fathoms I am pleased to say a change has taken place for the better, and we believe we have secured a good lode of lead ore, and a better lode than we have had before for lead, and presenting indications of in depth proving a productive lode. The recent floods have been so severe that it has caused us much expense and inconvenience; I, therefore, thought it advisable to stop the shaft for the time, and confine our operations to driving the adit; we are in the hill about 38 fms., and have now set to the men at 55s.; within the past week a most favourable change has taken place in our getting further into the hill; the end at present is composed of soft blue killas and Hookan, intermixed with muddle. I consider we are in a very promising channel of ground, and I think there is every indication of our being in close proximity to a lode.

WEST MILWR.—Wm. Francis, Dec. 8: The 70 yard cross-cut, south from West Meadow shaft, I am glad to say still continues to present the same favourable features, and the progress is satisfactory. The driving is set at 4l. 10s. per fm., and I am fully calculating on cutting the Milwr vein before the end of the month, with a valuable discovery of lead ore.

WEST ROSKEAR.—H. Stephens, Dec. 9: The adit is still driving in a rich lode for copper. We have resumed the sinking of Lanyon's shaft, this will take the lode down about 4 fms. below the 85 end, then it will be conveyed to sink in the lode, and from present appearances I have no doubt in a good course of ore. Oats' winze sinking 30 fms. east of the last named shaft is down 7 fms. below the adit, in a good lode for copper. Stephen's shaft, about 35 fms. east of Oats' winze, is down about 10 fms. below the adit, and when communicated with the 12 will open out a fine piece of mineral ground, and very much facilitate our future operations. We have commenced driving the 12 west in a large lode containing good stones of ore; we expect soon to reach the junction with the counter lode, when there can be no doubt a great improvement will be found. There is a large piece of ore ground opening out at the adit level, and every point touched indicates favourably for a vast and profitable yield of ore at the next level; therefore, in concluding my report, I feel bound to congratulate the shareholders on the early success in their new undertaking.

WEST TANKERVILLE.—Arthur Waters, Dec. 9: The south boundary shaft is being deepened with fair progress. The 63, south of said shaft, is worth 1 ton per fathom. The stope in said level south is worth 1 1/2 ton per fathom. The winze below the 50 south is worth 1 1/2 ton per fathom. No. 1 stope in the 50, south of shaft, is worth 2 tons per fathom. No. 2 stope, south of ditto, is worth 1 1/2 ton per fathom. No. 3 stope is worth 1 ton per fathom. No. 4 stope in same level is worth 3 tons per fathom. The stope in the 45, south of shaft, is worth for lead and blende, 25s. per fathom.—Old Mine: No change in the 48 south-east towards shale. The 48, west on counter, is letting out a good feed of water. The same level, east on counter, is now into some cross-strings and bunches of spar and ore, indicating our near approach to one of the side lodes. Weather very severe.

WEST WHEAL TOLGUS.—Dec. 9: The water is in fork in both shafts. The ground in Taylor's shaft is much the same as it has been, which is moderately easy. The ground in the back of the 12 east of shaft, continues hard; the view is calculated on communicating with the 175 about the end of next month. The lode in the 125 west is small and poor. The lode in the 115 west is large, and yielding 2 tons of ore per fathom. The lode in the 105 west is all the size of the end and poor. The lode in the 95 is about 1 ft. wide, with a little ore, and looking more hopeful; we are likely to have ore in this end soon, as it is getting under a shock of ore passed through in the 55. The stopes are yielding very well, and our next sampling will be up to the usual quantity.—Richard's shaft: Ground tolerably easy, and water increasing, which is what we want, to take off some of the great stream flowing from the 85 end. The lode in the 75 west is yielding 3 tons of ore per fathom. The lode in the 65 west is yielding from 1 1/2 to 2 tons per fathom. The lode in the 55 end west is still poor. The new engine is working well, and the other engines are doing a little better. To-morrow is our monthly setting.

WEST WYNE VALLEY.—J. Kitto, Dec. 4: We have made satisfactory progress since we commenced operations, and I am pleased to be able to say that our prospects have considerably improved, particularly in the 14 driving east towards the Wye Valley Mine. Here we cut into good ore almost the first day we started,

which has continued ever since, and has been worth fully 1 ton of lead ore to the fathom, and I have not seen a more kindly lode for a very long time, or anything more likely to produce great results. We have commenced a new shaft (called Brooke's shaft), about half way between the present engine-shaft and our eastern boundary. This will be used for ventilating and drawing purposes, and from it we shall be able to reach the ore ground known to exist eastward in a comparatively short time. This, in my opinion, will prove the richest and best part of the mine, and requires prompt action in its development. The 26 is also being pushed on eastward with full force, and a winze is being sunk between the 14 and the 26 for ventilation, and for proving the value of the ground. We pumped all the water out to the bottom (or 40), but shall not be able to do much there until the pitwork has been revised, but this will be done as soon as ever I can get the necessary pumps and other materials delivered on the mine.

WHEAL CREBOR.—J. Andrews, Dec. 6: Setting Report: The following was our setting on Saturday. To drive the 120, east of Cook's shaft, by six men, at 11l. per fathom; the ground in the end is spare for driving, and the lode small and poor. To stope the bottom of the 120, east of shaft, by six men, at 7l. 10s. per fathom; lode 5 ft. wide, worth 15s. per fathom. To drive the 108 end east, by four men, at 9l. per fathom; the north part of the lode we are carrying is 3 1/2 ft. wide, composed of quartz, capel, muddle, and yielding stones of copper ore, and is letting out water freely. To drive the 72 end east, by two men, at 8l. 10s. per fathom; the lode is 3 ft. wide, composed chiefly of quartz, capel, and muddle. To drive the 48 end, by four men, at 6s. per fathom; the lode is 2 ft. wide, and is worth 10s. per fathom. To drive the 26 end, by four men, at 6s. per fathom; the lode is 2 ft. wide, and is worth 10s. per fathom. This change I regard as temporary, as the appearance of the lode is as good as ever with the exception of not yielding so much ore. To stope the 48, by eight men, at 3l. per fathom; lode worth 40s. per fathom.

WHEAL GILBERT CONSOLS.—James Pope, Dec. 8: In the adit level west we have intersected a small cross-course, which has disordered the lode, which is now 9 in. wide—a tiny lode; but as soon as we have got away from the influence of the cross-course I expect a good improvement. In the adit cross-cut nothing of any lode or branch has yet been seen, but we are expecting to meet with one daily. The stope in the back of the adit is worth fully 8s. per fathom.

WHEAL KITTY (St. Agnes).—Stephen Davey, Richard Harris, Dec. 4: New Shaft—Pryor's Lode: In the 154 cross cut, driving north, we have cut a large stream of water, which has drained the shaft for several fathoms above, and indicates our nearing the lode. From the appearance of the ground in the end we believe it is but a short distance in advance. The lode in the 142, driving west of shaft, is 3 1/2 ft. wide, worth for tin 20s. per fathom. The lode in the 142, driving east of shaft, is 5 ft. wide, and worth for tin 10s. per fathom. In the 142, driving north of shaft, on the counter, the lode is worth for tin 9s. per fathom. The lode in the 130, driving west of shaft, is worth for tin 14l. per fathom. The lode in the 118, driving west of shaft, is worth for tin 9s. per fathom. The lode in the winze sinking below the 118 is worth for tin 13s. per fathom. The lode in the winze sinking below the eastern adit level is producing a little tin and copper, but not sufficient of either to value. Nothing has been done in the 80, east of sump, during the week. The lode in the 100, driving west of engine-shaft, is worth for tin 10s. per fathom.

WHEAL MARY HUTCHINGS.—H. Miners, Dec. 8: The lode in the 32, east of engine-shaft, has further improved since my last report, and the ground is becoming more congenial for the production of mineral; it is now about 2 ft. wide, and producing a little tin. The new south, or Hemerdon, lode has also improved, and is looking promising for a further improvement as we go west; it is about 2 ft. wide, and producing good work for the stamps. The main lode, both east and west of the shaft, is still of a very promising character, and I think, should the weather prove favourable during the coming week, that our sale of tin, with arsenic and rough muddle, will nearly upon me our cost this month.

WILLOUGHBY.—H. Nottingham, Dec. 9: The 23 driving south, on new lode, is without change since my last report, the end being in a very kindly lode, mixed with lead and blende, but not sufficient to value.—Goddard's Lode: The 23 driving south, on this lode, is going through a good course of ore, with 1 1/2 ton of lead and the same of blende per fathom. The stope in back of this level, north of No. 1 shaft, is not looking quite so well in the end we are advancing towards No. 1 stope. The 13, east of the 23, is worth for tin 13s. per fathom. The lode in the 13, driving south is not so productive, as we are passing through a poorer bed of ground; when through this I expect we shall have a good lode again. No. 3 winze, sinking below the 13, is looking well, and yields 1 1/2 ton of lead and the same of blende per fathom; this looks well for a continuance of a good lode in the 23 below. We have not yet holed the winze sinking below the 13, south of No. 1 shaft, to No. 1 stope below. We have had to drive a little to the north, the winze being a little to the south of the stope. We have had a hard bar in the lode here, but are now getting through it, and the stope will be better. The lode in the 13, south of No. 1 shaft, is worth for tin 13s. per fathom, and consequently poor; there is a better lode again in sight before us, but we must cut through this bar to get at it. The two stopes going forward above this, 15 fms. south of the shaft, are yielding respectively 1 ton and 1/2 ton per fathom, and ground easy for working. I have two men timbering the ends of the underlie shaft between the 13 and 23, so that we may pack up the stopes at either side of the shaft. They will afterwards go on cutting flat for angle-bolt to the 13. I am trying to get things so arranged that we may start to sink Fyne's shaft below the 23, on new lode, next month. We have had two weeks of rain, which has almost stopped us on dressing-floors. We have managed to keep the big wheel clear so far, and we have been able to crush and jig all the stuff at hand. The weather has been milder to day, so that we are expecting a change. The men who have been raising the embankments of the big reservoir are now raising stones to build a wall as additional support to the middle embankment.

WYE VALLEY.—J. Kitto, Dec. 4: I have nothing new to communicate to you, but I am pleased to say that everything is going on well underground, and that our prospects for the future were never better than at present. The 19, east of engine-shaft, which has been most productive, is still yielding very good ore, and we are washing on the 23 towards this point with full force, but without stopping to prove the lode, and I do not purpose to do so until this run of ore ground is reached. Since my last report we have sold to the Burry Port Smelting Company, 40 tons of lead ore, at 14l. 1s. 6d. per ton, and we have a similar parcel ready to sample on Tuesday next, which I have no doubt will realise equally as good, if not a better price.

WHITEHAVEN IRON MINES.—Agent's report for the month ending Nov. 30: The stope in the back of midway drift has been worked by two men, 2 fms. 1 ft. 4 in., at 1l. per fathom; the vein of ore is 4 ft. wide, and of good quality. The No. 1 drift driving north from No. 1 stope, in the back of No. 1 drift, has been extended 1 1/2 ft. at 10s., and stoped in back 10 fms. 1 ft. 10 in., at 1l. per fm. by two men; the vein of ore here is 6 ft. wide, and is improving as we extend. The drift driving north from No. 2 stope, in the back of No. 1 drift, has been extended by two men, 1 fm. 2 ft. 5 in., at 3s. per fathom; the lode in this drift is small at present, but I think by its appearance yesterday that it will soon open broad to a good lode. No. 3 stope, in the back of Intermediate drift, has been worked by two and four men, 6 fms. 1 ft. 2 in., at 2s. 6s. per fm.; lode large, and at present is mixed with a little stone. I put the lode yesterday on a dressing-floor; the lode here, which has been most productive, is still yielding a large quantity of ore; this we shall have all taken down to prove the lode. No. 2 stope, in the back of Intermediate drift, has been worked by two men, 5 fms., at 2s. 10s. per fathom; the lode here is small at present, and we thought it wise to suspend operations in this place, and put the men in No. 3 stope to assist in putting in timber, and making the ground secure. The stope in new drift, above No. 2, north of No. 2 rise, has been worked by two men, 3 fms. 3 ft., at 2s. 5s. per fathom; the lode here is small, and spare for working. The stope in the back of No. 1 drift has been worked by two men, 4 fms. 4 in., at 2s. 10s. per fathom; the lode here is 5 ft. wide, but mixed with a little stone at present, but we think this will soon wear out, and that the lode will become very productive. The stope in No. 4 drift has been worked by two men, three weeks, on daywork; the lode is very large, and has become very stoney, which will require a great deal of picking. The stope in No. 5 drift has been worked by two and four men on day-work; we have stoped this stope for the present, and have put the men to drive the drift. We have also done a great deal of other necessary work in putting in timber, and securing and filling up No. 1 stope with rubble. We have now employed in the mines 25 miners, 7 daymen, 1 smith, 6 boys, 1 timberman; total, 40 men and boys.

T. Rosewater, Dec. 9: I beg to say that I was all through the mine yesterday, and am glad to inform you that the new stopes in the back of midway drift are opening out well. No. 3 stope, south of No. 2 rise, will now yield about 12 tons of ore per fathom; the cost of breaking is about 1l. per fathom. The lode in No. 1 stope, north of No. 2, will now yield about 30 tons of ore per fathom, and is improving every day; this is worked by men on day-work. The stope above No. 1 drift, north of No. 1 rise, is mixed with a little stone, and will require picking; there are only self-lumps in it here, and they are in the lode, which will soon wear out. I have estimated the yield of ore in this stope to be about 20 tons of ore per fathom; it is worked for 1l. 2s. 6d. per fathom. No. 3 stope, in back of Intermediate drift, is improving, and I think it will be wise to put the men to cross-cut the lode into the footwall next week at this point to prove its worth. All other points of operations in the mine are about the same as reported last week.

RAVENGLASS AND ESKDALE RAILWAY.—Traffic returns for the month ending Nov. 30.—Receipts, 181l. 6s. 10d.; working expenses, 65l. 15s. 6d.

CORNISH MINE SHARE MARKET.—The following are the closing prices:—Carn Brea, 37 to 39. Cook's Kitchen, a little enquired for at 5 1/2 to 5 3/4. Dolcoath, 40 to 41; strenuous efforts are being made here to bring the boring machine into a profitable servant to Cornish mining. East Pool, 14 to 14 1/4. East Lovells, 6 to 7. South Carn Brea, 27s. to 29s.; another call is now approaching. South Condurrow steady, 5 1/2 to 5 3/4. South Crofty dull at 15 to 16; just one-half what they were a few weeks since. South Frances, 3 to 4. West Frances, 5 1/2 to 6. West Beton, 37 to 40; the mine is said to be looking well. West Frances steady, 8 1/2 to 8 3/4. West Tolgus, 5l. to 5s. Kitty (St. Agnes), 2 1/2 to 3 1/2. Wheal Uny, 1 1/2 to 1 3/4; call of 4s. paid. Wheal Jane, 3 1/2 to 3 3/4. Unity Wheal, 1 1/2 to 1 3/4. Killifreeths, 12s. to 14s. West Chiverton advanced to 17, 18.

SALE OF BLENCOWE CONSOLS MACHINERY.—An auction was held on Tuesday, at the Blencowe Tin Mine, for the purpose of selling the machinery and other effects. The sale was a

were several tubwork bargains let to about 70 men, to sink shafts, drive the deep levels, sink winzes, &c. At the same time about 40 tribute pitches were set to about 120 men, attributes varying from 2s. to 13s. 4d. in l., most of them upon copper ore. Altogether there are at present employed on the mines, underground and at surface, 400 hands.

FALL IN THE TIN STANDARDS.—A fall of 2s. per cwt. in the tin standards was announced last Thursday evening. It was currently reported in Penzance that, on Thursday, the tin standards were reduced 3s., and the prices offered to sellers seemed to confirm that rumour. The smelters, however, formally fixed the reduction at 2s. per cwt., and the standards now are—superior common, 76s.; superior 1st, 77s. The smelters' quotations for tin metal are—common, 85s., margin, 9s.; superior 1st, 86s., margin 10s.; Banca, 16l.; Straits, 81½-82½; Australian, 81.—West Briton.

CAPE ORES.—Messrs. Richardson report that at the Swansea Ticking, on Tuesday, the Cape ores sold gave an average produce of 31 15 16, and realised 16s. 6d. per unit, or 20l. 7s. 5d. per 21 cwt. dry weight of ore. The average standard was 89l. 14s.=104l. 1s. 6d. for 9 per cent. produce, which is about 1 7/8 6d. higher than the corresponding calculated standard realised for other ores.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, DEC. 10, 1875. Table listing prices for various metals including Iron, Tin, Lead, Zinc, and Copper, with columns for item name, quantity, and price.

REMARKS.—As the closing weeks of the year pass by in rapid succession the chief characteristic of the metal market for so long a period is preserved in all its integrity. Business is very dull, and the only difference to be reported is that the dullness of the past week is, if possible, greater than that of the preceding weeks. In some departments of the trade the quietness amounts almost to stagnation, and no feature of relief appears to present itself even in the far distant horizon, and yet it may be possible to draw from this fact some small measure of encouragement, inasmuch as when things are at their worst there is a reasonable expectation that times will mend. Manufacturers, who have for a long period fought bravely against a tide of disaster, mainly arising from the high prices demanded for wages and raw material, are at last determined to close their works, or to contract their operations, rather than continue to follow a line of policy which must end in loss. Whatever the causes which have been in operation to disturb the balance which ought always to be maintained between supply and demand, and however serious the character of the disturbance may be, the force of this well known and acknowledged law is such that in the end matters will right themselves; manufacturers will be in a position to make to profit, operatives will be prepared to accept such wages as the exigencies of the trade will admit of, and the public will become buyers, and find that they are not losers by the operation. When we may expect the dawn of these halcyon days is another question, but what has been assuredly will be again.

COPPER.—There has been very little doing during the week. The market opened quiet at 80l. to 80½. 5s. for Chili bars, g.o.b., usual cash, at which price a small business was reported, since which 81l. has been paid, and 81½. 10s. for picked brands; Wallaroo, 90l. to 90½. 10s.; and Burra, 89l.; English tough is quoted 87l.; best selected, 88l.; India, 4 by 4 sheets, 93l.; and strong sheets, 95l.; ore, 16s. 6d.; regulus, 17s.; yellow metal, 7¾ to 8¼. The following is tabulated statement from the Board of Trade exhibits the comparative imports and exports of copper during the first ten months of the last three years:—

Table showing comparative imports and exports of copper for the years 1875, 1874, and 1873, categorized by ore, regulus, and copper.

IRON.—There has been some slight measure of improvement in the pig-iron trade in the North of England during the past week, but not to an extent which would warrant the anticipation that a period of permanent improvement was about to set in. There must, from week to week, be some unimportant fluctuations, and the past week has been one of the better weeks of a bad time. The limited make of pig-iron naturally tends to keep the metal firm, and so long as the reduced output is adhered to, and lessened if necessary, in proportion to the demand for pigs, no doubt prices will continue firm. The enquiry for pig metal during the week has been rather on continental account, the demand for local purposes being not particularly strong. The quotations for the various qualities were as follows:—No. 1, 54s.; No. 2, 49s. 6d. to 50s.; and No. 4, 46s. 6d. to 49s. A few small orders for rails have been placed, and there are enquiries which have not yet resulted in contracts afloat on the market. Rails of heavy section are quoted 6l. 10s. per ton. The shipbuilding trade is somewhat more active than it was, and should the present indications of improvement become permanent the plate trade may reap the benefit. Up to this time the value of plates and other finished iron remains unaltered.

There is a rather better enquiry for merchant bars from India, but upon such terms as renders it difficult to do business. The continuation of the trade in South Staffordshire does not present any diversity of colouring to that of the other great centres of the iron industry. The small amount of work which has been coming in from time to time to keep the mills going, is dwindling down to something smaller still; and the prospects for the future are not one whit brighter in this district than in South Wales, or the North of England. The quotations for marked bars continue unaltered at 10l. per ton, extras as usual. Unmarked bars run from 8l. to 8½. 10s. Sheet-iron is in fair demand for the present. There is not much doing in pigs. Clinker pigs are quoted at 3l. to 3½. 10s. All-mine, 4l. 10s. to 4l. 15s.

At the beginning of the week the market for Scotch pigs opened firm at the closing prices of the previous week, and at the prices already quoted a considerable amount of business was concluded. On Tuesday buyers found a difficulty in purchasing upon the terms at which they were anxious to get in, and an extensive business was concluded at 63s. 3d. to 63s. 6d. and 63s. 6d. to 63s. 9d. one month. At the close there were buyers at the former quotations and sellers at the latter. The next day's business showed no alteration upon previous prices; the market remained firm. On Thursday prices were hardly so good, but the market was fairly steady, and at the close there were buyers at 63s. 6d. To-day 63s. 6d. is the price for mixed numbers, buyers 1¼d. per ton less. The demand for makers' iron has improved, and quotations generally exhibit an advance. G.m.b. at Glasgow (deliverable alongside), No. 1, 64s. 6d.; Gartsherrie, 74s.; Coltness, 71s. 6d.

Table showing shipping statistics for the week ending Dec. 5, 1874, and Dec. 4, 1875, including decrease and total increase.

LEAD.—The market maintains its position, and prices are very firm, but at present makers have not announced any advance in rates. Good soft English pig is quoted 22l. to 22½. 5s., and soft Spanish, without silver, 21l. 10s.

SPELTER.—The market is firm, and 25l. 5s. is the quotation for Silesian, and 20l. for hard spelter. Australian ingots have been sold at public auction at 21l. 10s.

ZINC.—The price for ordinary zinc, under terms, is about 32l. "Oberhausen" brand is reported to have been sold during the week at 29l. 10s.

QUICKSILVER.—The market is quiet, but prices have not fluctuated, the present quotation being 12l. 10s. to 13l.

TIN.—This market has been devoid of activity. Straits was quoted 81l. cash at the commencement of the week, at which quotation it has stood almost without variation, but to-day the market is rather firmer. Australian rules at 80l. 10s.; English block, 85l.; bars, 86l.; and refined, 88l.; Banca, nominally 90l.

TIN-PLATES.—This market is in a very unsatisfactory state. Notwithstanding the reduction in the make which has taken place, the

supply is found to be in excess of the demand, and buyers are not tempted by the low prices at which plates are offering.

THE IRON TRADE (Griffiths's Weekly Report).—Friday Evening.—We report an advance in the price of Scotch pig-iron this week of 9d. per ton, the closing price to-day being 63s. 3d. sellers. The closing price this day week was 62s. 6d. Since our last report there is nothing new in the iron trade. The Belgian ironmasters are driving an extensive business in this market, and continue to send more finished iron, with one exception, to England than in any other country. In other words, we are now their second-best customer. Our ironworks are stopping in various districts, and the men, we are sorry to say, will have a very hard time of it this winter. But they have brought it all on themselves. The present high wages have crippled the makers of the commonest iron, and they are compelled now to shut up the works or come to grief. When the men are disposed to work full time for the old pay we shall again be able to hold our own markets here against the Belgians, but not before. The meeting of the shareholders of the Nant-y-Glo and Blaena Iron Company has taken place this week. They have made a fair quantity of iron, and raised a large quantity of coal, but the balance-sheet shows no profit, and we regret to say that this state of things exists in the working of several other large companies.

Messrs. James and Shakspeare.—COPPER: Sales of furnace material have continued only of 1411 tons ore at Swansea Ticking, average produce 10½ per cent., average price 16s. 9d. per unit; stuff of high percentage realised at the same sale 16s. 8¼d. per unit. There has been more enquiry for bars throughout the week, and a tolerably large trade done mostly in ordinary brands at from 80l. to 80½. 10s. per ton, the latter figure predominating. It would seem that 80l. is about the lowest price warranted by the present position of the market, and though no great advance is to be expected, there are signs that the year will close with a slight improvement on the rates lately ruling. Australian descriptions are still neglected, but quotations remain unaltered, the quantity on sale being exceedingly limited. English kinds are steady, the smelters being tolerably well supplied with work, though offering a slight inducement to secure orders for Indian sheets.—TIN: English is in fair demand, but the quotations are a trifle easier than when we last wrote. Straits and Australian have fallen about 1s. per cwt.; but there has been more business doing at the reduction. The decline was chiefly brought about by operators for a fall, who daily announce transactions at figures below those ruling in the open market, and these tactics have hitherto proved so successful as to encourage a continuance.—LEAD is steady, with an upward tendency; Spanish showing an improvement of 2s. 6d. to 6s. per ton, owing to short supplies.—TIN-PLATES firmer, with a good trade doing for shipment to the United States.

Messrs. Grenfell and Rickards.—COPPER: Our market for Chili bars, after receding this week to 80l., 80½. 5s. for g.o.b.'s, yesterday became firmer, and a moderate business having been done up to 80½, 15s. 8½. closes with sellers at latter price. Orders for India scales and Smelters' copper in limited demand, and prices falling.—TIN: The London and Dutch delivery of foreign tin in November amounted to only 1220 tons, as against 1950 tons in October. Part of this falling off doubtless is owing to smelters having previously to November kept English at a price pounds above foreign, consequently the consumption of the latter was greatly stimulated, whilst the former met with very little demand.—LEAD is in good demand, and makers rather holding for higher prices.—TIN: Nothing satisfactory to report.

Messrs. Henry Rogers, Sons, and Co.—IRON: The iron market does not improve, excepting that pigs are a fraction higher. Most makers of malleable iron are working at a loss, and thus argue that prices will advance; but there is no sign at present that demand will get within a very long way of the present supply, and until this end approaches it is difficult to see how the trade can improve.—COPPER: The market has receded 10s. to 20s., but the quotations are, to a certain extent, nominal. No doubt a few hundred tons in second hands have not found buyers above 80l.; but the importers finding that a considerable business might be transacted at this low figure, have not been inclined to realise, their holdings costing them a good deal above present quotations. There has been no demand for furnace material. Bars may be quoted 81l.; tough, 87l.; selected, 87½. sheets, 80l.—TIN: The fall in this metal since the Dutch sale has been continuous. Australian is 80½. 10s.; Straits, 81l.—SPELTER: There is very little doing at this moment, but prices are kept up; on the Continent quotations are higher than this side.—LEAD: This metal has improved fully 5s., the supply of ore being again short.

Messrs. Fry, James, and Co.—COPPER has been less enquired for, with the natural result of a further weakening in prices. These are anomalies connected with this article which are not easy to explain; for instance, in the face of a recognised sluggish demand, the stocks in warehouses in England and at Havre were reduced by about 2500 tons during last month, whilst the quantities afloat and chartered for show no change.—The business sluggish and drooping, the fall in value in the foreign market having been fully 30s. per ton, and there Scotch pigs have no prospect of recovery.—LEAD maintains the little recovery noted in our last.—SPELTER has become dearer, partly from the effect of demand and partly from the effect of the weather on transport.—TIN-PLATES sell very slowly.

Messrs. French and Smith.—COPPER: Chili bars are a little stronger. In other descriptions no change.—TIN: Straits and Australian have gone back slightly, but close firm at 81s. for Straits and 80s. for Australian.—TIN-PLATES more enquired for.—LEAD firm, at quotation.—QUICKSILVER is slow at 12l. to 13l.

Mr. Murrant.—TIN: Foreign sorts were more than ordinarily depressed, Straits having receded to 80s. 6d., but there were some strong buyers at the lowest prices. The deliveries for the present month will, it is said, be larger than those for November, and should this be true, it may tend to a partial recovery from the late drop. The position has been regarded as critical by a few holders, who have, in consequence, shown some anxiety to sell, and this had a weakening effect on the market. The reported sales were 220 tons Straits and Australian, at 81s. 6d. to 79s. 6d. for cash and shipment.—COPPER: Very little business has been passing in Chili, which shows a drop of about 10s. for the week. At the Swansea Ticking on the 7th inst. about 148 tons of ore (in fine), with an average produce of 10½ per cent., fetched an average price of 15s. 9d. per unit. Australian sorts have been quiet. The business consisted of 37 tons g.o.b.'s, and named brands at 80l. to 81l. for cash and prompt.—IRON: Scotch pigs have improved in value, the closing price being about 6½. 4¼d. cash.—SPELTER and LEAD steady.—TIN PLATES in rather more enquiry.—QUICKSILVER quiet.

Messrs. Sanford and Bird.—COPPER is easier, with little doing.—TIN has relaxed about 20s. per ton, and closes weak.—TIN-PLATES are in better demand, and prices are somewhat firmer.—SPELTER remains firm.—LEAD keeps steady.—SHEET ZINC is in good demand.

Soon after our last it was publicly made known that smelters had dropped the tin standards for ore 2½. per ton, and in consequence the MINING SHARE MARKET has been more than usually dull, and in most cases among English mines prices are merely nominal. Among the sound and legitimate foreign companies more business has been done, and one or two are coming into favourable notice. Among these San Pedro has advanced from a mere nominal price to 2½. 3½. Argentine has been largely dealt in at 2 prem., while Santa Barbara, Gold Run, and a few others are enquired for.

Among home mines the chief attention has been directed to West Chiverton, Tankerville, Parys Mountain, Roman Gravels, Pateley Bridge, Devon Consols, Wheel Crebor, Prince of Wales, Trebeigh Consols, West Tankerville, West Tolgus, Great Wheel Vor, and a few others.

West Chiverton, 17½, 18½; the accounts, preparatory to the meeting next week, show a profit of 2023l. on five month's working, and a balance in hand of 2406l. 2s. 7d. A dividend of 12s. 6d. is recommended. The costs are charged up to Nov. 6, and the ores credited to Nov. 30. The amount due to merchants is 2523l. 10s. 5d. The lead ores sold realised 5635l. 13s. 10d.; blende, 3891l. 4s. 2d. The mine is reported as looking well, and to have greatly increased in value.

Roman Gravels, 12, 12½; according to the setting report there are three ends driving in the mine. The 90 north worth 25l. per fathom; 90 south worth 20l.; and the 80 south worth 20l. The stopes are worth in the aggregate 368l. per fathom. The monthly sale of lead ore (200 tons) realised 2052l. Tankerville have improved to 10, 10½, the mine looks better, and the sampling this month 130 tons of lead. West Tankerville, 24s. to 26s. The 48 east on caunter indicates the near approach of one of the side lodes. Ladywell, 2½, to 2½; Pennerley, 1½, to 1½; Bog, ½, to ½; East Caradon, 1½, to 1½.

South Roman Gravels, ½ to ½; a meeting has been called here for the 17th to decide upon future operations. It will be remembered that at a previous meeting it was decided to issue debenture bonds to raise 2500l., which was considered sufficient to get the shaft down to a productive depth, and that two gentlemen alone had agreed to take 1500l. if the other shareholders came forward for the balance; but it now appears the general body have not done so, and if they do not apply by the meeting a proposition, we understand, will be made for reconstructing the company, giving the present holders a pro rata interest in fully paid-up shares, and offering advantageous terms for raising the necessary cash capital. More than 20,000l. has been spent by the company, and the mine, situate as it is between Roman Gravels and Tankerville, only requires a further outlay of a few thousands to render it, perhaps, a great success. Under the cost-book system there would be no difficulty whatever in getting the money required, but under "limited liability" many a mine at the end of a fixed capital becomes sacrificed by one set of shareholders to make the fortunes of others. It is hoped, however, that the shareholders in South Roman Gravels will not allow this mine to get into other hands for the sake of a few pounds.

Devon Great Consols, 4½ to 5; no change here; the lode in Dymond's winze is worth 15 tons of copper ore per fathom; the 145 east, 8 tons; the 130 east, 12 tons per fathom. Carn Brea, 37½ to 40; Cook's Kitchen, 5½ to 6; Dolcoath, 40 to 42½; East Van, 2 to 2½; Great Laxey, 15 to 16; Great Wheel Vor, 2½ to 3½; Great West Van, ½ to ½; Hingston Down, ½ to ½; Marke Valley, 3½ to 3½; Old Tre-

burget, ½ to ½; Penstruthal, ½ to ½; Plynllymmon, ½ to ½; Pateley Bridge, 5½ to 5½; South Carn Brea, 1½ to 1½; South Caradon, 130 to 140; South Condurrow, 5½ to 6; Tincroft, 20 to 22; Van, 28 to 29; Van Consols, 1½ to 1½. Prince of Wales enquired for at ½ to ½; this mine has been for some time poor, but there is now a prospect at least of better things. In the 40, west of shaft, there is a lode in the end of a pitch worth 4 tons of copper ore per fathom. This is in whole ground to surface, and on what the present agent considers the main part of the lode, although the north part, which dwindled down to nothing, had been considered the best. This point is about 20 fms. west of the former rich course of ore, and is going into unexplored ground whole to surface.

At the Great Retallack meeting the accounts showed assets over liabilities of 264l.; the agent reports that if the mine continues as at present he can raise 80 tons of blende per month, and at an average of 3l. 10s. per ton they would have a good profit. Trebeigh Consols, 6s. to 8s.; at the meeting a call of 1s. per share was made. The mine has the Wheel Wrey and Ludcott lodes, and is considered a good speculation that can be proved for a little money. Parys Mountain, 10s. to 12s. 6d.; the frost has slightly interfered with the precipitating pits, but the agent has weighed off 270 tons of copper ore and 80 tons of sulphur. At the four-monthly meeting at South Tolcarne the accounts showed a debit balance of 150l., and a call of 3s. per share was made. At the Rosewall Hill and Ransom meeting a call of 3s. per share was made; the debit balance was 940l. 0s. 1d. Relistian Consols, ½ to ½; the lode in the shaft sinking towards the junction with the copper lode is now 5 ft. wide, with stones of copper ore, blende, and tin. Should this junction, which is high at hand, prove as the agents expect, there would be a great rise in the shares, which are in few hands, with a large working capital. West Basset, 5 to 6; West Craven Moor, 10 to 10½; West Great Work, ½ to ½; Wheel Agar, 1½ to 2½; Wheel Crebor, 2½ to 3; Wheel Grenville, 2 to 2½; Wheel Kitty (St. Agnes), 2½ to 3.

Cape Copper, 35 to 37; the directors have declared a dividend of 17. per share, free of income tax, and payable on the 24th. Santa Barbara shares have been enquired for at ½ to 1½; this mine is in the neighbourhood of St. John del Rey, and is making about 500l. per month profit. The paid-up capital is something under 20,000l., and the shares chiefly held by wealthy firms in Liverpool. San Pedro shares have advanced to 2½, 3½, and the next advices, which may cause a further rise, are anxiously looked for. Argentine Gold, 6½ to 7. Richmond, 7½ to 8½; the week's run is telegraphed at \$50,000. St. John del Rey, 420 to 430; the produce of 10 days for the second division of November is 18,500 ozs.=7168l. The directors will, at the forthcoming meeting, recommend a dividend of 25 per cent. for the half-year. Gold Run, 16s. to 18s.; advices have been received that the incline through the bed rock has been completed, the sluices arranged in place, and the incline through the gravel raised up 115 ft.; and, as the water season had set in, the agent hopes soon to be in full work. Before this work had been commenced in the summer the superintendent reported that when all was completed, and in full operation, the mine would pay large dividends. Almada and Tirito, ½ to ½; the advices show a profit on the month of October of \$2470. Eberhardt and Aurora, 7½ to 8½; Flagstaff, ½ to ½; Frontino and Bolivia, 1½ to 1½; Javali, 12s. to 14s.; New Quebrada, 3½ to 4½; Sweetland Creek, 2½ to 3.

The market for Mine Shares on the Stock Exchange during the week has been somewhat less firm than of late. Lead descriptions have been more offered, upon the expectation that as the weather is interfering with the current returns, forthcoming dividends may be proportionately diminished. There is also the general consideration that the volume of business is always much narrowed towards the close of the year. This, however, is perhaps less conspicuous now than in former years, while the market throughout is in a healthier condition than for a long time past, invariably the forerunner of a period of progressive activity.

Argentine shares have been largely dealt in at 7½ to 7½, and close 7 to 7½. A contract has been entered into for the necessary machinery, and 20 tons will be shipped during the present month, sufficient to put 24 heads of stamps in working order forthwith; the remainder will be shipped in January. In the meantime money has been sent out for vigorously working the mines. Profits are expected to commence from Jan. 1. Opening up the mines in a scientific and miner-like manner will be proceeded with energetically. There are several other mines in the same condition as Pique, the lowest workings of which are reported to be equally rich. Considerable interest, therefore, attaches to the future career of this enterprise.

Silver Mines, excepting Eberhardt and Aurora, have been dull and drooping. Eberhardt advanced to 8½, 8½, upon the announcement of an important discovery made at a point whence valuable results may fairly be looked for; a profit of 14,000l. has been realised in 36 days, and the mine, generally, continues to improve. Negotiations with the debenture-holders are in satisfactory progress, and it is not unlikely the debentures may be replaced by ordinary shares. Richmond Consolidated, in the early part of the week, were quoted 8½ to 8½, but subsequently declined to 7½, 8, closing 7½ to 8½. Cablegram received: "Week's run, \$50,000; sunk 30 feet in good ore; mine looking well." The make of bullion for the season is \$1,310,000, and since February, \$1,840,000. The refinery this season has produced gold and silver to the value of \$344,000, irrespective of the lead. The improvement this week in the returns tends to confirm the manager's anticipations; and, considering that the re-lined No. 3 furnace could scarcely have given its full complement, is satisfactory. The new discovery is opened out to 30 ft. in depth, being an advance of 18 ft. since last week, as no mention is made for the drift. The 50 ft. of width traced and named in former cable, gives the dimensions of the chamber as 50 ft. by 30 ft. The manager's written report describes his efforts to trace the lode in depth before he had ascertained its changed direction; this being proved subsequently, as we learn by cable he was able to run an incline 30 ft. in the lode in good ore. The flattening at the 600 ft. level may be the precursor of a chamber or chambers in the lode, as everyone familiar with the mine expected. The new hoisting-engine, if the contractor fulfilled his engagement, was to be ready for work by the first week in December. We learn that, from the preparations made, one or two other furnaces, in addition to the three now running, can be got ready for work at short notice. The delays from various causes have hitherto prevented this arrangement from being carried out, and the advanced position of the season may make it inadvisable to increase the smelting power this side of spring. Three furnaces, with the rich ore now available, should be made to yield large profits, those profits being determined chiefly by the absence or presence of sufficient lead, and as that is now abundant the weekly runs are larger, produced at less cost. The

Sentinel of Nov. 17 says:—"The Eureka and Palisade Railroad is now in successful operation its entire length, as projected by its builders. The construction of the road, especially the portion from Alpha to Eureka, is said to be first class in every particular." The opening of this line before winter is a fortunate thing for the district and its mines. As the new railroad of 80 miles was due to private enterprise, no greater testimony could be offered to the theory of permanence as a characteristic of Eureka mineral formation.

Tecoma, ½ to ½; the details of the meeting appear in another column. The mine seems to be opening out encouragingly; but, as explained by the Chairman, the shareholders must do one of three things—either let the vendor, Mr. Erwin Davis, continue to find money to work the mine, the shareholders find money themselves, or wind-up the company. Mr. Davis is at present owed 1400l.; if the shareholders came forward with 2000l., one or two large shareholders authorised the Chairman to state they are prepared to subscribe 500l. The main adit will give 500 ft. of backs, and a mine, according to the Chairman, that will last some time, paying a moderate dividend, the large amount of capital probably preventing a larger one being declared. A resolution was passed, requesting the directors, if possible, to obtain an independent report on the mine from Mr. Lowndesbury, who is in Salt Lake City. Emma, 1½ to 1½; the adjourned meeting was held pro forma on Wednesday, and further adjourned till Jan. 7, by which time the newly-elected directors hope to be able to report to the shareholders the financial as well as the general position of the company,

especially with regard to the law suits in America, and also as to whether they should advise the passing of the accounts of the late directors.

The Market for Gold-Washing Shares has been moderately active during the week, and shares in most of the companies have been enquired for. Washing has been commenced in all the Californian mines represented here, with every appearance of good results.

Malpaso, 3 to 4; during the year the returns have been 1008 ozs. of gold, realising 3961L., obtained at a cost of 3447L., leaving a profit of 514L. These returns have been obtained from 5608 hours washing with an average head of water of 456 in.; notwithstanding the disappointing results obtained from the main banks, a small profit has been realised during the past year.

In Foreign Quartz Mines, St. John del Rey stock further advanced, having changed hands at 417, closing 410 to 420; the directors recommend a dividend of 25 per cent. for the half-year at the meeting to be held on Dec. 22.

Copper Mines have been represented by Cape Copper at 30 1/2 to 37 1/2; the usual quarterly dividend of 20s. per share has been declared; the advices appear elsewhere.

Van, 28 1/2 to 29 1/2; the sinking of the engine-shaft below the 90 is making rapid progress. There is no change in the various parts of the mine, but everything is going on most satisfactorily.

Grogwinion, 3 to 4; Wye Valley, 4 1/2 to 5 1/2. Melindur Valley, 1 1/2 to 2; all the shares issued to complete the development of this mine have been absorbed by the original proprietors, and a very important change is reported to have occurred at the mine.

Pennerley, 1 1/2 to 1 3/4; the old mine remains without change, at Potter's Pit the sinking of the shaft is progressing favourably, and the two winzes in the 65 continue of the same value as before reported.

Subjoined are the closing quotations:— Bog, 1/2 to 3/4; Carn Brea, 37 to 39; Devon Great Consols, 4 to 4 1/4; Dolcoath, 40 to 42; East Caradon, 1 1/2 to 1 3/4; East Lovell, 6 1/2 to 7 1/4; East Van, 1 1/2 to 1 3/4; Great Laxey, 15 to 16; Great Wheel Vor, 3 to 3 1/4; Hingston Down, 7 1/2 to 10; Marke Valley, 3 1/2 to 3 3/4; Pateley Bridge, 5 1/2 to 6 1/4; Parys Mountain, 7s. to 10s.; Pennerley, 1 1/2 to 1 3/4; Penstruthal, 8s. to 10s.; Roman Gravel, 1 1/2 to 1 3/4; Tankerville, 10 to 10 1/2; Tincroft, 10 to 20; Van, 28 1/2 to 29 1/2; Van Consols, 13 1/2 to 15 1/2; West Bassett, 5 to 6; West Chiverton, 17 to 18; West Tankerville, 13 1/2 to 15; West Grenville, 1 1/2 to 1 3/4; Almada and Tiritio, 3 1/2 to 5; Birdseye Creek, 1 1/2 to 1 3/4; Cape Copper, 35 1/2 to 36 1/2; Cedar Creek, 5 1/2 to 7; Chontales, 3 1/2 to 5; Colorado Terrible, 3 to 5; Don Pedro, 1 1/2 to 3; Eberhardt and Aurora, 8 to 8 1/2; Emma, 1 1/2 to 1 3/4; Exchequer, 7 1/2 to 15; Flagstaff, 5 1/2 to 7; Frontino and Bolivia, 1 1/2 to 1 3/4; Javall, 12s. to 14s.; Last Chance, 10s. to 15s.; New Quebrada, 3 1/2 to 4 1/4; Richmond Consolidated, 7 1/2 to 8 1/4; St. John del Rey, 410 to 420; San Pedro, 2 1/2 to 3; Sweetland Creek, 2 1/2 to 2 3/4; Tecoma, 3 1/2 to 5; Oregon (pref.), 4 to 4 1/4; United Mexican, 2 1/2 to 3; South Aurora, 3 1/2 to 5; Blue Tent, 4 to 4 1/2; Argentine, 7 to 7 1/2; Asheton, 3 1/2 to 4.

SHEFFIELD.—Mr. J. R. Heard, stock and share broker, in his weekly report says—Local market idle, Staveley's 5L., Sheepbridge 30s. better. The following are current rates:—Bilbao Iron Ore Company, 40 to 44; Bolckow, Vaughan, and Co., 11 1/2 to 12 prem.; Brown, Bayley, and Dixon, 25 to 24 1/2 dis.; Charles Cammell and Co., 8 1/2 to 8 1/4 dis.; Charlton Iron Company, 9 1/2 to 10 1/2; Chillington Iron Company, 4 1/2 to 5; Ebbw Vale Steel and Iron Company, 15 1/2 to 15 dis.;

G. and J. Brown and Co., 75 to 70 dis.; Hopkins, Gilks, and Co., 7 to 6 dis.; John Brown and Co., 8 to 8 1/2 prem.; Parkgate Iron Company, 11 1/2 to 11 3/4 prem.; 11 1/2; Sheepbridge Coal and Iron Company, 19 1/2 to 19 3/4 prem.; 18 1/2, 18 3/4, 19 1/2; Staveley Coal and Iron Company, 44 1/2 to 45 1/2 prem.; 44, 45; William Cooke and Co., 25 to 24 dis.; Sheffield Waterworks Company, 94 1/2 to 95 1/2; Sheffield Gas Company, 205 to 200.

HALIFAX SHARE MARKET.—Dec. 9: The following quotations are from Mr. J. H. Thackrah's list:—Halifax and Huddersfield Union Bank, 30; Halifax Joint-Stock Bank, 28 1/2; Halifax Commercial Bank, 24 1/2; London and Yorkshire Bank, 28s. 9d.; John Crossley's, 13 1/2; Whitworth and Co., 9; Eiland Gas, 20; Rastrick Gas, 18 1/2; Bradford Brick and Tile, A, 24; B, 7 1/2; Charlestown Brick and Tile, 9 1/2; Ripponden Commercial, 12 1/2; Hebden Bridge Cotton, 10; Yorkshire Boiler Insurance Company, 21s.; Norton Brothers, 8 1/4.

The directors of the Cape Copper Mining Company (Limited) have declared a dividend of 20s. per share, free of income tax, payable on Dec. 24 to all shareholders on the books on Dec. 17.

The directors of the St. John del Rey Mining Company will recommend a dividend of 25 per cent. for the half-year at the meeting to be held on the 22nd inst.

The directors of the National Provincial Bank of England have this day declared a half-yearly dividend at the rate of 8 per cent. per annum, and a half-yearly bonus of 6 per cent.

Vice-Chancellor Malins has appointed Mr. E. G. Clarke (Barnard, Clarke, and Co.), Lothbury, official liquidator of the Llynvi Colliery Company (Limited).

The numbers are published of the bonds, amounting to 26,900L., of the Five per Cent. Mortgage (Spanish Coupon) Bonds of the Rio Tinto Company, which have been cancelled in accordance with the provisions of the trust deed.

The directors of the National Provincial Bank of England notify that on Monday next, the 13th inst., they will open a branch at Serle-street, Lincoln's Inn Fields.

With this week's Journal a SUPPLEMENTAL SHEET is given, which contains: Original Correspondence: Coal under the Severn; Steam Traction on Railways; Mining Interests of England and Wales (R. Treddinick); Blende Mines of Cardiganshire (A. Francis); Mining in Cardiganshire, No. II. (S. Trevelyan); New Consols Tin and Arsenic Works; Wheel Grenville, and its Management; West Maria and Fortescue Mines; Frontino and Bolivia Gold Mining Company.—Tasmanian Tin—Foreign Mining and Metallurgy—Prize Essay (T. H. Allan)—Treatment of Auriferous Ores—Chapter on Mining—the Surrender Mine, Reeth High Moor—Geology of Croyd—British Manufacturing Industries—Handbook for Charcoal Burners—Coal Trade—Cyclops Blower for Forges (Illustrated)—New Process of Treating Ores—Patent Matters—Meetings of the Almada and Tiritio, Tecoma, Blue Tent, Imperial Brazilian Collieries, Russia Copper, South Tolcarne, Nant-y-Glo and Blaiana Ironworks, West Godolphin, and West Craven Moor Companies.

BRITISH LEAD MINES.—We have been favoured with an early copy of Mr. Murchison's new work, published to-day. We cannot do better than commence our remarks by using the words of the opening sentence of Mr. Murchison's preface: "During an unusually intense and prolonged general depression, it is cheering to be able to point out at least one industry that is in a sound and prosperous condition."

And Mr. Murchison is quite justified in stating that this is particularly satisfactory to him, as it is a forcible confirmation of the views he has expressed for so many years regarding the advantages of British lead mining. The indiscriminate prejudices which exist against mining generally is, to say the least, very unfair; for, when a few thousands are lost by it, we hear much more about it than when hundreds of thousands have vanished (no matter how) in other pursuits.

The maps will also be found very useful. TANKERVILLE.—The report states that the winze below the 152 (down 8 fms. 2 ft.) has considerably improved this week, and it is evident that they are in a magnificent course of ore. The ore course in the 152, over the winze, is 15 to 16 fms. (query feet) wide, but the indications below the level show a richer and wider lode than anything seen overhead.

NEW CHIVERTON.—The lode in the shaft has further improved, now worth 18L. per fathom. This looks well for the 50, which will soon be reached. The stopes in the 25 and 35 are yielding their usual quantities of lead ore.

The sulphur and silver-lead mines situated in the lands of the Hon. Mr. Gore, North Wales, are being launched into a public company, with ample capital to develop the mineral resources of the property effectively and with practical dispatch. The mines at present are capable of returning 40 tons of sulphur daily, and the fore-brest of the deepest day level has a leader of lead ore fully 18 in. wide.

PATELEY BRIDGE LEAD MINES AND SMELTING COMPANY (LIMITED).

Messrs. F. W. Mansell and Co. (Sworn Brokers) afford the LATEST INFORMATION from these VALUABLE MINES. HYDRAULIC GOLD, RICHMOND, EBERHARDT, BLUENT, ARGENTINE, STOCK EXCHANGE MARKET. See page 1359 in to-day's Journal.

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LEAD MINING COMPANIES.—

Investor are informed that THIS DAY is published, price 1s. 6d., By J. H. MURCHISON, Esq., F.R.G.S.,

A Pamphlet on BRITISH LEAD MINES, together with the following MAPS, showing the position of the principal LEAD MINES, &c., &c., specially prepared by Mr. Murchison:—

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HENRY SEWELL, M.E., LONDON ADDRESS,—10, UPPER WESTBOURNE TERRACE. CALIFORNIA, NEVADA, UTAH, COLORADO, AND THE PACIFIC COAST OF MEXICO.

E. N. RIOTTE, M.E., After Fifteen Years' Practical Experience in the above States, has established himself as CONSULTING ENGINEER in SAN FRANCISCO. Reports on Mines, as well as their metallurgical establishment, attended to by letter or cable. Stetefeld Chlorination and Quicksilver Furnaces a speciality. For references, by permission, apply to GEORGE BATTERS, 2, Austinfrirs, London. Address,—330, PINE STREET, ROOM No. 9, SAN FRANCISCO.

CALIFORNIA. RIOTTE AND BEYEA, MEMBERS OF THE SAN FRANCISCO STOCK EXCHANGE, STOCK AND MONEY BROKERS, STATE AND CITY SECURITIES, MINING STOCKS and BONDS, bought and sold strictly on commission. 330, PINE STREET, SAN FRANCISCO (Room 9).

RICHARD P. ROTHWELL, C.E., M.E., MINING AND CIVIL ENGINEER, 27, PARK PLACE, NEW YORK.

Vice-President of the American Institute of Mining Engineers; Member of the American Society of Civil Engineers; of the North of England Institute of Mining Engineers; of the Geological Society of France, &c., &c.; Editor of the Engineering and Mining Journal, New York. Reports on Mineral Properties, and on the Working and Management of Mines. ADVISES AS TO THE VALUE OF AMERICAN MINING STOCKS AND INVESTMENTS.

A thorough technical education and long practical experience in Mining in various parts of Europe and America, enable Mr. ROTHWELL to give SAFE ADVICE; and his position as Editor of the leading Mining Paper of America affords him unusual facilities for knowing the ACTUAL VALUE of American Mining Securities and the standing of companies. References: The Presiding Officers of the American Institute of Mining Engineers, and the American Society of Civil Engineers.

STEPHENSON MEMORIAL HALL, CHESTERFIELD, FOR THE ADVANCEMENT OF SCIENCE, LITERATURE, AND EDUCATION.

At a PUBLIC MEETING, in CHESTERFIELD, on 9th December instant (His Grace the Duke of DEVONSHIRE in the chair),

Subscriptions amounting to £5900 were announced. Among the speakers were—The Mayor and ex-Mayor of Chesterfield, Lord Edward Cavendish, Admiral the Hon. F. Egerton, M.P., Prof. James Stuart, M.A., Honorary Secretary to the Syndicate for University Extension, Cambridge, Rev. J. M. Mella, M.A., F.G.S., Messrs. Chas. Binns, J. Stores Smith, J. Shipton, F. Swanwick, A. Carrington, and A. Barnes.

Additional amount required, £4800. From admirers of George Stephenson, and friends of higher education throughout the kingdom, SUBSCRIPTIONS ARE BARNESLY INVITED. Communications to be addressed to the Secretary, Mr. W. F. HOWARD, Assoc. Inst. C.E., 13, Cavendish street, Chesterfield. 9th December, 1875.

COAL MINES REGULATION ACT, 1872. EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY. DISTRICT UNDER THE CHARGE OF JAMES WILLIS, Esq., H.M. INSPECTOR OF MINES.

PERSONS desirous of being EXAMINED in this District for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, should at once COMMUNICATE with the Secretary to the Board of the above-mentioned District, at the following address:— CARLTON HOUSE, LOW FELL, NEAR GATESHEAD. By order of the Board, GEO. SOUTHERN, Secretary.

N.B.—Persons who do not reside within the district are equally eligible for examination with those who do.

EXPLOSIVES ACT, 1875. 38TH VIC., c. 17.

NOTICE IS HEREBY GIVEN, that the following ORDERS IN COUNCIL and ORDERS OF THE SECRETARY OF STATE, made in pursuance of the Provisions of the above-named Act, and which have already appeared in the London, Edinburgh, and Dublin Gazettes, have been published by Her Majesty's Stationery Office, and can be purchased at One Penny each through any Bookseller.

ORDERS IN COUNCIL. No. 1.—Classification of Explosives. 2.—As to Factories for Explosives other than Gunpowder. 3.—As to Magazines for Explosives other than Gunpowder, whether with or without Gunpowder. 4.—As to Small Firework Factories. 5.—As to Stores for Gunpowder exclusively. 6.—As to Stores for Mixed Explosives. 7.—As to Premises registered for keeping Mixed Explosives. 8.—As to keeping Explosives for Private Use and not for Sale. 9.—As to the Sale of Explosive. 10.—As to the Importation of Explosive. 11.—As to the Notices to be given of Accidents connected with the Conveyance of Explosives other than Gunpowder.

ORDERS OF SECRETARY OF STATE. No. 1.—As to Floating Magazines for Gunpowder. 2.—As to Floating Magazines for Explosives other than Gunpowder, whether with or without Gunpowder. 3.—As to the Packing of Explosives other than Gunpowder. 4.—As to the Conveyance of Explosives on Roads and in certain Special Cases.

Abstracts of the provisions of the Act, so far as they relate to different branches of the Trade, and to the different interests concerned, together with Forms of Application for Licenses, and Continuing Certificates, and Forms of Registration, have also been prepared: and a List of such Abstracts and Forms has been published, and can be purchased in the same manner as the Orders above named. Home Office, 9th December, 1875.

MINING ENGINEER. WANTED, A CERTIFICATED ENGINEER, who has had practical experience in Coal, Coke Manufacture, Coal Washing Machinery, &c.: Fire-brick Making, Ironstone Mines. He will be required to take CHARGE of the COLLIERIES, BRICK WORKS, and IRON MINES of the SOUTHERN STATES COAL, IRON, AND LAND COMPANY (LIMITED); and to reside in the State of Tennessee. None need apply except those who have been engaged in the same occupations. State age, salary required, and 1 reference. Apply to the Secretary, Exchange Buildings, Stockton-on-Tees.

TO MINING COMPANIES. A MINE AGENT, of long experience in Cornwall and Foreign Countries—thoroughly acquainted with Pumping and Winding Machinery, the Separation of Lead and Blende, and other Minerals, mechanically; a good knowledge of Copper Smelting, speaks English, French, and German—DESIRES a RE-ENGAGEMENT. Inspections and negotiations undertaken. Unexceptionable references. Address, "C. E.," St. Antonin, Porte Restante, Tarn-et-Garonne, France.

CLERK. WANTED, by a Young Man, aged 21, a SITUATION as ABOVE in the OFFICE of a COMPANY. Good shorthand writer, and quick at figures. Address, "Shortland," 32, Tachbrook street, London, S.W.

COLLIERY MANAGER. WANTED, an EXPERIENCED and CERTIFICATED VIEWER to TAKE CHARGE of a COLLIERY in the MIDLAND COUNTIES. His duties will be to undertake generally the working of the Colliery, excluding the commercial and financial arrangements. Apply, stating age and salary required, to "A Company," care of Messrs. Wells and Hind, Solicitors, Nottingham.

Notices to Correspondents.

Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be read on receipt; it then forms an accumulating useful work of reference.

MINERAL STATISTICS.—Will some correspondent kindly give me the yearly production of pig-iron in the Cleveland district (which, I presume, comprises Durham, Northumberland, and the North Riding of York) for 1850, '51, '52, '53, '54, '55, '56, '57, and 1868? I have these particulars from 1859 to the present time, but wish for the earlier figures, so as to show the progress of the Cleveland iron trades since its important discovery in 1850 by John Vaughan.—T. M.: Manchester.

MR. ARTHUR DEAN.—We have a letter for Mr. Dean, which we shall be glad to forward on learning his address.

GOLD IN WALES.—We regret that we are compelled to postpone the letter from Mr. T. A. Readwin intended for this week's Journal until next Saturday.

Received.—"J. B." (Paris): "One Interested" (San Francisco): "A Reader" (Sutro): "C. B. R." (Colorado): Shall be glad to receive it.—"S. G." Will be forwarded.—"A Shareholder" (Garmarthenshire Anthracite Coal and Iron Company): The voluntary winding up of the company has been ordered to continue under the supervision of the Court of Chancery.—"A Reader" (Truro) had better write to the paper in which the statement appeared.—"A Shareholder" (Van Consoles): "A Shareholder" (Wheat Grenville): "A Constant Reader" (Brussels): The information shall be given, probably next week.—"M. E." (Neath): "A Shareholder" (New Rosario): A report of the meeting appeared in last week's Journal.—"N. T. R." (Dudley): We should feel obliged by the particulars being forwarded.—"Inventor": No; you must apply to a patent agent, who will advise you how to proceed.—"Correspondent" (Leitrim): Send us the particulars, and, if possible, we will publish them.—"H. F."—"S. T. R."—"S. B."

THE SUPPLEMENTARY SHEET.—We have received occasional complaints, and of late a good many, that the Journal is delivered by country booksellers without the Supplement. Subscribers would oblige us by demanding that the paper should be handed to them complete, as every Journal is accompanied by the Supplement when it leaves our office, and the fault of omission must rest with the country bookseller or their London agent.

SCALE FOR ADVERTISEMENTS.—Our charge for general advertisements is—Forsyth lines and under, 4s.; per line afterwards, 8d. Average, 12 words per line.

IMPORTANT NOTICE.—REDUCTION OF POSTAGE ON THE "MINING JOURNAL."—In consequence of the new POSTAL CONVENTION, which came into operation on July 1, the postage of the Mining Journal to many countries will be reduced to one fourth. Henceforth the subscription will be 12. 10s. 4d. per annum (39 frs.), postage included, for the following countries. The amount will, if desired, be collected at the subscriber's residence at the end of each year. The subscription continues until countermanded:—Austria, France, Belgium, Denmark (including Iceland and the Faroe Islands), Egypt, Germany, Gibraltar, Greece, Heligoland, Italy, Luxemburg, Netherlands, Norway, Portugal (including Madeira and the Azores), Roumania, Russia, Servia, Sweden, Switzerland, United States, Malta, Turkey, Morocco, Tunis, and the Canary Islands. Spain 12. 19s. (50 frs.)

AVIS IMPORTANT.—AUX ABONNES ETRANGERS DU "MINING JOURNAL."—A cause de la nouvelle CONVENTION POSTALE il y avait, a partir du 1er Juillet 1875, une grande diminution du prix de l'abonnement du Mining Journal pour les pays dont le taux des postes était jusque la bien élevé. A partir du 1er Juillet le prix de l'abonnement est de 39 frs. le port compris, pour l'Autriche, Belgique, France, Danemark et ses dependances, l'Egypte, l'Allemagne, la Grèce, l'Italie, Hollande, Portugal et ses dependances, Roumanie, Russie, Serbie, Suède, la Suisse, la Turquie, l'Arabie septentrionale, etc. Le montant, si l'on le veut, sera touché a domicile, la fin de l'an. L'abonnement continuera sauf avis contraire.

AMERICAN SUBSCRIBERS.—In reply to several enquiries, it may be stated that subscribers in the United States can be supplied with the Mining Journal, post free, at the price of \$5.00, gold per annum, payable in advance, by remitting to Mr. D. Van Nostrand, publisher, and importer of scientific books, &c., Murray-street, New York; or, direct to our Office, 26 Fleet-street, E.C.

THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, DECEMBER 11, 1875.

THE CALAMITIES IN OUR COLLIERIES.

Very distressing is the news which we have this week to record in connection with the working of our coal mines. For several years we have been strikingly free from accidents of magnitude, but now they have come upon us at once. We much fear that nearly 200 will have been the total loss of life since our last publication. Perhaps 140 or 150 of these fell on Monday in the Swaithe Maine Colliery, which belongs to the Edmunds Main and Swaithe Coal Company, the members of which are Mr. Joseph Mitchell, Mr. Chas. Bartholomew, and Mr. John Tyas. It forms one of the nest of collieries which have sprung into existence in recent years in the vale of Worsborough, at one time a beautiful valley, some three miles from Barnsley. The colliery is connected with the Edmunds Main, in which, on Dec. 8, 1862, an accident happened, by which 57 lives were lost. At that time the Swaithe pit was being opened up, in order to give increased ventilation to the Edmunds Main, and the explosion then resulted from a shot, which was fired with the object of connecting the two collieries. South Yorkshire, therefore, again comes to the front with a painful conspicuousness, and the Barnsley seam affords a further illustration of its deadliness. Only two miles away from the Swaithe Main Colliery is the well-known Oaks, where the same fiery seam is worked, and where on Dec. 12, 1866, the greatest explosion which ever occurred in England "sent a thrill of horror over the whole country," 366 lives being then lost. In the same district is Lundhill, where on Feb. 19, 1857, 189 lives were lost. Both the Edmunds Main and the Swaithe Main Collieries are in the Worsborough Dale, and are not only among the most extensive, but are considered amongst the safest, best ventilated, and best managed in South Yorkshire. For a great many years Edmunds Main enjoyed a favourable reputation for immunity from danger, and Swaithe was thought about the best pit to work in throughout the district. The coal gotten is the well-known Barnsley "hard," 9 ft. thick. The system of working is the pillar and stall, usual in the district. All the men are supplied with Stephenson's or the Clanny safety-lamps—the former being used in the workings and the latter in the roadways—and naked lights are prohibited.

The colliery usually gives employment to between 500 and 600 men and boys, but only about 240 presented themselves at the pit bank to go down on Monday, although for a Monday 240 was a larger number than customary. The pit has two shafts, a downcast and an upcast, each of which is about 250 yards deep, and are 80 yards apart. The workings branch off 1700 yards towards the north, about 1000 yards towards the east, 400 yards to the west, and about 250 yards to the south. The pit is worked only during the day time, and there are two shifts, one going down early in the morning, and the other soon after noon. The 240 members of the morning shift descended at six o'clock on Monday, before which time the workings had been examined, and had been reported free from danger. The poor fellows had been at work between three and four hours—for the evidence is at present conflicting as to whether the accident occurred nearer to nine or to ten, but the best authority, perhaps, just now available estimates it at the earlier hour. He is the blacksmith at the pit, and states that he was engaged in his shop as usual about five minutes to nine, when he was startled by a loud report like the going off of a cannon. He looked to the pit bank, and he saw a volume of smoke issuing from the shaft. One of the deputies said the report felt to him as if he had been struck on the neck with a bar of iron. The head gearing was indistinguishable for the smoke. In a short time several mining engineers from the collieries around were on the spot. Amongst the earliest were Mr. John Mitchell, the certificated manager of the pit; and his brother, Mr. Joseph Mitchell, jun.; Mr. W. H. Peacock, Hoyland Silkstone Company; Mr. Miller, Strafford Main; and a large party from the Oaks Collieries, including Mr. Wren, Mr. R. Day, Mr. P. Hall, Mr. Dymond, Mr. Fred Barnaby, Mr. T. Briggs, Mr. J. Fairest, and Mr. G. Hall, New Oaks; Mr. R. W. Norton, Barrow Collieries; Mr. Beever, Dodworth and Silkstone; Mr. Wedon, Swaithe Main, and Oswald, New Oaks. Exploring parties were formed, and Mr. John Mitchell himself determined to go down in charge of the first corps. On descending they found that the cage, which lay at the bottom at the time of the explosion, had been forced several yards up the shaft. For a short time their progress was impeded, but a ladder was obtained, and by it the bottom was reached. It was then found that one of the hangers-on, named George Linford, had been blown into the sump, where he was wedged in by a portion of the cage. After great ex-

ertions he was rescued and sent to surface, when he was found to be less seriously injured than had been at first supposed.

The exploring party then proceeded along the main, and discovered a fire at what is known as the "half-way," which is 350 yards from the pit bottom. Attention was then paid to the air courses so as to ensure sufficient ventilation, which was made good as far as the half-way. Other exploring parties were speedily formed as the colliers from the neighbourhood flocked to the scene; in fact, nothing could be nobler than the readiness with which the men came forward to risk their own lives to save their fellows. Between 12 and 1 o'clock there were more volunteers than were needed. Mr. Miller, Strafford Main, and Mr. James Wilson, Oaks, joined these parties. They descended along with Edward Williams and George Hall, deputy viewers at the Oaks. These explorers did their work wisely and well. They ascertained beyond all doubt that an explosion had happened in the lower dip, which was the worst part of the mine where such a disaster could have taken place. They opened doors, hung up brattice sheets, extinguished the fire, sent a few corpses to surface, but more men whom they found unable to help themselves. Nearly all the men who formed what is called No. 1 district pit, which is nearest to the Edmunds main shaft, escaped by the roadway which was being cut at the time of the Edmunds main explosion, and which has ever since remained open. By-and-bye a conference of engineers was held. There were present Mr. Mitchell, sen., Mr. Joseph Mitchell, Mr. John Mitchell (the certificated manager of the colliery), Mr. Miller, Mr. Dymond, Mr. Peacock, Mr. John Higson, Mr. Blythe (Wombwell Main), Mr. Batty (Darley Main), Mr. F. N. Wardell (Her Majesty's Inspector of Mines for the South Yorkshire district), Mr. Day, jun. (the Oaks), and other engineers and colliery managers of the neighbourhood. The plans of the levels and workings were examined, and it is believed then an opinion was expressed that of all those in the south level few, if any, could by any possibility have escaped. This would fix the number of lives lost at something like 140 or 150, supposing that many escaped by the Edmunds shaft, and others by the Swaithe shaft.

Day after day, subsequently, the explorations were continued as the ventilation permitted, and the dead were sent up. Up to midnight on Wednesday 112 corpses had been recovered—death having resulted, as is usual in such cases, from the fire in some and from the after-damp in other instances. The disastrous effects of the explosion are everywhere apparent; it is not certain that there has not been more than one explosion, and to protect the exploring parties the cupola has not yet been lighted, for the low levels were, up to Wednesday night, still full of impure gas.

There is no room for question as to the cause of the Edmunds Main explosion. The verdict, although attaching blame to no single individual, expressed the unanimous opinion of the jury that the cause of the explosion was the incautious and unsafe working of the dipboard of the colliery. The mode of blasting with powder the jury considered to have been highly injudicious, and they felt sure that it ought not to have been allowed by the underviewer or prosecuted by the workmen. Arising out of the verdict of the jury, lawsuits followed, and they were only compromised upon a payment by Messrs. Mitchell, Bartholomew, and Tyas of a sum of 1550l. in compensation to the workmen. Since that it is reported that Mr. Mitchell has spared no pains nor grudged any expense in obviating, as far as possible, every risk of danger to the men employed in his pits. It may or may not be proved at the inquest that powder has recently been used at the pit; that the inspection has been strict, and that the closest precautions against the use of naked lights have been observed. It is not for us at this early period to pronounce any opinion. We very much fear that powder was used on Monday morning, and it is asserted that matches were found in the pockets of the men. But, apart from any events which from such causes as these may arise, we must concur in much that has been written by certain of our daily contemporaries that so many terrible colliery accidents having happened in the winter months point to the necessity for a close watch being kept upon barometrical evidences, and those arrangements made by colliery managers which shall not leave the margin between sufficient and copious ventilation so fine as we fear is sometimes the case.

INFRINGEMENTS OF THE MINES REGULATION ACT.

We fear that many persons about our mines and collieries have yet to learn that the Mines Regulation Act has to be observed. There is need that this should be borne in mind by those people in particular whose engagements are not of the most extensive class. For the benefit of numerous others similarly circumstanced, and having before us the calamities which are now again directing so much public notice to the working of our collieries, we indicate with some prominence certain of the convictions to which recent infringements of the Act have led.

At the West Riding Court, Bradford, Mr. Thomas Tomlinson, owner of the Eccleshall Park Colliery, near Bradford, has been summoned on a recent occasion for no less than eight different offences. The colliery was a new one, and, according to Mr. F. Wardle, the district Inspector of Mines, the defendant had not provided an adequate amount of ventilation, had not a competent person to inspect the mine and to daily report its condition, had not provided for the withdrawal of the men in case of danger, had not an adequate break and proper indication as to the position of the cage or load in the shaft, had not securely fenced the machinery in and about the mine, had not provided for daily inspection, had not kept the requisite books or a copy of them at the office of the mine for inspection, and had not posted up in a conspicuous place rules for the working of the mine. "Guilty" was pleaded to four of the charges, and by arrangement it was agreed that defendant should be fined 2l. and costs for inadequate ventilation, 5s. and costs in three other cases, and merely the costs in the remainder. Mr. Moses Cowell, the confidential manager of the South Liberty Coal Pit, Long Ashton, has been fined 10l. for having failed to supply an adequate amount of ventilation at that pit. In this instance, it may be remembered, four men who were employed at a particular heading used safety-lamps, and were killed by an explosion which followed the introduction of a naked light. The scientific evidence in this case was very conclusive, for Mr. Cadman, Assistant Inspector of Mines for the western district, gave in evidence that no means had been adopted at the seat of the accident to convey the air to the face of the workings.

At the same Court where this conviction was recorded the deputy-bailiff was mulcted in the penalty of 2l. and costs for not having fenced off a place in the mine where fire-damp had been discovered and put up a danger board, for not having reported to the bailiff, and for allowing a miner to pass through that portion of the workings before it was reported safe. The result of this carelessness was that there was an explosion, and one man was killed. A fine of 5l. and costs has been imposed upon Mr. William Williams, colliery manager, under Mr. Thomas Jones, owner of the Tylacock Colliery, Pontypridd, for not having provided an adequate amount of ventilation at that colliery. The information was sustained by the most direct evidence, and it was shown that several portions of the colliery were charged with explosive gases. The allegation for the defence was that the ventilating flue was being cleaned, and that there were no colliers employed at the time. We may now cite rather an unusual conviction, which exemplifies that the terms of the Act have yet to be learned by others than colliery officials and operative miners. Edward Brooks, a contractor for tunnelling mines, has been ordered to pay 2l. and costs for having taken into the Bradley Hall Coal Mine, near Chorley, more than 4 lbs. of powder. A fatal accident had recently happened at the colliery, and while the Government Inspector was making an examination of the workings he discovered a vessel containing 11 lbs. of gunpowder. Defendant alleged that, as a contractor, he thought he was at liberty to have in the pit a larger quantity than was allowed an ordinary miner.

This list of recent magisterial decisions under the Mines Regulation Act might easily be supplemented with numerous other instances, but these surely should be enough to bring about a stronger determination than is in some cases being shown to strictly observe the requirements of the new Act. Mining is attended with risks enough under ordinary conditions, and the progress of science has not yet absolutely vanquished the spontaneous elements of danger. It,

therefore, devolves upon both miners and our responsible officers to put forth every exertion that prudence, skill, and experience may suggest for minimising the occurrence of fatalities in our mines and collieries.

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY.

Public opinion has been exercised, to a certain extent, of late as to the affairs of an important and old established steam shipping undertaking popularly known throughout the empire, and we might almost add throughout the world, as the P. and O. The steamers of the P. and O. traverse great oceans, and bear the name and the fame of England into very remote regions, but the shareholders are just now not blessed with very liberal dividends. A very hard bargain is driven with the company by that stern and niggardly public department, the Post Office; and what with this stingy treatment, the competition of other lines of steamers, and the stagnation of Indian commerce, the company is only able to give its proprietors 3½ per cent. upon their nominal capital for the twelve months ending Sept. 30, 1875. But for the fall which has happily occurred in coal quotations of late, it is not at all improbable that the shareholders would have had to move on as best they could without any dividend—or, at any rate, with a still skinnier one than that actually proposed—for the past financial year.

The company has been making exertions for several years past to adapt its fleet more fully to the requirements of the times, and also to introduce into its steamers the latest modern appliances and improvements, with a view specially to a reduction in the consumption of fuel. The Poonah, the Bangalore, and the Travancore have been recently dispatched to the East, after having received new machinery and other improvements. The work done in each case has been successful, and the results in point of economy of fuel and additional carrying capacity are satisfactory. The Simla—a vessel built in 1853, and which during her career did excellent service to the company—has been sold to Messrs. HOWDEN and Co., of Glasgow, in part payment of new machinery which is to be supplied to the Tanjore, and sundry alterations which are to be carried out in that ship. With respect to the Tanjore it may be added that at the present time she is the only vessel laid up to receive new machinery. It is expected that she will be ready for sea in February, 1876. It should be also noted that the company has now one steamer—the Nepal—building at Glasgow. She will be a vessel of 3500 tons burthen, and 600-horse power. When she is ready for sea the company will own a fleet of 50 steamers, of an aggregate burthen of 1,27,039 tons, and an aggregate force of 22,165-horse power. The company further possesses 17 steam tugs and launches of an aggregate burthen of 1247 tons, and an aggregate force of 491-horse power.

The disposition of the company's 50 steamers may be stated as follows:—Some 37 are engaged in the Mediterranean, Adriatic, India, and China services; four are engaged in the Australian service (one plying between Melbourne and Sydney); five are occupied in Chinese and Japanese local services; two are cargo vessels; one is receiving new engines at Glasgow; and one has only a paper existence at present, being in course of construction in one of the Clyde yards, as already indicated. It is, perhaps, interesting to note that the directors, finding that in the present depressed state of steam shipping it is cheaper to purchase than to build steamers, have recently added by purchase three large steamers to the company's fleet. Two of these steamers—each of 3000 tons burthen and 500-horse power—were built in 1872-3 by Messrs. CAIRD and Co., of Greenock, for the North German Lloyd's Company, for the purpose of enabling that company to run a line to the West Indies; having been built with a view to service in a tropical climate, these steamers have required comparatively little internal alterations to adapt them for the Peninsular and Oriental Company's work. They have been named the Assam and the Siam; the former has already been dispatched to India, while the latter will follow in the course of a few days. The third steamer purchased was the partly finished Nepal, to which reference has already been made. The Nepal is being built by Messrs. STEPHEN and SON, of Glasgow. She was originally contracted for by a new German-American line, but this undertaking being abandoned by another company, the contract for this steamer was abandoned. At the time of the purchase of the Nepal by the Peninsular and Oriental Company, the construction of the vessel had merely advanced sufficiently to enable her to be adapted to any trade; and the contract made by the Peninsular and Oriental directors with Messrs. STEPHEN was that they should complete the work according to the company's latest specification. The Peninsular and Oriental directors appear to give a fair amount of attention to the important interests entrusted to their care, but we fancy that they might avail themselves to a larger extent than they do at present of cheap colonial coal.

ECONOMIC GENERATION OF STEAM—ROTARY BOILER.

Reference was made in the Mining Journal of May 4, 1861, to the practical trial of a new rotary boiler invented by Dr. F. Grimaldi, of Naples, and the improved arrangement was pronounced to possess many and important advantages. It was a 3-horse boiler, and in shape cylindrical, with curved ends, upon which trunnions were affixed to enable the boiler to be rotated through the stuffing-boxes provided in the brickwork in which the boiler was set; the steam and water supply pipes passed through the trunnions, so that almost the entire surface of the water could from time to time be exposed to the action of the heat. The extreme length of the boiler was 19 in., and its diameter 18 in., ordinary boiler-plate being used in its construction. The furnace was so arranged as to form a square chamber, with a cylindrical one above it, and it was in this cylindrical chamber that the boiler rotated, the lower side of the boiler dipping well into the square chamber; the grate surface was 16 in. by 12 in., and the diameter of the cylindrical chamber was about 2 ft., 5 in. being the depth of water kept in the boiler. The water was supplied by jets below the water line at each stroke of the feed-pump, and the steam before being used in the engine was passed through a second vessel fixed in the flue, with which the top of the boiler chamber communicated, in order to superheat it. The superheater was not, however, considered an essential part of the invention. It was pointed out at the time that perhaps the greatest advantage possessed by Dr. Grimaldi's boiler was that as the fire acted upon every part of the boiler in succession, instead of upon a single point continuously, it promised increased durability, whilst the practical trial showed that the mere rotation was productive of considerable economy.

Some doubt having been expressed as to whether the economy was due to the rotation or to the peculiar construction of the boiler and boiler chamber, the writer of the present article, who had merely attended as a scientist to witness the trial, and was not in any way connected with the inventor, suggested that the pressure gauge should be looked at: it showed 72 lbs. He then threw off the strap, so as to stop the rotation, and in three minutes the pressure had fallen to 64 lbs. The reduced pressure having been noted the strap was replaced, and in three minutes more the former pressure of 72 lbs. had been regained. During the whole time of the experiment—indeed from five minutes before the strap was thrown off—neither the fire, furnace, nor machinery were interfered with in any way whatever. The evaporation upon this particular occasion was 90 gallons of water from about 60° Fahr., with 122 lbs. of coal in six hours, but it was stated that at other times better results had been obtained. In the larger boilers, such as those exhibited at the International Exhibition of 1862, tubes were carried through the boilers, so as to increase the heating surface. One great advantage of the rotary boiler is that the steam becomes half-superheated in the boiler itself—it is well dried, but not rendered non-lubricating.

This latter form of boiler is now being re-introduced as the "Centennial" Rotary Boiler, by Messrs. Chase and Co., of New York, and the results obtained by Dr. Grimaldi are now secured with certainty. In its present form it is a cylindrical rotary tubular steam-boiler with two circular rows of tubes running from end to end. The outer row is surrounded by buckets, or elevators, as shown in the end view. These buckets nearly encircle the tubes and cover

the inner surface of the boiler shell with water at each revolution. The inner row act as superheaters, drying as well as generating steam. The rate at which the rotary boiler evaporated water into dry steam was such that it exhibited a steaming capacity of about four times that of well designed stationary boilers; or for the same area of grate the same rate of combustion, and same tube area the steaming capacity of the rotary boiler was nearly equal to that of a stationary boiler of the same type and diameter, and of not less than 15 ft. in length. The rotary boiler in this case was only 40 in. in diameter and 45 in. long, and having 32 flues. The power required to rotate this boiler was only 0.2 of 1 per cent. of the steam generated. Its evaporative duty was very high, when the fact that perfectly dry steam was produced was taken into account. The steam produced by this little boiler was very large. The quantity produced at 50 lbs. pressure per hour generated by the rotary was adequate to the performance in a good modern steam-engine of an amount of work equal to 44.1 horse-power, and consequently the steam capacity exhibited by the rotary boiler was more than three times that of an ordinary boiler of similar type, and constructed in accordance with good practice. The small size and great power of these boilers will render them especially valuable for use in ironworks and similar places where waste heat is to be utilised. On steamers and steam yachts the light weight and small size of the boiler, together with the fact that it can furnish an abundance of dry steam, will make the boiler very valuable.

TREATMENT OF ORES AND MINERALS.—In the Supplement to this day's Journal is published the essay, by THOS. H. ALLEN, on the "Improved Treatment of Ores and Minerals raised in Cornwall and Devon," to which the Royal Cornwall Polytechnic Society awarded the "Mining Journal Prize" of books at their last meeting. The essay is altogether a creditable production, as it contains a large amount of useful information which, if not new, is at least not generally known or acted upon by the agents and others entrusted with the management of the mines in the counties mentioned. Some of the views expressed are unquestionably incorrect, but this is excusable when it is considered that there are absolutely no facilities in Cornwall or Devon for working men to obtain sound scientific knowledge, the only instruction open to them being conveyed through teachers whose notions are no less wild and untenable than their own. That the essay is worthy of consideration will be admitted by all who read it, and every facility will be offered for the discussion of the various questions raised, but in the discussion it should be borne in mind that the writer is an uneducated man, and that, therefore, no unfair advantage should be taken of any trifling imperfections in the technical descriptions. The author has evidently bestowed a large amount of care upon the essay, and the fact that it has satisfied the Council of the Royal Cornwall Polytechnic Society is sufficient evidence that his knowledge is up to their standard, and that he has well earned the prize. Were the practice more general in Cornwall for men of the character and knowledge of Thomas H. Allen to publish their views it would be more easy to correct erroneous notions and diffuse sound information, so that, if for no other cause, he has entitled himself not only to the recognition his essay has received, but also to the thanks of mine agents generally.

EMIGRATION TO AUSTRALIA.—An interesting lecture was delivered on Tuesday evening, by Mr. W. H. Brook, at Barnsbury Hall, Islington, on Victoria and its Gold Fields. Mr. R. Hancock occupied the chair, and on the table facing the audience were several models illustrative of the gold fields, and showing the mode of living on the diggings. The Chairman, in opening the proceedings, said he felt great pleasure in occupying the chair that evening, as he had always taken a deep interest in the subject of emigration, and as he knew Mr. Brook had spent some years in the colonies he did not doubt but that he would make his lecture instructive as well as amusing. Mr. Hancock then introduced the lecturer to the audience.—Mr. Brook, on rising, said there were thousands and thousands of acres of land in Australia as yet unexplored, and his object in choosing the colony of Victoria for his topic that evening was to point out the remarkable changes that had occurred in that colony, and argued from that that what had been done in one place might with little material difference be easily accomplished in another, for it was his firm conviction that there was as much gold in Australia still undiscovered as had ever yet been found. The lecturer then proceeded to give an account of the first colonisation of Victoria in 1832, and traced its history right up to the year 1851, when he said Victoria was separated from New South Wales, and became an independent colony. Gold was also first discovered in Australia at that year, and Mr. Brook, after giving a brief account of the circumstance which led to its discovery, proceeded to describe the effect the sudden accession of wealth had upon the diggers, and related several amusing anecdotes of their extraordinary generosity and unaccountable hobbies. The lecturer then gave a graphic description of the town of Melbourne as it now stands, and pointed out very fully its principal buildings and places of public interest. He then asked the audience to step with him in imagination outside the boundaries while they paid a flying visit to some of the principal Victorian gold fields. Inglewood, a township some 250 miles from Melbourne, was, he stated, the richest goldbearing district in Port Phillip, and Bendigo was the next, a quartz reef in the former district having yielded 13,000 ozs. of gold from 14,000 tons of stone. The largest nugget in Victoria was found at Ballarat, the place where gold was first discovered in the colony. This prize weighed 189 lbs., and was worth 10,000. After a brief description of the mode of extracting gold from the quartz and the routine of alluvial digging, and describing the manners and habits of the aborigines, or Victorian natives, Mr. Brook brought his lecture to a close by giving some sound and wholesome advice to intending emigrants. The proceedings terminated with the passing of votes of thanks to the Chairman and lecturer.

IMPROVEMENTS IN GAS MAKING.—At the Society of Engineers' meeting, on Monday, Mr. F. W. Hartley read a paper "On an Improved Method of Drawing and Charging Gas Retorts." The author first pointed out the objections to the present system of gas manufacture in distilling coals in thick layers and at high heats, with prolonged distillation. He observed that most of the recent inventions for charging and drawing retorts perpetuated the errors of that system. Mr. John West, of Maidstone, had succeeded in producing a machine which was successful in working, and was adapted for either large or small gasworks. The author then described Mr. West's invention, which consists first of a small wagon or charger, which, when filled with coal, is run into the retort, and by a very simple contrivance is made to deliver the coal in a layer about 3 in. thick on its return journey. The charger is carried on a trolley, which runs upon rails laid along the retort house in front of the benches, the charger resting on a moveable stage, capable of being adjusted to suit retorts at all elevations. The trolley is provided with a hopper, from which coals are delivered into the charger, and the trolley is propelled along the rails by a winch worked by a boy. For the new system of charging, the coal has to be reduced in size; and this is effected by means of a simple breaker, which, together with a hoist or Jacob's ladder, is driven by the ordinary engines on the works. The hoist delivers the coals into a hopper fixed over the rails, and from which the hopper of the trolley is supplied. Mr. West uses a simple rake with which a man can clear the retort of coke at one draw. The author stated that the same kind of coals produced on the old system per retort per 24 hours from 4000 to 4300 cubic feet, and per ton 9800 cubic feet of gas, while on the new system the yield per retort was from 5300 to 5400 and per ton 10,300 cubic feet, with gas of a purer character. The retort power on the new system is stated to be increased nearly 18 per cent. the increased yield of gas per ton 5 per cent., and with Holmside coal and no Cannel, gas of from 15 to 16 candle power is produced. The author stated that with this apparatus the productive power per man would be increased more than 33 per cent., and that at London rates of wages the cost of all labour connected with gas working would amount only to 1s. 9d. per ton, while the average in most works exceeded 2s. 6d. The saving in coals due to 5 per cent. greater production of gas would be nearly 4½ per cent. and at 18s. per ton, gave a saving of 9d.; 8 per cent. greater bulk of coke was sold, and that was equal to

8d. per ton of coal carbonised. The author concluded by observing that the practical results of the adoption of the new system in works having 84 retorts would be a yearly saving of 877l. 5s. 6d., on a rental of 18,845l., or equal to 4½ per cent. on the rental.

COAL AND IRON IN THE UNITED STATES.—The production of anthracite coal in Pennsylvania to Nov. 6 this year amounted to 17,436,826 tons, against 17,614,483 tons in the corresponding period of 1874, showing a decrease of 177,657 tons this year. The production of bituminous coal in Pennsylvania to Nov. 6 this year amounted to 3,366,395 tons, as compared with 3,136,503 tons in the corresponding period of 1874, showing an increase this year of 229,892 tons. The aggregate coal extraction of Pennsylvania to Nov. 6 this year amounted to 20,803,221 tons, against 20,750,986 tons in the corresponding period of 1874, showing a final increase of 52,235 tons this year. English iron rails are quoted at New York at \$46 to \$50 per ton gold, while American rails have made at the works \$46 to \$50 per ton currency.

REPORT FROM CORNWALL.

Dec. 9.—Serious as the drop in the tin standard announced last week was, its effect has been dulness rather than depression. Shares have been lower, but hardly to the extent that might have been anticipated. There is, in fact, a very general belief that tin is about as low as it well can be to pay at all; and that, consequently, the effect of the drop will not be confined to Cornwall alone, which, of course, would in the end bring matters round. Copper is a little weaker, but still the price is remunerative for mines when the product is considerable. South Caradon still retains its position as a dividend mine, and there is a strong probability of its continuing to do so. It is reported that some tributaries have made a very valuable discovery in a part of the mine that has been abandoned for some years, and that they are getting a "sturt"—such as used occasionally to take place in copper mines in days gone by—300l. in two months, by a couple of men, is no mean sum to earn.

There has been a good deal of nonsense talked and written about the borer trials at Dolcoath, and some people have even gone so far as to say that neither the Barrow nor the Darlington have ever done in Cornwall a farthing's worth of profitable work. Assuming the truth of this assertion, which would be assuming a very great deal, the sensible course would be to enquire why, if those machines work well out of Cornwall, they should not work well in. Now, this is really the course that is being pursued at Dolcoath. Both Mr. Loam and Captain Josiah Thomas know perfectly well that the Barrow borer can and does work in the North, and they are not likely to drop the experiment until they find out whether it will not work equally well here. They have got over two great difficulties—the hardness or the rock, by the use of better steel; the hindrance caused by prejudices, by appointing a man who is used to the machine to superintend its operations. The result has already been seen in a greatly increased speed of drivage, and if all goes well the machine is likely to do nearly three times as much this month as could be done by hand labour. The prospects are, therefore, by no means so dark as they have been represented.

Who will be the first to bring into Cornwall one of the pneumatic dressing apparatus described in the *Mining Journal*? It is hardly probable that it will take the county by storm, but there seems something very likely about it.

Mining appears to be making a spurt in Devonshire. For centuries the Combartin Silver Lead Mines have been worked, and they are, in fact, quite historical. They made a profit well within the present century, but had long been idle, until during the past few days a party of Exeter speculators have resumed operations in what seems to be a likely locality, with very fair prospects of success. The leading spirits in the new undertaking are the same as those who have taken in hand tin mining at Wheal Eleanor, near Moreton Hampstead. The Eleanor sett is an extensive one, with several lodes, and the shares are at a good premium. The returns of tin commence this month.

Our rainy season is over for the time, but it has been succeeded by what is for this part of the world intense cold. And it has left its work behind it. In several mines the bottom levels are under water, and Balymynhear, which had actually become a paying concern, has been drowned out altogether. Then, too, the continual downpour has injured for the time being some of the finer beds of clay. Moreover, the demand for china clay has not much improved, and although higher class clays continue to realise good prices, ordinary clays are not much in request, and it is doubtful whether many works are doing more than paying their working expenses. New clay pits are still being opened, although the warehouses at Runcorn are quite full.

At last, the Liskeard Guardians have settled their mines rating dispute. When Linkinhorne and St. Cleer showed fight, and said they intended to keep what they had got, whether the Union wanted it or no, the board took counsel's opinion, and, finding it adverse, last Saturday passed the annexed resolution:—

"That inasmuch as the parishes of Linkinhorne and St. Cleer have virtually disposed of the arrears of rates received on account of the mining property assessed in those parishes, by means partly of orders made by the school board recently formed in them for payment to them of the large portions of such arrears of rates, and partly by applying other portions thereof for the relief of existing ratepayers, and seeing that the claims of the guardians for arrears of common fund charges should have been properly provided for out of such fund that has been so improperly disposed of, and that it is most doubtful whether any rate made for the amount of such claims on the existing ratepayers could be sustained if opposed, and appearing that, so far from any voluntary efforts to meet the first demand of the guardians being contemplated, a combination of those two parishes for resistance has been formed, your committee, after the fullest and closest investigation of the facts, and the law thereupon, and upon the advice of two eminent counsel, recommend that the guardians do relinquish their claim on the parishes of Linkinhorne and St. Cleer. With respect to the parishes of Menheniot and Lanreath, the committee recommend that the claims on those parishes be also withdrawn."

The overseers of Menheniot have also succeeded in obtaining an order for the payment of six rates made on Wheal Trelawny after it was abandoned, and of one rate made on Wheal Mary Ann—ditto. The contention was that in neither case was there a beneficial occupation. Trelawny engines were kept going, but that was to drain Mary Ann, and when the rate was made on Mary Ann all operations had been abandoned. However, the Bench held that the setts were in occupation, and made the orders.

It is rumoured that the Great Cornish Consolidated Iron Mines Corporation will even yet be made one of the chief industries of the county—and the future administration of its affairs will in all probability have the advantage of the individual energy and perseverance of the gentlemen to whom the county is indebted for their development, and for the Cornwall Minerals Railway.

Mr. Robert Blew, formerly of Truro and Redruth, but more recently of Plymouth, died last week at Redruth. As a writer on the health and diseases of our Cornish miners he will long be remembered, his contributions on those subjects to the reports of the Royal Cornwall Polytechnic Society bearing the impress of much thought. His statistics also were of great value, and showed that he had used unwearied exertions in collecting the best information from all parts of Cornwall on this important subject.

Mr. T. Cornish, of Penzance, records a fact ament of gold in Cornwall, which is worth preservation. He says:—"About 1850 one Mr. Emerson, a professional chemist, obtained a patent for making a substitute for white lead, into the composition of which wolfram largely entered, and having ascertained that many western mines produced wolfram in abundance he established works at Stable Hobbs, near Penzance. After while he found that his white lead had in it a faint tint of purple, and he ultimately traced this to the presence of gold. He then turned his attention to the chances of extracting gold from Cornish minerals, and adapted some of his machinery for the purpose. He selected for his first experiment a quantity of quartz from the neighbourhood of Liskeard, and after crushing somewhere about a ton of it, he succeeded in extracting two small buttons of gold—one about the size of an ordinary waistcoat button, and the other smaller, but the experiment proved so costly that he never repeated it. I profited by it to the extent of obtaining two specimens of Cornish quartz, each containing a very small nugget of gold. Mr. Emerson, unfortunately for himself, discovered too late that although wolfram was plentiful enough in Cornwall he could not get it saved at a remunerative price, and that

he could actually import it from Germany at a cheaper rate than he could get it here, and he was consequently compelled to close his works in 1853."

TRADE OF THE TYNE AND WEAR.

Dec. 9.—There is no change to notice in the state of the Coal Trade here, but little having been done during the past week. The Tyne has been crowded with laden vessels, and most of the works have been laid off two, and some more days. When the weather moderates a fair business may be expected in house and gas coals. Manufacturing coal continues plentiful, as the dull state of the iron trade has much reduced the local consumption. Most of the iron and engine works &c., have been kept going, but some of them are only employed three days per week. The great works of Sir William Armstrong, and a few others, are still busy, and founders are also fairly employed in most cases. Of course, the great question in the coal and iron trades is the proposed reduction of wages, and those questions are not expected to be settled before the middle, or perhaps the end, of January. As it is, the works are kept going at a slow rate, and when it is possible old stocks are cleared away. Few contracts or engagements of any kind will be made under the present circumstances. A better demand has sprung up for pig-iron, and prices have improved a little; a few orders have also been received for rails and ship-plates. There is a good demand for shipment, both foreign and coastwise, and there is little doubt that if the wages question were once settled in the coal and iron trades here a better feeling would prevail, and the prospect would soon brighten considerably.

Mechanical ventilation continues to make progress here, and that the adoption of this mode of ventilation has tended very materially to increase the safety of the coal mines and prevent accidents cannot for a moment be doubted. Various machines have been tried in this district—the Lemielle, the Waddell, &c.—and lately a new machine by Mr. Cook, of Darlington, has been introduced in the Cleveland district; this latter machine is expected by those interested in it to excel all others, but it has not as yet been subjected to the ordeal of public opinion, as its performances have been kept almost secret. The Guibal fan has made great progress, and about 190 of these machines are now at work in this country. It has so far been proved to be the most effective and economical machine yet introduced. We hope to be able to give soon some account of the comparative merits of this machine, and that of Mr. Cook.

The Pig-Iron Market was stronger at Middlesborough on Tuesday. The returns of the ironmasters' stocks show that the make for November was 165,553 tons, quite equal to that for October. About 10,000 tons more of pig-iron was shipped coastwise and foreign, as compared with the corresponding month in 1874. The most important feature of the returns is shown in masters' stocks, which declined 4675 tons, and are now standing at 71,671 tons. There are 112 furnaces in blast and 45 out. The returns, considering the local depression in the finished iron trade, is a most encouraging one. The rates of pig-iron were firmer. No. 1 is 53s.; No. 3, 50s.; No. 4 forge, 49s., net cash. There is a strong demand for pig metal for the inland trade, and shipments are also fairly maintained. There is little improvement in the finished iron branches, and no change in the rates for rails, while plates and bars remain the same. The number of workmen unemployed increase, and the area of distress widens. The wages question will shortly be submitted to arbitration, as the preliminaries are being arranged. Until the decision of the arbitrators is given the employers are not likely to repeat the offer to the men to accept a reduction, as such action has been discountenanced by the Arbitration Board. The Cleveland ironstone mines have received notice of a reduction. The coal and coke trades are quiet, and prices are low.

A general meeting of the North of England Institute of Mining and Mechanical Engineers was held on Saturday, in the Wood Memorial Hall, Mr. Greenwell, of Poynton, Stockport, one of the vice-presidents, occupying the chair. From the minutes read by the secretary (Mr. T. W. Bunning) it appeared that it is intended to hold a meeting of the Institute in London in the early part of July, 1876, and a letter has been received stating that the meeting could be held in the rooms of the Institute of Civil Engineers, Great George-street, and that the institute would do all they possibly could to make the meeting successful. A great number of new members were elected, and the two papers read by Mr. G. Lebour, "On the 'Little' Limestone and its accompanying Coal in South Northumberland," and "On the 'Great' and 'Four Fathom' Limestone and their Associated Beds in South Northumberland" were discussed, Mr. E. F. Boyd, Mr. Bewicke, and Mr. Hedley taking part in the discussion. Mr. G. A. Lebour also read a paper "On the Geological Relations of the Secondary Iron Ores."

Mr. H. Mills, late manager of the Tow Law Collieries, belonging to the Weardale Iron and Coal Company (Limited), was entertained by the colliery officials to a farewell supper previous to his departure for the South of England. About 30 gentlemen sat down to a substantial and excellently prepared repast, provided by Mr. Crabtree, of the Crown and Thistle Inn, Tow Law. After the usual loyal and patriotic toasts followed the toast of the evening, the Health of Mr. Mills, and success to his new undertaking as a mining engineer at Chesterfield, to which that gentleman feelingly responded. Dr. Reid, of Tow Law, officiated as chairman with his usual ability, the vice-chair being occupied by Mr. Robert Dixon, coke inspector. Amongst the speakers were Mr. D. Thomson, manager of the Ironworks; Mr. Campbell, Ironworks; Mr. England, of the Colliery office; Mr. Hamilton, Mr. Ridley, Mr. Robert Wallis, &c.

THE COLONIAL GOVERNMENT AND CLEVELAND RAILS.—An order for the supply of 6000 tons of rails has just been placed in the Cleveland district by the colonial authorities of England. The order has been divided between the Britannia Iron Company of Middlesborough, the Moor Iron Company at Stockton, and the Darlington Iron Company. It is understood that the prices quoted by these firms, and accepted by the Colonial Government, have been considerably under those offered by Welsh firms—in one case as much as 7s. 6d. per ton—but the main object apparently held in view in giving out the order was to be secure as early a delivery of the rails as possible. Two of the firms named have undertaken to deliver at the rate of over 100 tons per week. In trade circles there is a disposition to associate the circumstances under which this order has been given out with the apprehensions of political troubles in the East. How far this conjecture may be accurate remains, of course, to be proved; but, in the meantime, the placing of such a large order in the Cleveland district has been a source of considerable satisfaction. —*Newcastle Daily Chronicle.*

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Dec. 9.—Additional gloom has been cast over the district this week by the occurrence of very distressing disasters. The great catastrophes of Risca and Ferndale will not be forgotten for years, but the district has for some time enjoyed an appreciable immunity from calamities of such an alarming character. The past week, however, seems to have brought with it a return of terrifying accidents in coal mines, and reminds the general public what perils surround the miner. Three accidents have occurred which are worthy of notice, two of them being, perhaps, the greatest terrors of the under world—the explosion of gas. The first explosion was at the Powell's Duffryn Steam Coal Company's New Tredegar Pit, and 23 lives were sacrificed, while a number of other men and boys were more or less injured. The others received warning of the disaster in time to escape. Close upon this followed an explosion at the Llan Pit, a few miles from Cardiff, the property of Messrs. Booker and Co., when 12 persons were killed and others injured. There is little doubt that to the great change in the state of the atmosphere these accidents are to some extent attributable, for the sudden lifting of the pressure on the surface causes great exudation of gas from the coal strata, but to what extent this is preventable has yet to be ascertained. There is, however, some reason for believing, it is thought, that the latter accumulation of gas, which was ignited, was caused by striking into an old working. Against such an accident no mineral engineer would say that some, if not effective, precautions might be taken. The third accident was of less magnitude, but still serious, and seems to point to a lack of engineering knowledge or caution. The Pengraig Collieries, Rhondda Valley, were flooded by two men, who were driving a heading, striking into an old working, where a very extensive accumulation of water had taken place. The two men and a horse were consequently drowned. These occurrences, of course, cause a good deal of alarm, and for a short time must affect operations more or less, but, generally speaking, do not cause anything like

a panic at the other pits, which outsiders might imagine would be the case.

In regard to the position of trade generally there is, unfortunately, still no change to report. The demand for coal has fallen off very considerably, and it is with great difficulty that some of the proprietors keep their men on at all.

The Nant-y-Glo and Blaenau Ironworks Company meeting, on Wednesday, was presided over by Mr. Hugh Mason, in the place of Mr. Richard Shaw, M.P., who has retired.

Matters are if anything, yet duller in the iron trade than at all, and prospects do not improve in the least. Rumours are again current of the closing of other works.

EXAMINATION OF MINE MANAGERS.—A meeting of the board for the examination of the managers of mines in South Wales was held on Monday at the Town Hall, Cardiff; present Mr. William Adams (in the chair), Messrs. T. E. Wales, H.M. Inspector of Mines, D. Davies, Aberdare; I. Glassbrook, Swansea; T. Forster Brown, C.E., Cardiff; G. Tasker, Merthyr Tydfil; D. Thomas, Swansea Valley; W. Hill Neath; and the secretary, Charles Henry James, Merthyr Tydfil.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE. Dec. 9.—That part of the South Staffordshire district of which Bilston is the centre is now threatened with a very serious calamity in the shape of a flooding of the whole of the mineral workings in an area comprising several square miles.

The demand for best coal in the South Staffordshire district is extremely buoyant, and, indeed, the supplies are becoming scarce. A splendid trade in best house coal is doing in the Cannock Chase district at well supported prices.

We much regret to learn that after a tedious trial sinking of nearly four years at Fairtoak to the north of Cannock Chase, and after an expenditure of 80,000l., the prospects of finding coal are so discouraging that an abandonment of the enterprise is under consideration.

The directors of the Cannock and Huntington Colliery Company (Limited), regarding the results of the trial boring as affording satisfactory and conclusive evidence of the presence of all the Cannock Chase coal measures under their estate, have decided not to carry the boring to any greater depth, but at once to commence the sinking of the shafts.

REPORT FROM DERBYSHIRE AND YORKSHIRE. Dec. 9.—A meeting of the Silkstone Fall Colliery Company was held to-day at the King's Head Hotel, Barnsley, Mr. Baker in the chair.

The monthly meeting of South Staffordshire and East Worcestershire Institute of Mining Engineers was held, on Monday, in the Geological Museum, Dudley; Mr. JOHN HUGHES presiding.

The discussion on the suggested amalgamation of the South Midland Institute of Mining Engineers, with the South Staffordshire and East Worcestershire Institute of Mining Engineers, was resumed.

The meeting then proceeded to discuss Mr. Tom Parton's paper on "The Duties and Responsibilities of Managers, under the Mines Inspection Act."

The Secretary read the resolution of the council, which was to the effect that the proposed amalgamation should be accepted; that such members as were willing and eligible should be elected, after approval, without entrance fee; all papers, transactions, and property to be the property of the larger Institute, which should not be liable for the South Midland's liabilities.

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sponsibility, and in small collieries the cost would be enormous. He spoke favourably, however, of the appointment of second-class managers. Mr. Peacock said the inclemency of the weather was such as to prevent a large attendance, and he should move that the discussion be adjourned until after the meeting.

REPORT FROM LANCASHIRE AND CHESHIRE. Dec. 8.—The Works of the Wigan Coal and Iron Company were on Friday last the scene of a terrible accident, to account for which seems almost impossible. At one of the new pits they are opening out near Wigan seven men were descending the shaft, when the cages collided, and the poor fellows were thrown to the bottom of the shaft, and, of course, killed instantaneously.

The enquiry into the disaster which caused the deaths of two men at Stand Lane Colliery, near Bury, closed on Saturday, and it having been shown that the charge man, Haslam, had failed to carry out his instructions as to signalling, he was censured by the jury for not having taken sufficient care.

An important meeting was held in Manchester on Tuesday for the purpose of promoting Technical Education in South Lancashire, Mr. Alfred Hewlett (Wigan Coal and Iron Company) occupying the chair. It is proposed to enlarge the field of operations of the Wigan Mining and Mechanical School, and to erect for its accommodation suitable buildings, which are also to include rooms for a museum, collection of models, &c.

The Lancashire and Cheshire Coal Associations' ordinary monthly meeting was held on Tuesday at the Clarence Hotel, in Manchester. There were great complaints with regard to the traffic of the district, which, if it is possible, worse than last year.

The Coal Trade is brisk, and prices are well maintained, especially for coal from the best seams. Burgly and slack are plentiful, but the demand for these kinds has improved lately.

NORTH LANCASHIRE AND CUMBERLAND EXCHANGE. There was an average attendance on 'Change, at Barrow-in-Furness, on Monday, and a better feeling was evidenced among business men.

REPORT FROM DERBYSHIRE AND YORKSHIRE. Dec. 9.—A meeting of the Silkstone Fall Colliery Company was held to-day at the King's Head Hotel, Barnsley, Mr. Baker in the chair. The company, it may be said, was formed in the early part of 1872, with a paid-up capital of 50,000l., in 64 shares.

Mr. Baker, the Chairman, in opening the proceedings, stated that the company, formed under such apparently favourable circumstances, and which is to pay the shareholders at least 24 per cent., besides putting aside a sum sufficient to clear away the capital in about 14 years, had been a decided failure.

The Chairman said that at the last meeting but one Mr. Warwick stated that he had received 81 proxies, but after that it was found they had dwindled down to six—a fact in itself most significant. Mr. Baker then read some letters he had received from some of the proxies formerly given to Mr. Baker.

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The motion was seconded by Mr. Culpen, a director. Mr. Robinson said he had two or three questions to ask the Chairman. In the first place he wished to know how it was that the directors decided to dispose of the stores of the company without putting any reserve price on them, for some of the goods were actually given away; and he also wished to know how it was that the directors sold the effects and the lease of the coal without consulting the shareholders; and why, before expending something like 2000l., in making bricks, they did not first test the clay to see what it was worth?

The Chairman said the directors, finding the concern was a losing one, were fully justified in selling the plant to pay off the bank debt. With regard to the fire-clay, it was useless to work it when the coal was found to be of no value. But the loss with respect to the fire-clay was altogether only between 2000l. and 3000l. He felt glad that the matters had turned out as they had done, for all the creditors of the company had been paid, and they had a balance in hand of about 2500l. to carry out the voluntary liquidation.

Some discussion then took place relative to the shares given to the original directors to qualify them, and it transpired that some of them had to pay for them through legal proceedings.

Mr. Kimber said proceedings had been taken against two of the old directors, and about 4000l. had been recovered.

Ultimately Mr. Baker was appointed liquidator, having received a majority of three-fourths of those present, as well as of proxies. The first resolution was also agreed to. On the part of Mr. Warwick it was understood that further legal proceedings would be taken to upset the decision of the meeting.

OPENING OUT OF AN EXTENSIVE COAL FIELD.—On Wednesday the Silkstone coal was struck at the colliery belonging to the Barrow Hematite. This is the first time that the Silkstone coal has been reached from the Barnsley bed, so that an important problem has been solved, and one that has been watched with great interest, for the coal turns out to be of excellent quality and rather more than five feet in thickness.

MEMORIAL TO GEORGE STEPHENSON.—A crowded public meeting was held at Chesterfield, on Thursday, under the presidency of the Duke of Devonshire, Lord Lieutenant of Derbyshire, to raise funds to build a public hall in memory of George Stephenson (who lived many years at Chesterfield, and is buried in one of the churches in that town), the hall to be devoted as a home for the various literary, educational, and scientific institutions of the Derbyshire coal field, of which Chesterfield is the natural centre.

DEEP SHAFTS AND MINES.—During last May the shaft of the argentiferous lead mines of Przbiram attained a depth of 3280 feet. After various trials, borings, &c., dating from the fourteenth century, actual working commenced at these mines in 1779. In 1800 the shafts were 870 ft. deep, and 2345 ft. in 1865. During the first 96 years of working the annual increase of depth was 34 ft., and in the last 10 years it has been regularly increased 83-56 ft.

Table with 5 columns: Country, District, Mineral, Name of Mine, Depth Feet. Rows include Wurttemberg, Russia, Bavaria, Portugal, Baden, Pays-Bas, Sweden, Italy, Spain, Hungary, Norway, France, Great Britain, Prussia, Saxony, Belgium, Austria.

—Revue Industrielle.

Original Correspondence.

WHEAL GRENVILLE.

SIR,—It was not my intention to have recalled what must be an unpleasant fact to the person immediately interested in one of the resolutions of the meeting of the shareholders of this mine held on the 19th ult., but as "Argus" appears to be the mouthpiece of the late secretary, I cannot allow the statements contained in his letters published in the Journal of the 27th ult. and 4th instant to pass without a few remarks from myself, as the solicitor under whose advice the recent proceedings were taken.

I will say but little in respect of "Argus's" letter of the 27th ult., for its fallacies were exposed in the very able letter which immediately preceded it, and your readers having the facts thus brought before them side by side were in a position to grasp the whole subject at once.

The case and opinion referred to by "Argus" in his letter of the 4th instant was printed, and I believe it was sent to each of the shareholders. "Argus," however, when writing this letter does not appear to have studied the case, for if he had done so he would have seen that counsel was requested to advise—

1.—As to the position of the shareholders and the validity of the rules and regulations, such rules and regulations not having been registered.

2.—Whether having regard to the wording of the Stannaries Act, 1869, and more particularly the 4th, 5th, 6th, 7th, and 17th sections and the rules and regulations of the mine, it is necessary to hold a second meeting for the purpose of confirming, &c.

In order to obtain an opinion on the first point I did not consider it necessary to refer counsel to any particular section of the Act, whereas I thought it was necessary to do so when asking for advice on the second point, for these five clauses refer to the same subject matters, viz., "special resolutions," and they should, as I consider, be read together.

"Argus" has been good enough to favour us with his opinion on the first point; now let us compare it side by side with the opinion given by Mr. Arundel Rogers:—

"Argus" says— "That a company having rules of its own (not inconsistent with the provisions of the Act) may continue under them if registered, but if not registered, as in the case of Grenville, they come under the operations of the Act itself."

Mr. ROGERS says— "It appears to me that the rules and regulations of the 24th June, 1855, are still in force and binding upon the company, notwithstanding that they have not been registered under the 9th section of the Stannaries Act, 1869, although the fact of non-registration would strengthen the views of any shareholder who might have any substantial grounds for alleging that the rules and regulations of 1855 had either been practically superseded by other resolutions or treated as of no binding force."

I leave your readers to judge as to the value to be attached to these two opinions, and I ask "Argus" has he any substantial grounds for alleging that the rules of Wheal Grenville have either been practically superseded by other resolutions, or treated as of no binding force? Have such rules ever been treated by the late secretary of the mine as so superseded and of no binding force? Did the late secretary treat them as superseded and of no binding force when he issued the notice calling the meeting for the 19th ult., in accordance with a requisition signed by two shareholders, holding in the aggregate 600 shares? I will only add that this requisition was drawn by myself in accordance with the 7th rule of Wheal Grenville Mine.

The case then resolves itself thus—Have the shareholders of a mine the power of immediate dismissal of a servant, or is it necessary for them to call a second meeting, in accordance with the 7th section of the Stannary Act, 1869, to confirm such dismissal? It cannot require more than ordinary common sense to answer this question.

With regard to the lease, books, papers, &c., the late secretary, after considerable delay, appears to have consulted a wiser friend than your correspondent "Argus," who says in his letter of the 27th ult.—"The secretary, or any other holding office under the

company, would commit a gross dereliction of duty were he or they to part with a single book, paper, or any funds belonging to it, except to a properly constituted authority," he having in a previous part of the same letter very strongly insisted that there was no properly constituted authority until after the holding of the second meeting; yet it appears that even the late secretary had some doubt as to the soundness of the advice thus tendered to him, for in his letter of the 4th inst. "Argus" says—"That he believes the late secretary was quite ready to deliver up everything connected with the company at once on receiving a proper indemnity."

Now, as to the indemnity; it is preposterous that a servant of a company should refuse to deliver up books, papers, moneys, &c., required for the purpose of carrying on the business of the mine, and which have come into his possession as such servant, on the plea that he is a trustee of the lease under which the mine is being worked; and I advised the committee that the late secretary had no legal or equitable claim to detain such books, papers, &c., though he was clearly entitled to retain the lease until he was indemnified against the covenants contained therein. And even if the late secretary were unable to compel the company to make an assignment of the lease, it is clear the Court of Chancery would not allow him to suffer, and would compel the company, if necessary, to indemnify him.

I have not seen the lease, but the committee will in due course require an assignment of it, when they will be properly advised as to the "dead rent," and other stringent covenants, mentioned by "Argus," who seems to have taken a very active part in the financial management, and otherwise, of the Wheel Grenville Mine.

Austinfriars, Dec. 9. FREDERIC CLIFT. [For remainder of Original Correspondence see this day's Supplement.]

ECHOES FROM THE MINING MARKET.

The anticipations we expressed in our last remarks as to the immediate future of the tin market were fulfilled at a very early date, as a fall of 2s. per ton in the Cornish standards was announced by the smelters before last week closed; in consequence, the market for all tin stock is in a most stagnant condition, as besides the depressed appearance of the metal, the season of the year is dead against any recovery. Thus the many hopes indulged in at the commencement of 1875 of a better 12 months than the last have been completely broken, for matters may be said to be far worse now than they were on Jan. 1, whilst the chances of permanent amendment are farther off than ever. We may have, of course, fluctuations in the standard—transient advances may take place, but from all we can see at present, and after carefully reviewing the experience that the last 12 months has given to us, we are fain to again express our opinion that it must be in reduction of costs and charges, and not from any great advance in the value of produce that those interested in our Cornish mines must look for an amelioration of their prospects. We hear from Cornwall that, although the official reduction has been 2s. per ton, the prices now offered to sellers of ores are fully 3s. per ton below the standards lately ruling. The copper market is not in a very buoyant condition, but there are no particular causes apparent to create anxiety. The season of the year will account for much of the depression and the dulness of trade generally for the last 12 months, coupled with a few adverse statistics on foreign supply of this metal in particular, for the rest. Lead is firm, and the market looks in a healthy condition. Coal is in fair demand; on the other hand, iron is again drooping.

The event of the week has been the publication of the West Chiverton accounts, which have been looked forward to with much interest. As usual, they are given in a most complete form, and will be found fully analysed below. Generally, business is rather restricted, but in Barry Mountain, Tankerville, Roman Gravel, Pennerley, West Chiverton, Marke Valley, West Tankerville, Penstrathal, and one or two others, a fair amount has been done. For foreign mines, too, there has been some enquiry, but little change has really taken place in quotations.

The following notes are from Cornwall:—Capt. W. Teague, jun., has been appointed agent of Wheal Agar. We should like to hear a little more of the progress of the Darlington borer than we have heard of late. The materials of a mine called Blencowe Consols—whose existence, we believe, has been but a short one—have just been scattered by public auction. Good prices were realised: the 70 in. pumping engine, together with the 36 in. stamping engine and 25 heads of stamps, were secured by the executive of the Van Mine. The latter was to all intents and purposes really a new engine, having been made scarcely two years.

At Basset Mine it is reported the great flat lode has been cut in the eastern part, where it had previously been lost. A call of 3s. per share has been made on Rosewell Hill shares, the debit balance being 940l. West Seton is said to be looking very well, with good chances of further improvement. Shares about 40l. each. At New Chiverton it is intended to sink to the 50 fathom level. At present there remain about 5 fms. more to sink with a lode worth 16l. per fathom. Trebleigh Consols, a new adventure in St. Ives district, is to be vigorously worked for lead. A call of 1s. per share has just been made, which will produce 600l. South Tolcarne has made a call of 3s. per share (900l.), and an encouraging report has been presented. At Dolcoath they are working hard with the boring machine, and hope shortly to solve the problem as to its applicability to Cornish rock. Another call is expected to be made at South Carn Brea, and the shares are weak in consequence. Crenver and Wheal Abraham Mines have been offered for sale in one lot, but the results were not touched by a good sum, so the present company will probably have to wind-up. As upwards of 400 hands are employed, it will be a bad thing for the Crown district unless the affair can be resuscitated.

We often hear a good deal of calls being made by the Stannaries Court on cost-book contributors years after the commencement of liquidation proceedings, and after they have been all but forgotten, but little is heard when the matter is reversed and the adventurers receive instead of having to pay; therefore, we have pleasure in noticing that a return of 11s. per share has just been made in Trumpet United, a mine that has been lost many years. In the liquidating embraces of the Court. We believe the dividend was quite unexpected by the adventurers concerned, and to many it will be a welcome Christmas box. The last call made years ago by the Court was 16s. per share. So the greater part of this is now returned.

The meeting of West Chiverton is called for the 16th inst., to transact the usual business, and to consider what portion of the profits be divided. As we have already stated, the accounts are now in the hands of the shareholders, so we will at once proceed to lay before our readers the results of the last four months' working. The profit made has amounted to 2923l., which added to the credit balance brought into the accounts makes an available balance of 2406l., equal to 16s. per 3000th share. It should be noted, however, that four months' costs and five months' merchant's bills are charged against four months' returns; so the profit is really increased by the amount of one month's bills (600l.) and by a special debit incurred in having the late purser's accounts for the last five years of his purshership examined by a professional accountant, which item amounts to 75l. The real profit has, therefore, been nearly 2600l. That this result has exceeded the most sanguine expectations, as the secretary states in his circular, cannot be gainsaid. We will readily admit that the excellent prices realised for blende has contributed in no small way to the success achieved, but the mine has also yielded well for lead. During the four months the sales of the latter have amounted to 5635l., and the former to 3891l. Two other items—rent received for Garras Wharf, Truro, and coal sold—bring up the total receipts to 9673l. Against this costs have amounted to 7650l., of which the following are the chief items:—Agency, engineering, labour, and carriage, 5907l., from which has to be deducted 1250l. for July labour, estimated and charged in last balance-sheet, making 4657l.; merchants' bills, 2374l.; dues, 388l.; sundries, including rates, doctor's fees, rent, the special charge already named for accountants and discounts, 231l.; making together 7650l. The present liabilities amount to 3089l., and assets to 5488l., leaving 2406l., the credit balance named. The accounts are duly certified by an auditor, an innovation in Cost-Book mines, worthy of imitation by the management of other leading Cornish adventures. The dividend will probably be a sum from 10s. to 12s. 6d.; perhaps the first named amount will be most in favour, although it may be remarked that a distribution of 12s. 6d. per share would still leave a larger credit balance by 150l. for the new account than that which is now brought forward. The latter sum, too, would represent exactly the figures composing the present year—1875—and, as a distribution for the final four months, would well compensate the year of the restored prosperity of the mine. JAMES H. CROFTS.

KERL'S METALLURGY BY CROOKES AND ROHRIG. Complete in Three Vols., 8vo., with 625 woodcuts, price 24 10s.

PRACTICAL TREATISE ON METALLURGY, Adapted from the last German Edition of Prof. KERL'S "Metallurgy," By WILLIAM CROOKES, F.R.S., &c., and ERNST ROHRIG, Ph.D., M.E.

Each volume may be had separately. VOL. I. comprising Lead, Silver, Zinc, Cadmium, Tin, Mercury, Bismuth, Antimony, Nickel, Arsenic, Gold, Platinum, and Sulphur, with 207 woodcuts, price 31s. 6d. VOL. II. Copper and Iron, with 273 woodcuts, price 36s. VOL. III. comprising Steel and Fuel, with a copious Supplement, and 145 woodcuts, price 31s. 6d. London: LONGMANS and Co.

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Fourth Edition, in which are incorporated all the recent valuable improvements in Assaying made in this country and abroad, including Volumetric and Colorimetric Assays, and the Blowpipe Assays. Edited and for the most part re-written by WILLIAM CROOKES, F.R.S., &c. London: LONGMANS and Co.

SCHERRER and BLANFORD ON THE BLOWPIPE. New and Revised Edition, price 4s.

AN INTRODUCTION TO THE USE OF THE BLOWPIPE, from the German of Dr. TR. SCHERRER; to which is added a Description of the Blowpipe Characters of the more important Minerals. By H. F. BLANFORD, F.G.S.

A cheap and concise handbook, valuable alike to the chemist, the mineralogist, the smelter, and the miner.—Practical Magazine. London: F. NORGATE, 17, Bedford-street, Covent Garden, W.C.

IN LIQUIDATION. VALUABLE MINING PROPERTY IN DEVONSHIRE FOR SALE, BY AUCTION.

By order of His Lordship Vice-Chancellor MALINS. IN THE MATTER OF THE LIQUIDATION OF THE CORNISH CONSOLIDATED IRON MINES CORPORATION (LIMITED).

MR. WILLIAM NORRIS is instructed to SELL, on Thursday, 23rd December, 1875, at Three o'clock precisely, on the premises, in One or more Lots, as may be determined upon at the time of sale, all those VALUABLE IRON MINES, known as THE HENNOCK MICACEOUS SETT,

And the SOUTH EXMOUTH SPATHOSE LEAD SETT, situated in the parish of Hennock, in the county of Devon, and held by the Cornish Consolidated Iron Mines Corporation (Limited), under a grant to them for a term of 42 years, of which 39 are now unexpired, together with all the PLANT, MACHINERY, GEAR, and all thereunto belonging or appertaining.

Full particulars, with conditions of sale, will be published on Thursday, the 16th December, and may then be obtained on application to the auctioneer, at 25, South-street, Exeter, from Mr. J. O. HARRIS, of Gandy-street Chambers, Exeter; or from Messrs. COPE, ROSE, and FRARSON, 26, Great George-street, Westminster. 9th December, 1875.

SHARES IN A CELEBRATED MINING PROPERTY IN CHILI, YIELDING LARGE PROFITS, FOR SALE.

TO BE SOLD, BY AUCTION, at the Mart, Tokenhouse-yard, in the City of London, on Tuesday, the 23rd day of May, 1876, at Two o'clock precisely, by Messrs. DRIVER, in One or more Lots, THREE SHARES (in Chili designated Barras) in the CARRIZALILLO MINING COMPANY. The company is divided into 24 shares only.

The CARRIZALILLO COMPANY own the celebrated DESCUBRIDORA MINE, and the three adjoining sets of SAN JUAN, CANCHAS, and SAN FRANCISCO, which are all worked under one administration, and are situate about thirty-three miles from the Port of Pan de Azucar, from whence there is a good road.

The DESCUBRIDORA MINE has been working since 1859, and has yielded large profits. There are two steam-engines at work, one of 20-horse power and one of 8-horse power, for drawing, and there is also a newly-erected powerful engine, with Blake's crusher attached; by the use of the latter the company is enabled to dress and return the large accumulation of low-produce ore, which will now give a considerable profit. The mine is in thorough working order, and well stocked with materials, rails, jiggers, crushers, &c.

The adjoining sets of SAN JUAN, CANCHAS, and SAN FRANCISCO were acquired for the purpose of securing the ground around the Descubridora Mine, and they have since been worked on a limited scale. There is also a shop, which supplies the workpeople, and also horses, carts, and mules.

Also the VEGA WASHING AND JIGGING ESTABLISHMENT, with yards, houses, shop, and stores, about nine miles from Descubridora (a tramroad is being laid down from the mine, which will greatly lessen the costs of carriage to the Vega). There are also dwelling-houses, bake-house, yards, store-rooms, ore-floors, and mole at Pan-de-Azucar, with convenient launches for use in loading ships with the ore; and there is also belonging to the company a quinchique establishment, a watering place, situate about eleven miles from Pan-de-Azucar, on the road to Descubridora, with dwelling-house, shop, store, mule yard, water carts, mules, and harness; and in Chanaral a well-furnished house of eight rooms, and spacious balcony and store below, with good counting-house.

The company also have at Chanaral other houses and sites, and also a complete condensing apparatus, with four boilers, &c. Two-thirds of Descubridora, San Juan, Canchas, and San Francisco, with some other property of comparatively small value, were sold in 1872 for the aggregate sum of £90,000, and since then profits have been divided much more than sufficient to repay the purchase-money, and there is every prospect of Descubridora continuing to give large profits for a considerable time.

Printed conditions of sale will be shortly ready, and further particulars can be obtained in Chili from ROBERT PEEBLES, Esq., Chanaral, Chili; and in England from Messrs. DRIVER, the Auctioneers, Whitehall, London; or of S. T. G. DOWNING, Solicitor, Redruth, Cornwall.

CORNWALL. SALE OF VERY VALUABLE MINERAL AND OTHER PROPERTY, Including PART OF THE DUES FROM WEST CHIVERTON, &c.

AN AUCTION WILL BE HELD, BY MR. THOMAS R. OLVER, at the Royal Hotel, Truro, on the 12th January, 1876, at Three o'clock in the afternoon, for SELLING, subject to the conditions to be produced, the LIFE INTEREST OF A GENTLEMAN,

Aged about 28 years, in various properties, embracing, amongst other lots—Lot 1.—ONE-SIXTH OF THE MINES AND MINERALS under the Manor of Ventogimps, in Perranzabuloe, Cornwall. The celebrated West Chiverton Mine (from which the owner of the one-sixth, now offered for sale, has received on the average upwards of £500 per annum) is in Ventogimps, as are also the mines formerly known as Great South Chiverton, Wentworth Consols, and part of Chiverton Moor.

Lot 4.—ONE-SIXTH OF certain MINERALS in the Manor of Gooonearle, in St. Agnes, Cornwall. The sets now or formerly known as North Trekerby, Wheal Rose, East Downs, Wheal Briton, and others are situate in Gooonearle.

Lot 5 includes portions of the MINERALS in Chilly and Chytdoden, Trevaunance, Bolster, Trewartha, and Towan, in St. Agnes. The sets now or formerly known as St. Agnes Consols, Wheal Charlotte, Wheal Towan, &c., are either wholly or in part within the above estates.

For further particulars, application should be made to Messrs. OLVER and SONS, Auctioneers and Land Valuers, Falmouth; or to Messrs. STONE, KING, and KING, Solicitors, Bath; or Messrs. PETERGAVE and HODGKINSON, Solicitors, Bath; or Mr. SILVERT BARTRUM, Solicitor, Bath; or at the offices of S. T. G. DOWNING, Solicitor, Redruth. Dated November 22nd, 1875.

TO CAPITALISTS OR PROMOTERS DESIRING TO MAKE MONEY.

TO BE SOLD, A COLLIERY ROYALTY IN NORTH WALES, close to rail or shipping port; several shafts partially sunk; coal fully proved of FOUR SEAMS of good HOUSE and STEAM COALS, in an area of upwards of 400 acres of surface. It adjoins the West Mostyn Coal Field, just successfully launched, where under seams (including Cannel) have been proved in addition to the above; so that eminent engineers state that the available coal in this royalty may be 85 feet thick.

Present holder will arrange to sell the entire to an individual or company for what it has cost him, dividing all profit made above, which, even in a normal state of the coal trade, must be large. Certain and safe surveys by eminent Staffordshire and Welsh engineers have already been made. Address, "Nil Desperandum," care of Mr. Watson, 15, Fenwick-street, Liverpool.

THE HENDON SPELTER WORKS. TO CAPITALISTS, PROMOTERS OF PUBLIC COMPANIES, & OTHERS.

FOR SALE, in consequence of the Death of the late Senior Partner, John Cadell, M.P., the SPELTER WORKS, situate at Hendon, in the borough of Sunderland, in the county of Durham, carried on under the style of "THE HENDON SPELTER COMPANY."

The works are situated within one mile of the well-known docks of the port of Sunderland, and adjoining the Hartlepool Branch of the North Eastern Railway, with which they are connected by high and low level sidings, and thereby placed in communication with all parts of the United Kingdom. Their position, within easy distance of both the ports of Newcastle and Sunderland, is very advantageous for the cheap importation of raw material, as also the forwarding of the manufactured article either by land or sea.

The ground on which the works are built can be either bought out or bought on a yearly perpetual ground rent, and any quantity under 20 acres can be included in the sale. Being situated in the midst of the Durham Coal Field fuel of the best description can be obtained at a cost below almost any other part of the United Kingdom. There are 19 workmen's cottages, which can be bought with the works.

The works contain 24 zinc furnaces, capable of producing 70 tons of metal a week, as also calciners, pottofts, machinery, blacksmiths' and joiners' shops, &c., of sufficient capacity for a much larger number. The works can, therefore, be doubled at a comparatively small cost.

The quality of the metal made at these works is well known, and it, therefore commands a ready sale at the highest prices. Attached to the high level sidings are large depots for coal, ore, &c. The goodwill would, of course, go with the works, and they will be sold subject to all stock being taken at a fair market value.

The purchaser can also have the option of buying the CALCINING WORKS and VALUABLE MINES in SPAIN, thus allowing of the economic and regular supply of the raw material, and saving the mineowners' and merchants' profits. As the ore from the South of Spain generally comes as ballast for ships laden with exports, it has been brought for this company at an average cost of 7s. per ton, sometimes as low as 4s. 6d.

Further particulars can be had on application to the company.

CHINA CLAY AND TIN, COPPER, AND IRON ORES IN CORNWALL.

THE LESSEE'S INTEREST in certain VALUABLE CHINA CLAY AND TIN WORKS, in full operation, and also in certain CHINA CLAY AND TIN, COPPER, AND IRON ORES SETTS in CORNWALL TO BE DISPOSED OF.

Full particulars can be obtained on application to Mr. S. N. SCOTT, China Clay Merchant, St. Austell.

CONDENSING AND NON-CONDENSING HORIZONTAL STEAM ENGINES, of the highest class, at low prices. PUMPING AND WINDING ENGINES. First-class references. ENGINEERS' TOOLS of all kinds, unrivalled for arrangement and general usefulness, at low prices. Inspection invited.

POLLOCK AND MACNAB, BRITANNIA IRONWORKS, HYDE, NEAR MANCHESTER.

SINKING, WINDING COAL, &c. FOR SALE, a 14-horse power PORTABLE STEAM ENGINE, with two cylinders, link motion reversing gear, drum 5 ft. diameter, with gearing to wind and pump, ready for delivery. Also, a 35-horse power PORTABLE ENGINE, a 9-horse and an 18-horse power VERTICAL, all with link motion reversing gear—suitable for mining operations. BARROWS AND STEWART, ENGINEERS, BANBURY.

In the High Court of Justice. CHANCERY DIVISION.—VICE-CHANCELLOR MALINS. IN THE MATTER OF THE COMPANIES ACTS, 1862 AND 1867, AND IN THE MATTER OF THE CAPE BRETON COMPANY (LIMITED).

NOTICE IS HEREBY GIVEN, that Vice-Chancellor Sir RICHARD MALINS has DIRECTED a MEETING to be SUMMONED pursuant to the Joint-Stock Companies Arrangement Act, 1870, of the several holders of debentures of the above-named company, or of the debentures or bonds issued by any of the three companies under mentioned, and purporting to constitute a charge upon any properties now vested in the above-named company for the purpose of ascertaining their wishes as to an arrangement proposed between the above-named company and the holders of such debentures or bonds, as aforesaid, with a view to suspending the proceedings in liquidation and carrying on the undertaking of the said Cape Breton Company (Limited), and that such meeting will be HELD on TUESDAY, the 11th day of January, 1876, at Two o'clock in the afternoon, at the City Terminus Hotel, Cannon street, in the City of London, at which time and place all persons holding debentures of the above-named company, or debentures or bonds issued by any of the three companies under mentioned, and purporting to constitute a charge upon any properties now vested in the Cape Breton Company (Limited), are requested to attend.

The names of such three companies above referred to are—(1)—THE GLASGOW AND CAPE BRETON (NOVA SCOTIA) COAL AND RAILWAY COMPANY (LIMITED).

(2)—THE LORWAY COAL COMPANY, CAPE BRETON (LIMITED).

(3)—THE SCHOONER FOND COAL COMPANY (LIMITED).

The said Judge has appointed Mr. THOS. FENN, of 6, Princes-street, in the City of London, Stockbroker, one of the debenture-holders of the Cape Breton Company (Limited) to act as Chairman of such meeting.

S. LOWELL PRICE } Official Liquidators. D. J. KENNELLY } Dated this 7th day of December, 1875.

N.B.—Any debenture or bond holder who, on or before the 8th day of January, 1876, sends his name and address, and the number of and amounts purporting to be secured by his debentures or bonds respectively to SAMUEL LOWELL PRICE, of 13, Gresham-street, in the City of London, one of the Official Liquidators of the above-named Cape Breton Company (Limited), will have sent to him a printed form of proxy duly stamped; and also a print of the resolution which has been suggested by the Vice-Chancellor as embodying the points upon which he desires to be informed of the wishes of such debenture or bond holders.

THE BWLCHY-GARNEDE SLAB QUARRY, County of DENBIGH, TO BE LET for a TERM OF YEARS, the lease having expired.

This quarry lies within two miles of the Great Western Railway and the Shropshire Union Canal, in the parish of Llantysilio. The valuable deposit of blue flags has been proved and worked. They are suitable for chimney-pieces, cisterns, pavements, &c.; of lasting quality, large dimensions, and of various thicknesses. For particulars, apply to WATKIN RICHARDS, Esq., Bank Buildings, Llangollen. Llangollen, October 28th, 1875.

THE CAPE COPPER MINING COMPANY (LIMITED).

Notice is hereby given, that at a MEETING of the Directors of this company, held to-day, it was resolved—That a DIVIDEND OF TWENTY SHILLINGS PER SHARE, free of income tax, be and is hereby declared, PAYABLE on the 24th day of December instant to the shareholders on the books of the company on the 17th instant; and that the Transfer-books be closed during the said 17th instant.

By order of the Board, J. C. LEAVER, Secretary. 6, Queen-street-place, London, 8th December, 1875.

THE MALPASO GOLD WASHING COMPANY (LIMITED).

Notice is hereby given, that the ORDINARY GENERAL MEETING of the Malpas Gold Washing Company (Limited) will be HELD at the Offices of the Company, No. 1, Winchester House, Old Broad-street, London, E.C., on THURSDAY, the 16th day of December, 1875, at One o'clock. The Transfer-books will be closed from the 9th to the 30th proximo inclusive.

By Order, SYDNEY A. COBBETT, Secretary, 1, Winchester House, Old Broad-street, London, E.C., 30th November, 1875.

THE RICA GOLD WASHING COMPANY (LIMITED).

Notice is hereby given, that the ORDINARY GENERAL MEETING of the Rica Gold Washing Company (Limited) will be HELD at the Offices of the Company, No. 1, Winchester House, Old Broad-street, London, E.C., on THURSDAY, the 16th day of December, 1875, at Two o'clock. The Transfer Books will be closed from the 9th to the 30th proximo, inclusive.

By order, SYDNEY A. COBBETT, Secretary, 1, Winchester House, Old Broad-street, London, E.C., Nov. 30, 1875.

NATIONAL PROVINCIAL BANK OF ENGLAND, BISHOPSGATE STREET.

Corner of Threadneedle-street, London, E.C., Dec. 7, 1875. The Directors of the National Provincial Bank of England hereby give notice that a HALF-YEARLY DIVIDEND, at the rate of EIGHT PER CENT. PER ANNUM, and a HALF-YEARLY BONUS OF SIX PER CENT., will be PAYABLE on the Bank's Stock on and after the 10th day of January next, when the Dividend and Bonus Warrants may be obtained at the Bank, No. 112, Bishopsgate-street (corner of Threadneedle-street), or at the different branches. The Transfer-books will be closed on and after Saturday, the 11th inst., until the Dividend and Bonus become payable.

By order of the Court of Directors, E. ATKINSON, } Joint General W. HOLT, } Managers.

FOR SALE, a splendid 40-ft. WATER WHEEL, 4 ft. breast, with double-gear DRAWING MACHINE, balance bob and connection, all complete.

For particular address, Messrs. J. TAYLOR and Co., 86, London Wall, E.C. L O C O M O T I V E T A N K E N G I N E S.—DOUBLE, 9 x 18..... £570. DOUBLE, 10 x 18..... 650. Apply to—S. LEWIN, POOLE, DORSET.

CONSIDERATIONS IN FAVOUR OF FORMING AN ASSOCIATION for the purpose of PURCHASING AND WORKING MINES in CALIFORNIA and NEVADA.

The Undersigned represents the Owners of—GRAVEL CLAIMS. QUARTZ MINES OF GOLD. QUARTZ MINES OF SILVER. CINABAR MINES.

All being more or less developed. The owners not having sufficient means to continue the working, seek the co-operation of capitalists, who would employ their own staff, advancing cash to pay for machinery and working expenses, only returning to the vendors such a share of the profits as may be agreed upon. An undoubted title shall be given to those advancing the funds.

For further particulars apply by letter addressed to—WM. MAC CANN, 42, CHAPEL WALKS, LIVERPOOL; or 42, GREAT RUSSELL STREET, LONDON.

THE SUNNYSIDE LEAD MINING COMPANY (LIMITED).

SITUATED IN THE COUNTY OF DURHAM. Incorporated under the Company's Acts, 1862 and 1867. Capital £32,000, in 16,000 Shares of £2 each, fully paid-up.

DIRECTORS. CHARLES LAWLESS, Esq. (Lawless and Co.), 85, Gracechurch-street, E.C., Merchant. JAMES PARKE HOLMES, Esq., 5, Jeffrey's Square, St. Mary Axe, E.C., Merchant. WILLIAM THOMAS HUXLEY, Esq., 85, Gracechurch-street, E.C., Merchant. DR. HOLMAN SUCKLING, LL.D., 15, St. Helen's-place, E.C.

BANKERS—THE CITY BANK, Threadneedle-street, E.C. SECRETARY—MR. GEORGE SEARLE CAUNTER. TEMPORARY OFFICES,—19, CHANGE ALLEY, CORNHILL, E.C. Prospectuses, with full particulars, can be had on application.

NOTICE. THE YSPYTTY LEAD MINING COMPANY (LIMITED).

Capital £5000, in 2000 Shares of £2 10s. per share. Deposit 10s. per share on application, and 10s. on allotment. Calls to be made as required, at intervals of not less than three months. FIRST ISSUE OF SHARES TO BE 1200.

Application for Prospectuses and Shares to be made to the Secretary, Mr. ABSALOM FRANCIS, M.E., Goginan, Aberystwith.

THE STANDARD LUBRICATING OILS COMPANY (LIMITED).

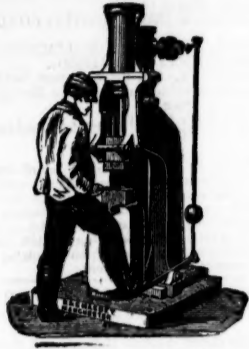
95, CANNON STREET, E.C. The SPECIALITY of the COMPANY'S OILS consists in their CHEAPNESS and FREEDOM from GLUINATION.

AGENTS WANTED.

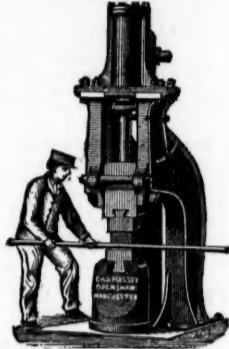
B. & S. MASSEY, OPENSHAW, MANCHESTER.

PRIZE MEDALS Awarded:—Paris, 1867; Havre, 1868; Highland Society, 1870; Liverpool, 1871; Moscow, 1872; Vienna, 1873; Scientific Industry Society, 1875. Leeds, 1875.

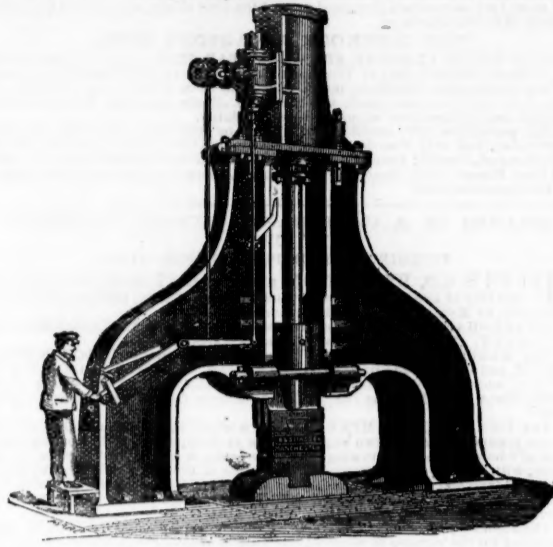
Patentees and Makers of Double and Single-acting STEAM HAMMERS of all sizes, from $\frac{1}{2}$ cwt. to 20 tons, with self-acting or hand motions, in either case giving a perfectly DEAD BLOW, while the former may be worked by hand when desired. Large Hammers, with Improved Framing, in Cast or Wrought Iron. Small Hammers, working up to 500 blows per minute, in some cases being worked by the Foot of the Smith, and not requiring any separate Driver.



Hammer with Foot Motion.



General Smithy Hammer.



Steam Hammer for Heavy Forging.



Special Steam Stamp.



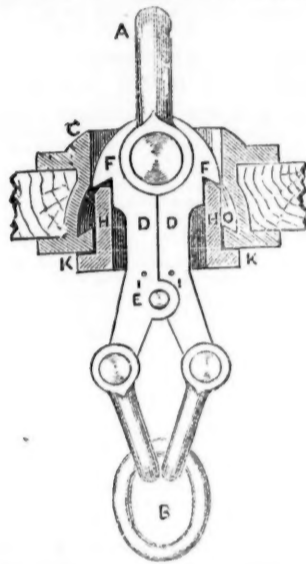
General Smithy Hammer.

From 60 to 100 Steam Hammers and Steam Stamps may usually be seen in construction at the Works.

SPECIAL STEAM STAMPS, for Forging, Stamping, Punching, Bolt-making, &c. STEAM HAMMERS for Engineers, Machinists, Ship-builders, Steel Tilters, Millwrights, Copper-smiths, Railway Carriage and Wagon Builders, Colliery Proprietors, Ship Smiths, Bolt Makers, Cutlers, File Makers, Spindle and Flyer Makers, Spade Makers, Locomotive and other Wheel Makers, &c.; also for Use in Repairing Smithies of Mills and Works of all kinds for straightening Bars, bending Cranks, breaking Pig-iron, &c.

OVERWIDING IMPOSSIBLE.

WALKER'S DETACHING HOOK, FOR COLLIERIES AND BLAST-FURNACE HOISTS.



SIX LIVES SAVED.

Walker's Hook, at Tockett's sinking, has saved six men's lives. On the 6th instant, the kibble was overwound, and but for the hook would have fallen down the pit, where six men were working, 120 ft. below, all of whom would probably have been killed. Thanks, however, to Mr. Walker's invention, the rope alone passed harmlessly over, the kibble remained suspended, and in half-an-hour everything was working as if nothing had occurred.—From the Northern Echo August 20, 1874.

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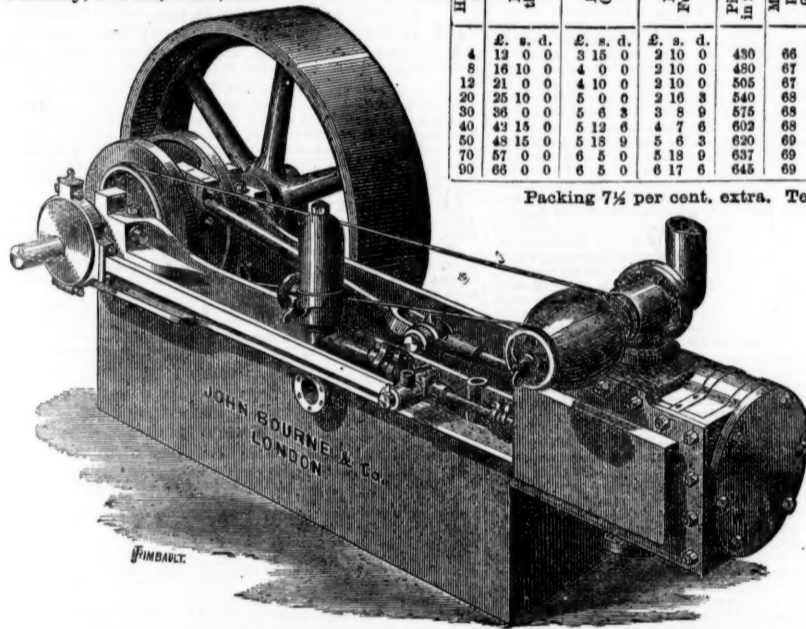
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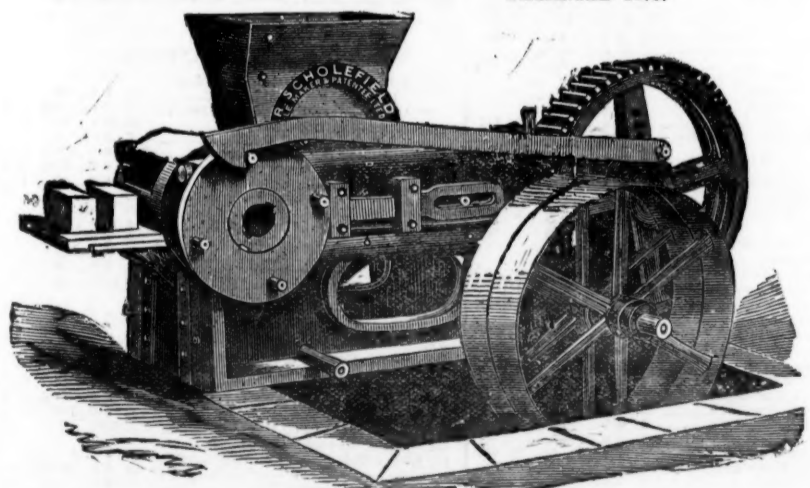
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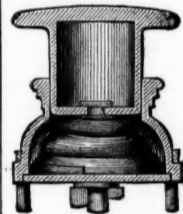
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