

1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

STOCKTON COLLIERY DISASTER.

(RETURN RESPECTING.)

Printed under No. 18 Report from Printing Committee, 7th October, 1897.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated the 12th May, 1897, That there be laid upon the Table of this House,—

“ All papers, documents, evidence, and reports of inquiries in connection with the Stockton Colliery Disaster.”

(*Mr. Fegan.*)

SCHEDULE.

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* Omitted by the Printing Committee.

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* Omitted by the Printing Committee.

STOCKTON COLLIERY DISASTER.

PART III.

Correspondence and Decision to hold Investigation under Section 23, Coal Mines Regulation Act, 1896, into Stockton Colliery Accidents.

No. 1.

Minute by The Hon. the Minister of Justice.

330/98

Subject :—Stockton Inquest.

I HAVE had a consultation with the Minister for Mines in reference to this matter, and learn that he determined, when the accident was repeated, to have an inquiry under the provisions of the Coal Mines Regulation Act (sec. 23) as soon as the inquest was concluded.

It does not appear that another inquest is called for, provided the inquiry under the Act is proceeded with, as, under this course, a competent person, with assessors having special knowledge, will hold an investigation in open Court for ascertaining the causes and circumstances of the accident, after which the persons so appointed will report to the Minister, stating the causes of the accident and its circumstances, adding any observations which they may think right to make. This will ensure a finding. To hold another inquest would, as pointed out by Mr. Wilshire in his report, necessitate not only the exhumation of at least one of the bodies, but a long inquiry, with perhaps the same unsatisfactory result, while I understand no further evidence can be obtained other than of the character already submitted. The Coroner may be informed and requested to forward papers at once.

A.J.G., 14/1/97.

Wire sent to Coroner, 14/1/97.

Telegram from The Under Secretary of Justice to The Coroner, Newcastle.

Sydney, 14 January, 1897.

PLEASE forward all papers in connection with Stockton inquest, as Minister for Mines intends having investigation under section 23 of Coal Mines Regulation Act. Minister of Justice, for this and other reasons, does not think another inquest necessary.

No. 2.

Telegram from The Secretary for Mines and Agriculture to The Premier.

Department of Mines and Agriculture, Sydney, 15 January, 1897.

STOCKTON Colliery Accident: After prolonged inquiry, jury disagreed and were dismissed. It is necessary to come to some determination as to cause of accident, and Ministers in town, Messrs. Brunner, Gould, Cook, and myself, decided that it was desirable to carry out my original intention of holding investigation under new Act which gives this power. It is thought Judge Murray and two competent assessors, as required by the Act, should be appointed to hold the inquiry. Matter urgent. Kindly let me know whether you concur as to appointment of Judge Murray.

SYDNEY SMITH.

No. 3.

Telegram from The Premier to The Secretary for Mines and Agriculture.

Lorne, Victoria, 15 January, 1897.

QUITE concur as to Murray and inquiry.

G. H. REID,
Lorne.

No. 4.

Memorandum by The Secretary for Mines and Agriculture.

Department of Mines, 14 January, 1897.

SECTION 23 of the Coal Mines Regulation Act, 1896, provides that:—

Where it appears to the Minister that a formal investigation of any explosion or accident, and its causes or circumstances, is expedient, the Minister may direct such investigation to be held, &c.

When I received the telegram on December 4th, apprising me of the accident at the Stockton Mine, I was of opinion that the case was one in which the provisions of section 23 of the Coal Mines Regulation Act should be brought into operation, and a special investigation held as to the causes and circumstances surrounding the occurrence. In view, however, of the Coroner's inquest, I decided to defer action until the jury had deliberated, as it would be inadvisable to have two inquiries proceeding at the same time.

As the inquest is now concluded, and the jury failed to arrive at a verdict, I have, after consultation with the Minister of Justice, decided that the investigation shall now be proceeded with, so that some determination may be arrived at as to the cause of the accident.

S. SMITH.

No. 5.

No. 5.

W. T. Dick, Esq., M.P., to The Under Secretary for Mines and Agriculture.

Sir,

Newcastle, 13 January, 1897.

I have the honor to draw your attention to the result of the Coroner's inquest on the Stockton fatality, and to request that you will be kind enough to suggest to the Minister the importance of having the matter further investigated with a view of arriving at the cause of the deaths.

I have, &c.,

W. T. DICK.

It was decided yesterday that an investigation is to be held under the 23rd section of the Act. Resubmit on Monday next as to the persons to be appointed to make the inquiry.—D.McL., 15/1/97.

No. 6.

W. T. Dick, Esq., M.P., to The Under Secretary of Justice.

Sir,

Newcastle, 13 January, 1897.

I have the honor to direct your attention to the result of the inquest on the Stockton fatality, which is not only unsatisfactory to the relatives of the deceased and the general public, but also to the mine officials. I desire to point out the necessity for further searching investigation. The matter is far too grave to allow it to remain in its present condition. Will you kindly suggest to the Minister the necessity for instituting some other form of inquiry? I do not know whether a second Coroner's inquest is possible.

I have, &c.,

W. T. DICK.

Submitted. The Minister may, perhaps, approve of the effect of his minute, dated 14th instant, being conveyed to Mr. Dick, though it appears in this morning's paper.—G.M., 15/1/97. Approved.—A.J.G., 15/1/97.

No. 7.

The Under Secretary of Justice to W. T. Dick, Esq., M.P.

Sir,

Department of Justice, Sydney, 16 January, 1897.

Referring to your letter of the 13th instant, calling attention to the unsatisfactory result of the inquest held respecting the Stockton fatality, I have the honor, by direction of the Minister of Justice, to inform you that it does not appear that another inquest is called for, in view of the fact that the Secretary for Mines and Agriculture, whom he consulted in the matter, had previously decided, on the termination of the Coroner's inquest, to have a separate inquiry held, under the provisions of section 23 of the Coal Mines Regulation Act.

I have, &c.,

GEORGE MILLER,

Under Secretary.

No. 8.

Telegram from The Under Secretary for Mines and Agriculture to His Honor Judge Murray.

15 January, 1897.

THE Government have decided to hold an inquiry as to the cause and circumstances connected with the Stockton Colliery accident, as provided for in the 23rd section of the Coal Mines Regulation Act. I am desired to ask whether you will accept position on Board, with the assistance of two assessors; and, if so, the earliest date when you would be prepared to commence the investigation.

D. C. McLACHLAN,

Under Secretary.

No. 9.

His Honor Judge Murray to The Secretary for Mines and Agriculture.

Sir,

Drumcevin, Mittagong, 15 January, 1897.

In reply to your telegram received by me this afternoon, asking if I would accept a position on a Board to be appointed to inquire into the Stockton Colliery accident—I presume as Chairman or President of such Board—I have the honor to inform you that I am prepared to undertake the duties of the office offered to me as soon as arrangements can be made for the constitution of the Board.

I have to request that you will give instructions that a copy of the last Coal Mines Regulation Act, which I have not the means of procuring here, be posted to this address to-morrow, to be received by me in the ordinary course of post on Sunday morning, with all particulars of the matter which it may appear that I should be informed of. If it then seems to me that the work of the inquiry can be expedited by my presence in Sydney on Monday, I will go to town by the early train.

I have, &c.,

C. E. R. MURRAY.

P.S.—I have, of course, assumed that there is no probable chance of this inquiry lasting so long as to clash with the performance of my duties as a "Court of Review," under the Land and Income Tax Act.—C.E.R.M.

No. 10.

Telegram from The Under Secretary for Mines and Agriculture to
John Thwaites, Esq.

Department of Mines and Agriculture, 21 January, 1897.
PLEASE say if nominated whether you would accept appointment as an assessor in holding an investigation of the accident at the Stockton Mine, and of its causes and circumstances, under section 23 of the Coal Mines Regulation Act. Kindly favour me with an immediate reply.

D. C. McLACHLAN,
Under Secretary.

Telegram from John Thwaites, Esq., to the Under Secretary for Mines and Agriculture.

Adamstown, 21 January, 1897.

Yes; if nominated will accept appointment.

JOHN THWAITES.

No. 11.

Alfred Edden, Esq., M.P., to The Secretary for Mines and Agriculture.

Hon. Sir,

Adamstown, 10 February, 1897.

As the House is not in Session, I am forced to trouble you on the following matter, viz., the appointment of Mr. John Thwaites as assessor to the Stockton Inquiry. It is looked upon as ignoring all the miners' representative men; not that anyone can put a finger on Mr. Thwaites' character. It is being discussed as wrong all over the district, and I am charged as the man that has recommended him to you, and so caused his appointment. I suppose he was recommended by some one; and I don't think you do things in a corner, and I ask you to kindly state who did recommend him, and so clear me from a charge that is doing me great injury. I have offered to resign my seat, so you will see how it stands with me. Awaiting an early reply,

I have, &c.,

ALFRED EDDEN.

Mr. Edden replied to.—D. McL., 10/2/97.

The Under Secretary for Mines and Agriculture to Mr. A. Edden, Esq., M.P.

Sir,

Department of Mines, Sydney, 11 February, 1897.

I am desired by Mr. Secretary Sydney Smith to acknowledge the receipt of your letter of yesterday's date regarding the appointment of Mr. John Thwaites as one of the assessors in connection with the Stockton Inquiry, and to say, in reply, that you did not make any recommendation on Mr. Thwaites' behalf, as you state you have been charged with doing. To the statement that you did, the Minister can give an emphatic denial, if it be necessary.

Mr. Smith wishes me to explain that Mr. Thwaites was first known to the Department when his name was prominently brought before it as a suitable appointment to make as one of the Board to select the examiners under the new Coal Mines Regulation Act; and although he was not appointed to that Board, yet the inquiries made at the time as to his qualifications and general character were such as to cause his name to be brought up when the appointment of an assessor on the Board of Inquiry had to be considered. The Department, before selecting him, gave the greatest consideration to his claims, and it comes as a surprise to the Minister if Mr. Thwaites has not the confidence of the general body of miners, as, from the exhaustive inquiries which were made before his appointment, it was considered he was in every sense a good and practical miner, with a knowledge of the work, gained not only here but in England; and was, moreover, held in general esteem and repute throughout the mining community. Your letter itself confirms this, as you state that Mr. Thwaites is a man no one can put their finger on as to his character.

I have, &c.,

D. C. McLACHLAN,
Under Secretary.

Mr. Dixon.—Can you say whether there is any general dissatisfaction as to Mr. Thwaites' appointment; and, if so, whether there are any grounds for it?—D. McL., 11/2/97.

I am not aware that there is any general dissatisfaction as to the appointment of Mr. Thwaites. If such were the case I should have certainly heard it. Mr. Thwaites is a thoroughly practical miner, with both Home and Colonial experience. He is well known in this district as an honorable, just man, with a character beyond reproach.—J. DIXON, 17/2/97.

Submitted.—H.B.S., 18/2/97. For the Minister's information.—D. McL., 19/2/97. Seen.—S. SMITH, 20/2/97.

No. 12.

W. T. Dick, Esq., M.P., to The Under Secretary for Mines and Agriculture.

Sir,

Newcastle, 17 February, 1897

I have the honor to suggest that the whole of the evidence taken at the Coroner's inquest, and at the subsequent examination before Judge Murray, together with the addresses made by the various representatives present, be combined and published. Such a publication would be of the utmost value as an instruction to mine managers, under-managers, and miners. It would tend to lessen the risk of danger from such causes, and would draw the attention of all concerned to various vital points in the new Act, to which sufficient attention has not been directed.

I have, &c.,

W. T. DICK.

The

The expense of printing the large amount of evidence taken would, I think, be considerable. The publication of the report of the Court of Investigation would serve all practical purposes.—H.W., 18/2/97. The Under Secretary.

Submitted.—H.B.S., 19/2/97. D. McL., 19/2/97. To await receipt of report.—S. SMITH, 19/2/97. Inform Mr. Dick that we are awaiting the publication of the report of the Court of Investigation.—H.B.S., 23/2/97. Mr. Dick informed, 23/2/97. Resubmit in a fortnight. Resubmitted, 10/3/97. In a week.—H.B.S., 10/3/97. Resubmitted, 17/3/97. Chief Clerk,—I do not think that it is intended to publish the report and evidence, unless called for by Parliament; perhaps this paper might be submitted to the Under Secretary.—H.W., 18/3/97. Put by.—H.B.S., 18/3/97.

The Under Secretary for Mines and Agriculture to W. T. Dick, Esq., M.P.

Department of Mines and Agriculture, Sydney, 23 February, 1897.

Date of letter under reply:—17 February.

Subject:—Stockton Colliery Disaster. Suggesting that the whole of the evidence taken at the Coroner's inquest, and at the subsequent examination before Judge Murray, together with the addresses made by the various representatives present, be combined and published.

Reply:—The Department is awaiting the publication of the report of the Court of Investigation.

I have, &c.,

D. C. McLACHLAN,

Under Secretary.

(Per A.F.)

PART IV.

Proceedings of Court of Investigation into Stockton Colliery Accidents; also, Report of Court.

No. 1.

The Under Secretary for Mines and Agriculture to His Honor Judge Murray.

Sir,

Department of Mines, 20 January, 1897.

I am directed to forward a copy of the evidence taken at the Coroner's Court in connection with the Stockton Colliery fatality, and to inform you that, if anything further transpires in this matter, you will at once be notified.

I have, &c.,

D. C. McLACHLAN,

Under Secretary.

No. 2.

The Under Secretary for Mines and Agriculture to His Honor Judge Murray.

Sir,

Department of Mines, 21 January, 1897.

I am directed to forward two copies of the depositions taken at the inquest into the deaths of Smith and Curran, which were the first to take place, viz., on the 2nd ultimo. One copy is the newspaper report, the other is the copy of the depositions that have been furnished by the Inspectors.

I have, &c.,

D. C. McLACHLAN,

Under Secretary.

No. 3.

The Under Secretary for Mines and Agriculture to Mr. John Thwaites, Adamstown.

Sir,

Department of Mines, 22 January, 1897.

I am directed to forward a copy of the depositions taken at the inquest in connection with the accidents at the Stockton Colliery for your perusal, and to inform you that a copy of the depositions taken at the first inquest, as well as of the joint report of the Inspectors, will be ready for you at this office on your arrival on Monday morning. I am to add that the evidence is to be treated as confidential.

I have, &c.,

D. C. McLACHLAN,

Under Secretary.

No. 4.

The Under Secretary for Mines and Agriculture to Mr. D. A. W. Robertson, J.P., Helensburgh.

Sir,

Department of Mines, Sydney, 22 January, 1897.

I am directed to forward a copy of the depositions taken at the inquest in connection with the accidents at the Stockton Colliery, for your perusal, and to inform you that a copy of the depositions taken at the first inquest, as well as the joint report of the Inspectors, will be ready for you at this office on your arrival on Monday morning. I am to add that the evidence is to be treated as confidential.

I have, &c.,

D. C. McLACHLAN,

Under Secretary.

No. 5.

No. 5.

Telegram from The Under Secretary for Mines and Agriculture to John Thwaites, Esq., Adamstown.

Department of Mines and Agriculture, Sydney, 22 January, 1897.

Re Stockton accident: Will you please attend at this office on Monday next, at noon, so that the Court may hold its preliminary meeting? A railway pass and a copy of the depositions taken at the second inquest are being forwarded to you by to-night's mail.

D. C. McLACHLAN,
Under Secretary.

No. 6.

Telegram from The Under Secretary for Mines and Agriculture to D. A. W. Robertson, Esq., J.P., Helensburgh.

Department of Mines and Agriculture, Sydney, 22 January, 1897.

Re Stockton accident: Will you please attend at this office on Monday next, at noon, so that the Court may hold its preliminary meeting? The second assessor has been appointed.

D. C. McLACHLAN,
Under Secretary.

No. 7.

Telegram from The Under Secretary for Mines and Agriculture to His Honor Judge Murray.

22 January, 1897.

THE Minister has now appointed the assessors, and thinks that a preliminary meeting should be held at this office on Monday next, at noon. Messrs. Robertson and Thwaites have been so advised.

D. C. McLACHLAN,
Under Secretary.

No. 8.

The Under Secretary for Mines and Agriculture to The Crown Solicitor.

Sir,

Department of Mines and Agriculture, 27 January, 1897.

With reference to the recent fatal accident at the Stockton Colliery, I am directed to inform you that the Secretary for Mines and Agriculture has decided that a formal investigation shall be held under section 23 of the Coal Mines Regulation Act, and for that purpose has appointed His Honor Judge Murray (President) and Messrs. D. A. W. Robertson and J. Thwaites (Assessors) to hold the inquiry.

As it is desirable that the Department should be represented at the investigation (which will take place at Newcastle on Tuesday next and succeeding days), I am to request that you will be good enough to instruct the proper officer of your Department to be present during the inquiry, to watch the proceedings on behalf of this Department.

I have, &c.,

D. C. McLACHLAN,
Under Secretary.

No. 9.

Telegram from Mr. H. D. Wood to The Under Secretary for Mines and Agriculture.

Newcastle, 28 January, 1897.

FIND Mr. Humble not able to complete examination work before Wednesday evening next week. Would, therefore, suggest Court arrive Newcastle that evening. They can then, at 10:30 a.m., Thursday, inspect mine with Messrs. Dixon and Humble, and proceed to take evidence on Friday. Old Court suitable, and there is a retiring room for Judge and assessors; am arranging for furniture. Have informed Company that they may be represented; will also inform Mr. Curley and relatives of deceased miners. Constable Knight, Stockton, instructed to notify witnesses that they may be required next week. A constable will attend Court, to serve summonses, &c. Presume Mr. Inspector Dixon will have *locus standi*? Please, reply, if suggestion approved, so that I may make necessary arrangements.

H. DALRYMPLE WOOD.

Minister says inquiry must go on as arranged.—D.McL., 28/1/97.

No. 10.

Telegram from The Under Secretary for Mines and Agriculture to Mr. H. D. Wood.

Sydney, 29 January, 1897.

ALL arrangements have been made for the Court to take evidence on Wednesday next, and the Minister thinks no alteration should be made. The Court arrives Newcastle on Monday, and Minister considers they should proceed with the investigation without delay. Mr. Dixon will meet them on arrival, and can go with them down the mine. Minister is pleased with arrangements you have made. Inspector Dixon will be able to arrange with the President as to his standing in the Court. Mr. Wilshire will also attend on behalf of the Department.

D. C. McLACHLAN,
Under Secretary.

No. 11.

Telegram from Mr. H. D. Wood to The Under Secretary for Mines and Agriculture.

Newcastle, 30 January, 1897.

HAVE arranged for Court to inspect Stockton Mine, 10.30 a.m., Tuesday, with Mr. Dixon. Have informed Mr. Thwaites and Mr. Curley that Court would begin to take evidence on Wednesday, and that they might be represented. Hope to complete arrangements to-day for furniture. Examination not yet concluded.

H. D. WOOD,
Coal-fields Office.

Inform His Honor Judge Murray.—D.McL., 30/1/97. His Honor duly informed.—W.D.W., 30/1/97.

No. 12.

Telegram from His Honor Judge Murray to The Under Secretary for Mines and Agriculture.

Mittagong, 1 February, 1897.

REGRET that I am compelled to postpone the Court of Investigation in consequence of an attack of sciatica. You will receive letter to-morrow explaining. Expect to be sufficiently recovered in a week to go on with the work. Have telegraphed to Secretary. Hope no serious inconvenience will be caused.

C. E. R. MURRAY,
President.

No. 13.

Telegram from The Under Secretary for Mines and Agriculture to Mr. H. D. Wood.

1 February, 1897.

JUDGE MURRAY has wired that in consequence of an attack of sciatica he is compelled to postpone Court of Investigation for a week, when he expects to recover. Will you please notify those concerned, and you might also give notice to the Press. The other arrangements you have made will of course be altered to suit the circumstances.

D. C. McLACHLAN,
Under Secretary.

No. 14.

Telegram from Mr. H. D. Wood to The Under Secretary for Mines and Agriculture.

Coal-fields Office, Newcastle, 1 February, 1897.

HAVE informed Press, Mr. Thwaites, Mr. Curley, the Inspectors, and Stockton Company of postponement of Stockton inquiry. Have asked police authorities to let witnesses know. Furniture and room in readiness for Court.

H. DALRYMPLE WOOD.

No. 15.

Telegram from The Under Secretary for Mines and Agriculture to Mr. Inspector Dixon.

5 February, 1897.

COURT of Investigation, Stockton accident, will arrive Newcastle Monday night; leave Newcastle 10 a.m. Tuesday to inspect mine, and commence sitting on Wednesday. Please see that plan of mine is available for Court, and let Mr. Humble know. Mr. Winchester might see that Court-room is in order. Mr. Wilshire will not, I am afraid, be able to attend for first day or two.

D. C. McLACHLAN,
Under Secretary.

No. 16.

Telegram from Mr. Inspector Dixon to The Under Secretary for Mines and Agriculture.

Newcastle 6 February, 1897.

YOUR wire *re* Court of Investigation received, and instructions noted.

JOHN DIXON,
Inspector of Collieries.

No. 17.

Telegram from His Honor Judge Murray to The Under Secretary for Mines and Agriculture.

Mittagong, 5 February, 1897.

I SHALL be able to go to Newcastle on Monday. Am telegraphing to Secretary, giving full instructions.

C. E. R. MURRAY,
President, Court of Investigation.

No. 18.

Telegram from The Secretary, Court of Investigation, to The Under Secretary for Mines and Agriculture.

Newcastle, 10 February, 1897.

WILL you please wire whether Mr. Wilshire, of Crown Solicitor's Office, will attend Court of Investigation here to-morrow.

E. C. WRIGHT,
Secretary.

Reply:—Mr. Wilshire will not be able to attend till Friday, as he is engaged on important case at Lithgow inquiry. Had better, perhaps, proceed in the meantime.—D.McL.

No. 19.

The Secretary, Court of Investigation, to The Under Secretary for Mines and Agriculture.

Court of Investigation, Stockton Colliery Accidents.

Sir, Department of Mines and Agriculture, Sydney, 15 February, 1897.

I have the honor to inform you that the Court appointed to hold an investigation into the accidents which took place at the Stockton Colliery on the 2nd, 3rd, and 4th December last, sat at Newcastle daily, from the 10th instant to the 13th instant inclusive. Evidence was taken, and addresses on behalf of parties represented at these sittings were heard. The Court, upon rising on Saturday, the 13th instant, adjourned *sine die*.

It is the intention of the members of the Court to hold a meeting in Sydney on Wednesday, the 24th instant.

I have, &c.,
E. C. WRIGHT,
Secretary.

Seen.—D.McL., 15/2/97.

No. 20.

The Crown Solicitor to The Under Secretary for Mines and Agriculture.

Sir, Crown Solicitor's Office, Sydney, 16 February, 1897.

With reference to your letter informing me that a formal investigation was to be held at Newcastle, before Judge Murray and assessors, concerning the Stockton Colliery disaster, and requesting that the Mines Department be represented by an officer of this Department, I have the honor to inform you that Mr. Wilshire, the prosecuting officer, appeared on behalf of your Department. The depositions taken at the inquest were put in as evidence, and some of the principal witnesses before the Coroner were further examined, also Mr. Dixon, Chief Inspector. As, however, the matter had been exhaustively dealt with at the coronial inquiry, few fresh facts were elicited.

I have, &c.,
GEO. COLQUHOUN,
Crown Solicitor,
(Per C.E.P.)

For the information of the Minister.—H.B.S., 17/2/97. Seen.—S. SMITH, 18/2/97.

No. 21.

His Honor Judge Murray to The Secretary for Mines and Agriculture.

Court of Investigation, Stockton Colliery Accidents.

Sir, Department of Mines and Agriculture, Sydney, 4 March, 1897.

I have the honor to forward herewith, in duplicate, the report of the Court appointed on the 22nd day of January last, to hold an investigation into the causes and circumstances attending the fatal accidents which took place in the Stockton Colliery on the 2nd, 3rd, and 4th days of December, 1896. Attached to the report is a tracing of a plan showing some of the important workings of the colliery.

I also beg to submit a copy of the evidence and addresses taken and delivered in open Court at Newcastle, as well as minutes of the proceedings and sittings of the Court.

I have, &c.,
C. E. R. MURRAY,
President.

The report and evidence with plan were sent to the Attorney-General; copies are also with the Crown Solicitor.—D.McL., 11/3/97.

No. 22.

Report of Court of Investigation.

Sir, Sydney, 4 March, 1897.

We, the persons appointed by virtue of the provisions of section 23, of the Coal-mines Regulation Act, 1896, to be a Court to inquire into and report upon the causes of and circumstances attending the fatal accidents which took place at the Stockton Colliery on the 2nd, 3rd, and 4th days of December, 1896, having completed our investigation, have now the honor to report as follows:—

Before taking the oral testimony which is attached to this report, we decided that it was expedient to adopt as evidence in this investigation the depositions taken by the Coroner at Stockton, in the course of the inquests held on the bodies of Curran and Smith, whose deaths are the subject matter of the accident which

which occurred on the 2nd of December, and on the bodies of Cockburn, Bailey, T. L. McAlpin, S. S. McAlpin, Charlesworth, Sweeney, Gascoigne, and Fitzpatrick, whose deaths constituted the second accident. But, before finally taking this course, we, by notice in sundry newspapers, invited all persons who wished to be represented at the investigation, held in open Court at Newcastle, to attend the hearing, and Mr. Dixon and Mr. Wilshire alternately appearing for the Department of Mines and Agriculture, Mr. Curley, on behalf of the Colliery Employees' Federation, the Stockton miners and the relatives of some of the deceased, and Mr. O'Sullivan for the Stockton Colliery Company and its officers, and no other persons suggesting that they had a *locus standi*, we informed all present of our intention to thus use the evidence taken at the inquests, adding that we should allow any of the witnesses to be further examined by any party, for which purpose we would, if requested, compel the attendance of the witnesses required. We invited objections to this course; all freely assented. We then proceeded to call Mr. Dixon, whose evidence had not been taken on either inquest, and afterwards called Gould, Burt, Jury, and Ellis. Messrs. Humble, McAuliffe, and McDonald were afterwards called, partly at our suggestion and partly by desire of Mr. Curley and Mr. O'Sullivan. We invited the production of any other witness whom any person present might wish to examine, or who might come forward to volunteer evidence, but the parties preferred to leave matters as they appeared on the depositions and the evidence taken, and no person tendered his testimony. Seeing no need to go further, we closed the Court, after hearing Mr. Curley and Mr. O'Sullivan, who elected to address us on the facts proved. In addition to the oral evidence taken, the tracing map herewith was also before us, and we had occasion to refer to the general map of the mine, which is, however, required for use at the colliery, and which we allowed, after its production in Court to be taken back. The tracing will sufficiently explain the evidence, and is the only plan we consider necessary to attach to our report.

Before hearing evidence, we made such a personal inspection of the mine as we judged expedient, for the purpose of informing ourselves of the locality.

To render the plan, which is generally very clear, and practically speaks for itself, fully intelligible, it is necessary to explain that the seam of coal worked at Stockton is double, consisting of a lower seam, serviceable to a thickness of about 7 feet, and a top seam, good for about 9 feet, separated by a band of blue shale, known as the morgan, 6 feet and upwards in thickness, and by some commercially useless coal. The lower seam only, as shown on the plan, has been generally worked, though in places the workings are in the top coal. The main return air-way shown rises from the lower to the upper level as it approaches the furnace drift, which is in the top seam; the same level is shown continuing thence through No. 3 door round the down-cast shaft, and contains No. 2 and No. 1 doors. This drive opens on the shaft at a stage some 14 feet above the bottom, the skips of coal for the furnace being raised to this stage taken in through No. 1 door, and then run round, on tram rails, through No. 2 and No. 3 doors, to the furnace, and returned empty in the same way. On the same level is shown the prolongation in a straight line, in a southerly direction, of the main return air-way, till it meets the narrower drive running to the eastward, crossed by two stoppings with trap doors; the ladder, further on, marks the descent to the bottom coal, whereby access is gained from the top level to the trap door "Z," formerly one entrance to No. 3 district, but now built up solid, or to the main engine plane. The drive again, on which the skips start from the down-cast shaft is continued across the prolongation of the main return air-way, to the eastward, and is marked on the plan "to top seam by rope road." The tail rope, which hauls the trucks, empty so far as coal is concerned, outwards on the engine plane (along which it is led overhead on sheaves) runs from the down-cast shaft—having descended therein from the surface to the upper stage—along this "rope road" as far as the drive which turns off at an obtuse angle, by which it is led to the bottom level. But the "rope road"—which is thenceforth only a rope road in name—continues, on a down grade till it meets the main road or going bord (or "ganning bord") of the No. 3 district, passing over the "travelling road bottom seam." About the point marked "d" is now a solid stopping. Here was originally a large door; that was taken away some years ago, and a stopping, with a trap-door in it, was substituted; this again was removed some time about the middle of 1896, and was not rebuilt until after the two fatal accidents, the subject of this inquiry. This explanation will, it is hoped, clear up some difficulties presented by the tracing, by reason partly of its attempting to set out two levels on one ground plan.

The tracing does not show the workings on the north-east side of the haulage road. These, bounded on the east by the main return air-way for some distance, are also abandoned. They are affected with falls to a great extent. Unfortunately there is known to be a communication in the upper seam between these old workings and the No. 3 district, at the point marked on the plan with a red cross, where a bord has been broken through over the main road. No attempt has been made to get at and stop this communication, to attempt to gain access to which would probably be very difficult, if not impossible, and would certainly involve great risk. The consequence of the existence of this communication is that these old workings have become more or less charged with the noxious gases generated in No. 3 district, and that—failing the means of closing the connection—it has become necessary to seal off a large extent of these workings, a task involving the erection of many stoppings of great size, several of which have to be built under very difficult conditions. These not having yet been completed, it has been deemed proper to protect the men working at the furnace from the risk of poisonous gases exuding into the main return air-way by erecting across it a galvanised-iron partition, extending into and dividing the furnace drift, so as to direct all the return air to the furnace, and prevent its affecting the men, whose position of safety is now the seat on which Smith and Curran met their deaths; to which pure air, direct from the down-cast, is now supplied by means of regulators placed for the purpose in Nos. 1, 2, and 3 doors—No. 3 district being, of course, completely locked off by the stopping in the "rope road." At a point in the main return air-way, not far from the furnace drift, where the head of a partly fallen bord provides an outlet from the old workings, we were made aware very decidedly—on our visit to the mine—of the presence of "fire-stink," as described by the witnesses, drifting out of the opening, accompanied by an extinctive gas; but whether this latter was carbonic acid or nitrogen in excess we had no means of deciding.

In order to follow the course of events that led up to the accidents on the 2nd, 3rd, and 4th of December, it is necessary to go back about three years, when (*vide* Mr. McAuliffe's evidence), in consequence of a crush on the pillars bounding the main haulage road, the brick stoppings at the entrance to the abandoned bords broken off that road were so affected as to permit a serious waste or leakage of air through these stoppings by way of the No. 3 district direct to the furnace. It was to effectually cope with

with this leakage that Mr. McAuliffe, the manager, says the stopping at "d," with a manhole or slide-door for easy access to No. 3 district, was built, and not for the purpose of preventing poisonous gases, known to be generated in the abandoned workings, from being drawn—or, rather, forced—along the rope road to the furnace, or, on the other hand, in case of a careless use of Nos. 1 and 2 doors, driven by impulsion from the down-cast into the main engine plane. This object would appear equally legitimate, if not more important; but, unquestionably, a stopping placed in this position would correct or control wasting of air through the crushed stoppings referred to. Owing to the litigation arising from an alleged subsidence of strata under certain properties over this No. 3 district, to permit an inspection by experts, the slide-door in the stopping "d" was opened in 1893, and on occasions up to 1896, but appears to have been closed after each inspection, thus sealing off the district. In August, 1896, another inspection was made by several experts; but on this occasion, if not earlier, the stopping, with slide-door, was entirely removed, as stated by Mr. McDonald, for the purpose of more promptly clearing out the gases which had accumulated. Unfortunately, this stopping was never replaced, until after the accidents.

On Monday night, the 30th of November last, Gould, a bricklayer, temporarily employed unloading coal at the furnace, working under direction of the furnace-man, Smith, left the No. 3 door open (to save trouble) for some considerable time longer than was necessary to pass the skips of coal through to the furnace. Feeling sick and giddy, and suspecting that the cause was bad air, and having an appointment with Henry Burt, the night officer, at another part of the mine, he, as soon as he was able to meet Burt, reported the circumstance to him. That officer—although Gould's evidence is somewhat unsatisfactory on the point—rightly concluded from what Gould told him that the matter was sufficiently serious to justify an immediate inspection. Proceeding to the furnace, Burt examined its vicinity, and also between No. 3 and No. 2 doors, and found no indication of a smell or of gases likely to produce the effects described by Gould, and by Smith, the furnace-man, who, on being questioned, said he also felt ill when No. 3 door was open. Burt, although certainly aware that the men felt ill only when the No. 3 door was left open, that the stopping at "d" had never been replaced, and that poisonous gases, if present at the furnace, could only come from the No. 3 district by way of the "rope road," and with No. 3 door open—contented himself with an examination of the locality in its ordinary working condition, under which danger could not well be expected to exist. In fact, the experience of all the witnesses who inspected the entrance into No. 3 district when the No. 3 door was shut, and the ease and rapidity with which the current was reversed on the morning of the 4th of December, indicate a tendency of the air to flow down the rope road and to escape by some outlet, possibly the disused overcast, and only to take the opposite course under the strong inducement held out by the leaving open of No. 3 door for some time. The levels, and the direction of the established currents, would appear to favour this theory.

Burt, it would appear, reported Gould's and Smith's complaint to the under-manager, Mr. McDonald; and it was also brought under cognizance of the manager, Mr. McAuliffe. Mr. McDonald, on the morning of Tuesday, the 1st of December, and also on the same night, made an inspection of the furnace and for some 200 yards along the going bord from the door "Z," and found nothing to indicate danger from any cause. Mr. McDonald, however, like Burt, although fully aware of all the surrounding conditions, and from whence and by what means Gould and Smith must have been affected, did not think, or take the trouble, to make his inspection under the conditions prevailing when Smith and Gould were attacked, namely, with the No. 3 door open, thus providing direct communication with the No. 3 district, from which he and Burt admit dangerous gases could only be expected. Burt, on his inspection, and previously, had warned the furnace-man as to the danger of leaving doors open; and Smith gave his promise that the doors should be shut in future. On Tuesday, the 1st of December, about 9.30 p.m., Smith, the night furnace-man, on that occasion assisted by Curran, proceeded to his work as usual.

On the morning of Wednesday, the 2nd of December, about 4 a.m., Jury and Coulson, deputies employed to make the statutory inspection of the mine before the miners began work, proceeded in their usual course to the furnace. On opening the No. 1 door, from the fact of the air rushing through in the direction of the furnace, they became aware of some defect in the ventilating arrangements. This they verified by finding No. 2 and No. 3 doors open, the latter permitting a current of air to pass from No. 3 district to the furnace. On the furnace side of No. 3 door the bodies of Smith and Curran were discovered; and, with commendable energy, under great difficulties, owing to the existence of foul air, extinguishing their lights, the bodies were removed by Jury and Coulson to a place of safety outside of No. 1 door. Coulson then reported the sad event to the under-manager, Mr. McDonald, who was soon on the scene. Jury, Coulson, and McDonald, emphatically asserted on that morning that the gas was black damp, owing to its extintive properties, and to its having a smell. Mr. McDonald thought the smell was somewhat different from that he had usually found accompanying black damp. Mr. McDonald then inspected the "rope road" for some distance, and found everything as on his former inspection, except for the presence of the black damp which he detected. Mr. Humble, inspector, having been duly apprised of the deaths of the two men, visited the furnace and surroundings about 8 p.m., with the manager and Mr. McDonald. Mr. Humble at once detected the odour of "fire-stink," and informed the manager and under-manager of the fact. Shortly after this, Mr. Dixon, the Chief Inspector, joined the party; and that gentleman was the first to suggest the very proper course then adopted—an inspection of the part under the only conditions in which danger from the gases generated in No. 3 district was likely to arise, namely, by the opening of No. 3 door. This having been done, in about ten or twelve minutes it became apparent, from the odour of "fire-stink," and from the fact that a light continued to burn, that carbon monoxide was being produced by a gob-fire in some part of the district. Mr. Dixon and Mr. Humble then notified the manager of the fact, and that, being a defect and a menace to the safety of the men employed in the colliery, the defect would require to be remedied. Mr. McAuliffe, it is clear, on this occasion was fully impressed with the opinions of the inspectors; but Mr. McDonald, notwithstanding their emphatic warning, and the presence of this peculiar benzine-like odour—or "fire-stink"—seemed to treat the opinions of the inspectors with something akin of contempt, holding that the gas which caused the death of Curran and Smith, and which was at this time being discussed, was black damp.

During the course of the day—Wednesday—it was decided by the management to remedy the defect complained of by the inspectors; and, accordingly, by means of knocking out a stopping at No. 20 bord, on the main intake or haulage road, and bratticing across the road, a current of air was directed into the No. 3 district, finding its way by scaling through the workings as approximately shown by the blue arrows on plan, through the "rope road," and through the No. 3 door (propped open) to the furnace.

It

It was the intention of the management to send a party to explore the workings on the afternoon of Thursday the 3rd of December; but, in order to give more time for the air to clear out any gases which might have accumulated, the departure of this party was deferred till 9:30 the same evening.

The explorers—a party of twelve, all told—Mr. McDonald, the under-manager, leading—first having left two of their number, Alexander McDonald and Benjamin McAuliffe, at the furnace, went by way of the dismantled stopping at “d” on the “rope road” into the old workings, as shown by the green line on plan, as far as No. 16 bord. In proceeding thus, from the foregoing remarks it will be noted that the party was advancing *against* the air, and meeting any noxious gases that might be produced in the workings. No inconvenience or ill effects seem to have been experienced by the party until No. 16 bord was reached by Mr. McDonald, who then called a halt, and gave an order to retreat. In the vicinity of No. 11 bord, Bailey very suddenly gave signs of distress; and, in assisting Bailey, others soon gave way to the effects of the poisonous atmosphere they had been unconsciously inhaling. The explorers appear to have stuck to one another nobly up to the point when, from physical and mental exhaustion, further assistance would have been suicidal, and useless. Struggling and staggering on, Jury, Ellis, Wm. McAuliffe, and Burt finally reached the trap door “Z” in a state of exhaustion; but, without delay, proceeded to the shaft and gave the alarm to the manager and others. The manager, having secured some assistance, promptly entered through the trap door, and succeeded in rescuing alive Mr. McDonald and his son, James McDonald; but, in doing so, was himself affected by the gas, and rendered unfit to take further part in the proceedings. Rescuers continued to arrive; but, unfortunately, in the haste and confusion, and with the principal officials of the colliery either totally or partially prostrated from the effects of the noxious gas they had inhaled, with no controlling authority, zeal outran discretion, and several paid the penalty with their lives of their noble but misdirected efforts. Of the exploring party, Cockburn, Bailey, and the two McAlpin’s—of the rescuers, Charlesworth, Sweeney, Gascoigne, and Fitzpatrick—were found dead or dying in the mine; another of the attempting rescuers, Thomas Sneddon, died in the hospital a few days afterwards from the effects of the poison he had breathed.

Between midnight on Thursday and 1 o’clock on Friday morning, Messrs. Dixon and Humble arrived on the scene; and, under their direction, prompt steps were taken to reverse the current, thus permitting the rescuers to be either in or within touch of fresh air. Firm measures were taken to restrain the ardour of the rescuers; thus accomplishing the object in view, without further loss of life. At 11 a.m., on Friday, the 4th of December, the last body, that of Fitzpatrick, was recovered at No. 11 bord, as shown on the plan. Finally, at a meeting of experts, on Saturday, the 5th of December, with the concurrence of the inspectors—but in the absence, and without the approval, of the manager—it was decided to seal off the No. 3 district, and the other districts connected therewith, by means of brick stoppings at all openings into intake or return air-ways.

Dealing with the events recorded in the depositions taken at the inquests, and the evidence adduced before the Court, in the order of time given in the foregoing *resumé*, it will be apparent that the primary cause of the accidents was the removal of the stopping at “d.” Mr. McAuliffe maintains that this stopping was originally intended to control the leakage of air from the stoppings along the main haulage road, which had suffered from a crush; and that, the crush having ceased, it was not considered necessary to replace the stopping at “d” after the inspection by the colliery managers in August, 1896. It is somewhat singular that, the crush having ceased long before 1896, and the No. 3 district having been inspected on several occasions from 1893 to 1895, the slide, or trap, door in this stopping being closed after each inspection, on none of these former occasions did the propriety of leaving this slide-door open occur to the management. It would also seem strange, and inconsistent with the good relations existing between the manager and under-manager, that the question of replacing or leaving open this stopping had never formed the subject of conversation between these gentlemen. From the evidence of some of the under officials, it appears clear that no instructions had been given to them to rebuild it. It would almost appear, therefore, that the matter had been entirely overlooked; although the officials, having made several inspections of the district, in doing so passing through this dismantled stopping, must have been well aware that this formerly effectual safeguard against the emission of gases from the district was not in existence. With this stopping removed, persons having occasion to pass through the No. 1 and No. 2 doors practically entered the No. 3 district, and would be brought in contact with any noxious gases generated there and finding their way by any means towards the furnace. When the No. 3 door was opened, the way was clear to the up-cast; and there was nothing to prevent foul air or gases from pouring forth out of these old workings so long as the No. 3 door remained open. Having known that these workings did generate carbonic acid gas, that no attempt was made, as a matter of good mining practice, to ventilate this abandoned district, giving it an outlet into a return air-way with sufficient volume of ventilation from other districts to neutralise or dilute to a reasonable extent any dangerous gases produced, it does seem a most regrettable circumstance that no colliery official ever suggested, or appears to have ever thought of, the advisability, as a matter of safety, of either erecting an additional door or replacing the dismantled stopping on the “rope road,” to hold under control any gases collected in No. 3 district when No. 3 door was opened. The necessity of this course was made all the more obvious, apart from the danger arising from the unavoidable opening, necessitating a prompt closing of the door, to pass through the skips of furnace coal, by the knowledge the manager appears to have possessed of doors having been carelessly left open on former occasions. But—altogether apart from such knowledge—the experience which every employer must possess of the carelessness of men, especially when the conditions of their employment tempt them to commit certain acts of negligence to save labour to themselves, should have led the management to the conclusion that it was most unwise to allow the security from death or illness of the furnace-men, as well as possibly, of other workmen, to depend upon the proper closing and keeping closed of this single door, which there was so much temptation to leave open dangerously long. And they should also have known that any sudden fall in general atmospheric pressure might seriously aggravate the risk incident to the leaving of a working, in connection with an abandoned part of a mine, in the position of the uncorked neck of a bottle containing poisonous gases. Burt, the night deputy, was also aware of the No. 3 door having been left open on the night Gould complained. Burt reported the fact to the under-manager. He was also cognizant of the No. 3 door having been left open on a former occasion, although he states he did not report the circumstance to his superior. From the fact that he remonstrated with, or warned, the furnace-men to be specially careful to close the doors, it would almost appear that he, at least, had some doubts as to the security afforded by this single door. Every official seems to have been fully aware of the
necessity.

necessity for enforcing Special Rule No. 28, and of the serious consequence that might result from leaving a door open; but, apparently, beyond cautioning offenders, no serious step, such as fining or prosecuting workmen for a breach of the rule, seems to have been taken by the management. Clearly, Smith's and Curran's deaths were due to inhaling some poisonous gas; but the proximate cause was, undoubtedly, in spite of the warning of Burt on the previous night, and in contravention of Special Rule No. 28, the leaving open of a door which they were bound to close promptly after passing through it. Had the discipline of the mine been strict, and had persons leaving doors open been promptly and severely dealt with, it is much less likely that these two men would have dared to risk the consequences following upon their neglect or wilful breach of the rule; and it is highly probable that lax discipline is at least indirectly responsible for their deaths. The inspection of this locality by Burt and McDonald after the complaint made by Gould and Smith can only be regarded as perfunctory and incomplete. If they had taken the course promptly suggested by Mr. Dixon on the Wednesday morning—that is, the opening of the No. 3 door—they could not have failed to discover noxious gases; and Curran and Smith would now, in all probability, be alive.

Considerable diversity of opinion has been expressed as to the nature of the gas which caused the deaths of Curran and Smith. The manager and Mr. McDonald, and the deputies, have emphatically designated it as black damp. Dr. Hester, at the first inquest, seemed also to favour this theory; while, on the other hand, the inspectors (Messrs. Dixon and Humble) hold by carbon monoxide. Jury and Coulson, who found the bodies, assert that the gas extinguished their lights; that it had the "smell of black damp"; and Jury says he detected an acid taste. When the inspectors reached the scene of the accident the gas did not then extinguish the light, but the smell was quite pronounced, and they had no hesitation in ascribing the cause of death to carbon monoxide accompanying the volatile hydro-carbon, which has the benzine-like smell peculiar to "fire-stink." Those who favour the black damp theory are evidently labouring under some misapprehension with regard to the smell. Neither carbonic acid nor carbon monoxide has a smell; and the odour detected was, undoubtedly, "fire-stink," or the characteristic smell known to be given off during the partial destructive distillation and partial imperfect combustion of carbonaceous matter, in which process both of these gases are generated in proportions varying with the supply of oxygen. There can be no reason to doubt that the composition of the gas inhaled by Curran and Smith was essentially different from that afterwards found by the inspectors on the Wednesday, and the explorers and rescuers on the Thursday night. Whether the poisonous element predominating was black damp—a mixture of carbonic acid and nitrogen—as the management claim, or carbon monoxide, as the inspectors maintain; and whether the extinction of the light was due to carbonic acid, or, as the inspectors assert, to an excess of nitrogen; or, whether carbon monoxide was then present to a dangerous extent, is, in the absence of an analysis, pure conjecture. One fact, however, seems beyond dispute, that, at the time Jury and Coulson discovered the bodies, the gas did extinguish lights, and, therefore, did not support combustion. The point is only important in so far as it might justify the subsequent action of the management in the assumption that the difficulty to be dealt with was black damp; but, in face of the warning of the inspectors, to be hereafter referred to, such a contention is perfectly untenable.

The inspectors having, on the Wednesday morning, arrived at the scene of the accident, and, after inspection, satisfied themselves that the pungent odour then so pronounced was "fire-stink," indicative of combustion of carbonaceous material in some part of the No. 3 workings, and that certain deadly gases, including carbon monoxide, were being generated, at once notified the manager, then present with the under-manager, of a grave defect, which was a menace to the safety of the colliery, and required him to remedy the same. It has been contended that this notice should have been in writing; and there seems to exist in some minds the impression that, in a way that it is hard to understand, the failure to give notice in writing had some connection with the calamity of the following night. It is difficult to discover any substantial ground for such a contention. Section 20 of the Act very properly gives a discretionary power to the inspector; and if an inspector were to serve written notice to managers in respect of every matter requiring attention, this would lead to interminable correspondence, and would cause needless friction and distrust where nothing but good feeling and a spirit of loyal co-operation should exist. An inspector must, in the course of years, be in a good position to gauge the professional knowledge and general disposition of the managers in his district, and to determine to whom and under what circumstances it would be expedient to give a written notice. Moreover, in this instance, two inspectors were present when the notice was given to the manager in the presence of the under-manager. Again, it is quite clear that Mr. McAuliffe was open to reason and conviction, and would not treat the inspectors' opinion lightly; and the fact that he immediately (whatever opinion may be formed as to his method) took steps to remedy the defect is the best proof that the inspectors' confidence in the manager was not misplaced, and that under some circumstances and with certain people a verbal notice would receive, probably, more attention than a formal written notice, the giving of which might cause irritation and annoyance. If the inspectors had had to deal with an unbelieving, opinionative man, with little knowledge of the dangerous properties of the gases, such as Mr. McDonald appears to be, it is very probable that a written notice would have at once suggested itself. But even if a written notice had been given to Mr. McAuliffe, he could not have done more to give effect to it than to proceed, as he did forthwith, to remedy the defect. It has been suggested also that the inspectors should, at this time, have required the manager to replace the stopping at "d." It is no part of an inspector's duty, and is clearly inadvisable, for him to suggest how a defect is to be remedied. The course to be pursued under such circumstances is to notify the manager of a defect, and to see that the defect is cured, leaving the management to adopt such methods as their experience may suggest or their circumstances permit; though an inspector should always be ready to consult with a manager who seeks his advice; and, if he is aware that what he considers a dangerous or foolish step is contemplated, he should at once express and give reasons for his disapproval.

It is perfectly clear that Mr. McAuliffe and Mr. McDonald were warned in the most emphatic terms by the inspectors, that "fire-stink" was being then given off; and that they understood that this odour was, in the opinion of the inspectors, produced by a fire in the No. 3 district. Mr. McDonald, it is true, ascribed it then—and in his evidence before the Court maintained—that it was due to the fermentation of old wood in water; but that conviction, however sincere, would not exonerate Mr. McAuliffe or himself from the consequence of any action taken subsequently in defiance of the inspectors' warning. This, unfortunately, seems to have been what actually happened; the steps taken to discover in order to remedy the defect, being based on the assumption that (incredible as it may appear in the face of the inspectors'

inspectors' warning) black damp, as on former occasions, had only to be dealt with, and that a vigorous coursing of the ventilation through the old workings would clear out the poisonous gases accumulated therein, when, in point of fact, had they reflected a moment upon the subject of their conversation with the inspectors, and given due weight to their opinion—that of experts approved by the State—both the manager and under-manager must have perceived that the probable effect of increased ventilation would be to fan the flame and increase the production of deadly gases.

Here it may be well to deal with the point raised by Mr. Curley, namely, that the management were under an obligation to make an inspection of the workings before taking an exploring party, and that the inspection by Mr. McDonald did not comply with General Rule No. 7. It was contended that, before an exploring party may be sent into a mine with the object of discovering or locating a mischief, an inspection must be made and duly recorded; but a careful reading of the section in the light of common sense appears to lead to the conclusion that the word "exploration" used therein is really almost synonymous with "inspection": the "competent person" having a right to conduct his examination with the help of others, whose services he utilises for the purposes of "inquiring into the cause of danger, or for the removal thereof, or for exploration." To contend that the unfortunate "competent person" must go alone, practically as far as the exploring party is intended afterwards to follow, and may on his return—if he should ever come back—take a mate with him, is utterly to stultify the rule and its framers. The management did not claim that the inspection by Mr. McDonald was more than a superficial examination for his own satisfaction; moreover, while there is nothing in General Rule 7 to limit the inspection to one man, the consensus of opinion seems to be that it would have been most unwise to send one man, and that, in point of fact, safety would lie in numbers. Clearly, the number of men forming an exploring party must be a matter for the discretion of the management; and, when penetrating old workings likely to contain noxious gases, more danger is likely to result from an undue limitation than an unnecessary extension of the numbers of a party. These men were not taken into the workings to follow their usual avocation, but for the purpose of helping to inspect and remedy a defect complained of. If, as Mr. Curley contended, an inspection should have been made as far as the explorers intended to go, it is difficult to see what good purpose the explorers could serve by virtually repeating the operation. In point of fact, the explorers might quite reasonably be designated an inspecting party.

During the course of Thursday the 3rd of December, Mr. McAuliffe, Mr. McDonald, and Mr. Cockburn, seem to have had a conversation with reference to the inspection or exploring of the old workings in No. 3 district. But it is material to remark that this conference, if it may be so termed, did not take place until *after* a large part of the work of sweeping out the district from No. 20 bord towards the "rope road" had been completed. This would indicate that—inasmuch as it appears to have been known from the first that an approach could not be made from bord No. 20—the decision to enter in face of the air had been arrived at before the conference took place; a contrary decision would have amounted to a reversal of a scheme evidently adopted on the Wednesday. The subject of noxious mine gases seems to have been discussed at this meeting. This would imply that it was thought that gases other than black damp, usually met with in this colliery, might have to be dealt with in the course of the inspection or exploration. The manager appears to have been aware of the route to be taken by the party; but, beyond advising Mr. McDonald to take fresh men, he issued no further instructions to his subordinate officer. He states that he intended to join the explorers, but arrived late, and did not make haste to come up with them. A party of subordinate officials and workmen, under ordinary circumstances, would await the arrival of the manager; but, apparently, it was understood that he was not to be present, and his absence caused no comment. The manager, on his arrival, finding the party gone, went to the furnace. It is a matter of great regret that he did not personally supervise this exploring or inspecting party, as the circumstances were of such a grave and unusual nature as to demand the best knowledge and experience available to direct operations. He explains that he was considerably upset by the deaths of Curran and Smith; that he had been attending to the funeral arrangements; and that he was not in a fit condition for superintending such work as exploration. Mr. McAuliffe, apparently, is a man of a keenly sensitive nature; and there is no reason to doubt that the circumstances were such as to cause mental distress in a man occupying a responsible office; but his position was not analogous to that of a manager having to deal with a mine swept by an explosion, causing death and destruction in every direction; and there seems hardly sufficient reason for his delegating his duties on this occasion to Mr. McDonald. It was all the more incumbent upon him to assume control, inasmuch as his under-manager had somewhat contemptuously treated the views of the inspectors, and was an opinionative man, ignorant of the nature and properties of such deadly gases, and likely to permit prejudice to warp his judgment. Mr. McAuliffe was entitled by section No. 3, subsection (i), of the Act, to delegate his duties to the under-manager; but, as provided by subsection (ii), this delegation of authority does not relieve the manager from his personal responsibility; and, being aware of the route to be taken by the exploring party, he must be held personally responsible, equally with the under-manager, for the course of action adopted.

Under the leadership of Mr. McDonald, the exploring party entered the No. 3 workings by way of the dismantled stopping at "d," and followed the course shown by the green line on plan, thus facing the return air and the possible products of combustion from the fire believed by the inspectors—but not by the leader of the party—to exist in the workings. This, as events proved, was a fatal mistake, which should never have been made by colliery officials of considerable experience, presumably accustomed to act with deliberation and judgment. Mr. McDonald explains that he thought he had to deal with black damp, as on former occasions; and, being a firm believer in the fermentation of old wood, he did not recognise, or did not heed the warning given by the pungent odour present throughout the workings; and he considered—as the manager also thought—that the vigorous current of air which had coursed the district for some thirty-six hours had removed all danger. This explanation, if offered by men ignorant of the fact that a gob-fire would produce deadly gases, might, to a certain extent condone their blunder; but neither the manager nor the under-manager can plead ignorance after the emphatic and unmistakable warning of the inspectors. A danger signal was given by these gentlemen which was deliberately ignored by the management—an act of indiscretion that led to the deaths of nine men. It is perfectly true that no one seemed to anticipate danger. The very fact of Mr. McDonald's being accompanied by his own son, and Mr. McAuliffe's brother and nephew being members of the party, would imply, on the part of the management, a sense of security not warranted under the circumstances. None of the party seemed to apprehend danger in the slightest degree, a fact inexplicable in the case of Jury and Cockburn, men evidently of a superior type, and having

having a considerable knowledge of the gases met with in coal-mines. The explanation appears to be that the manager allowed his better judgment to be overruled by his reliance on Mr. McDonald, and the explorers, with equally mistaken but commendable confidence and respect for the position and experience of their immediate superior, the under-manager, did not exercise the caution and judgment which a full sense of responsibility might otherwise have brought forth. There was also one consideration, very far from legitimate, which acted possibly on the mind of Mr. McAuliffe—certainly on that of Mr. McDonald. It was this: the inspectors had expressed an opinion which involved the conclusion that Smith and Curran had been poisoned by carbon monoxide; the management contended that carbonic acid was the cause of their deaths. This difference of opinion was involved in the further question whether there was or was not a gob-fire burning. Dr. Hester's evidence, given on the Wednesday, tended to the conclusion that the men died of carbonic acid poisoning. On Thursday the inquest was adjourned till the following Tuesday. Before it could be concluded, Mr. McDonald at any rate was anxious to prove by actual inspection that he was right and the inspectors were wrong. Not believing in the existence of a gob-fire, he could not suppose that expedition was essential to locate or extinguish it; his strong opinion and decided inclination practically overruled Mr. McAuliffe's wavering faith in the judgment of the inspectors.

Apart from the one vital blunder of advancing in face of the air, there appears to be no reason for taking exception to the measures adopted by the explorers. Placing chalk marks on the roof was a very proper course, usually followed when traversing old workings, and not in apprehension of any special danger to be encountered. The *personnel* of the party was unexceptionable, being made up of colliery officials mainly, with other colliery employees, able-bodied and accustomed to mining work.

All the way to No. 16 bord, where a retreat was ordered, no inconvenience or ill effects were apparently experienced; but the insidious nature of carbon monoxide being considered, this is not to be wondered at, and, unquestionably, the unfortunate men must have been unconsciously inhaling the gas from the start. At this point a fall is said to have been heard by some members of the party, and there is no reason to question the fact. Falls may always be expected in old workings, and when the roof is alternately affected by the action of heat from a gob-fire and by a fresh current of air, a condition of matters arises when falls would almost certainly occur. It is probable that this weighed with Mr. McDonald, and, in fear of their retreat being cut off, he ordered the party to return. At this time signs of distress were shown by several of the explorers, and it is reasonable to suppose that the consequence of inhaling the gas in the advance were aggravated by the gas belched forth from the old bords by means of the rush of air caused by the fall. But the sound was, in fact, not heard by most of the party, and the effect on the flames of their lamps appears to have been very trifling; the size of the bords, with an average section, when intact, of over 100 square feet, and the extent of the workings, covering nearly 30 acres of ground, and giving at least 15 acres of actual excavation, would provide ample scope for absorption of concussions. The effects of this fall must have been quite local, and had the route traversed in the advance been as free from poisonous gases as it is described to have been by the survivors, the party, when retreating, would soon have reached a region of comparative safety. The fact that six men were prostrated at a considerable distance from No. 16 bord, and that four only reached the trap-door, "Z," after great difficulty, evidently inhaling this deadly mixture all the way, is convincing proof of the insidiousness of the gas and the misplaced confidence of the explorers when advancing.

Mr. McDonald having been rendered unconscious in the retreat, his responsibility would cease there; and other under-officials—Jury, Ellis, and Burt—having got out only after a struggle, and suffering from the gas they had inhaled, were not (although they afterwards rendered noble assistance in the rescue work), in a fit condition to take charge, and could not be reasonably held responsible for anything that followed.

Mr. McAuliffe having been alarmed, and having obtained assistance, headed the first rescue party, and, following a natural impulse, entered the poisonous atmosphere without hesitation, and succeeded in rescuing the two McDonalds. If he had hesitated, in order to alter the ventilating arrangements, or to secure the safety of the rescuers, it seems probable that the two McDonalds would not have been brought out alive. Had he also, as he asserts, been able to command sufficient assistance to send in from time to time fresh parties of rescuers, it is probable that the bodies of the explorers might have been recovered without the sacrifice of a single rescuer. Unfortunately such assistance was not immediately available, and when he returned with the two McDonalds, Mr. McAuliffe was himself so overcome by the effects of the gas he had inhaled as to be unfit for further duties. Rescuers arrived, but Mr. McAuliffe and his principal officials being laid low (with the exception of the mechanical engineer, Mr. Sampy, placed in charge of the trap-door), there was no controlling authority, and the rescuers were, until the arrival of the inspectors, at liberty to follow their noble impulse to save life without the guidance and restraint of the officials. It is not a matter for surprise, therefore, that so many of these men, some of them probably ignorant of the dangerous character of the atmosphere they had entered, and unacquainted with the locality, were sacrificed to their misdirected zeal.

With the arrival of the inspectors, effective measures were taken, needless to detail, to enable the rescue work to proceed with reasonable safety; order was restored, a wholesome restraint was placed upon the rescuers, and further loss of life was averted. If the inspectors had not appeared at this time—lamentable as the loss of life actually was—there is good reason to believe the sacrifice would have been much greater.

Mr. Sampy, the engineer in charge of the trap-door, from the nature of his duties, would not come in contact with the general body of the men, and his authority would not, perhaps, be recognised, by miners eager to rescue their fellow-workmen. Nevertheless, he appears to have done his utmost to exercise some control, and to prevent men from re-entering the trap-door when unfit for further exertion.

The mode adopted by the management for clearing and entering the old workings was claimed as the only practicable method, but this contention will not bear investigation; and, in point of fact, Mr. McDonald, in cross-examination, could see no insuperable difficulty in the manner suggested by the Court, namely, to replace the brick stopping at "D," place a brattice stopping on the main intake at the old stables at No. 1 bord, and remove the trap-door at "Z," thus causing a current of air to be diverted into No. 3 district along the going bord, finally returning by way of No. 20 bord to the main intake or engine plane, thence by way of the door at the disused air-crossing to the main return air-way, and so direct to the furnace. In other words, the current of air which entered at the No. 20 bord, and thereafter traversed No. 3 district, could, with slight modification of the arrangements, have been very easily reversed, thus giving every facility for the thorough inspection of the district, the explorers taking fresh air with them right up to the gob-fire or seat of trouble. It has been contended on behalf of the

management that the course adopted on this occasion was identical with that followed formerly, when experts had occasion to enter these old workings; but the circumstances were of an entirely different character then. At that time, only the accumulated carbonic acid had to be dealt with; and a vigorous ventilation would undoubtedly sweep out entirely, or break up and isolate to a harmless extent, all black damp or noxious gases. On this fatal evening, however, different conditions altogether existed, which the management, although warned, failed to realise. They should have recognised that the retorting of coal was in active operation in this working, producing certain gases of an extremely dangerous nature; and that the effect of increased ventilation would be to generate still greater quantities of gas, and, in fact, intensify the evil. To enter and inspect this district with ten men, in such a manner as to expose and bring every one in contact with the products of combustion of a gob-fire, for a distance of some 500 yards from fresh air, displayed either gross ignorance or an indifference to danger not usually found in men occupying responsible positions. When the party actually started, the previously pent up gases having been removed by the sweeping of air through the district, the smell had been appreciably reduced, but still manifested itself perceptibly. The inspectors had warned the management that this smell denoted the presence of a deadly gas, known to be terribly insidious and deceptive in its action; and there was every reason to believe that a certain substantial portion of the air met at the eastern end of the going bord was sealing down the "double heading"; and that, therefore, as the explorers passed that point, they would not only lose some of the air that was meeting them, but would also encounter a more and more vitiated current, as they approached the point, about bord 19 or 20, where the fire, if it existed, was supposed to be. On cross-examination by Mr. O'Sullivan, Mr. Humble, in the course of his evidence, given before the Court of Investigation, said that on the Thursday evening, the 3rd of December, he was incidentally informed by Mr. Cockburn of the intention to explore on that night, and of the mode of entry to be adopted; and he does not appear to have, as might be expected, raised any serious objection or given an emphatic caution. This conversation took place at the Technical College, a considerable distance from Stockton; Mr. Humble's attention would be taken up with his duties at the College; Mr. Cockburn was in a hurry to leave; and there really does not appear to have been time or opportunity for such reflection as might have led Mr. Humble to attempt to exercise the indirect authority which, we think, his position as inspector would have justified in opposition to the project. Mr. Cockburn's action in putting his affairs into Mr. Humble's hands (*vide* Mr. Humble's evidence) would indicate that he had some strong doubts of the safety of the expedition. This gives colour to the suggestion that he had deferred to Mr. McDonald's strongly expressed opinion rather than that he was following out his own ideas. Mr. Humble freely admitted this conversation; and we do not feel justified in imputing blame to him under the circumstances. It appears that the fact that he had thus become aware of the proposed exploration was not communicated to the manager or under-manager. In the course of his evidence, Mr. Humble afterwards said that he had, in a rather hurried conversation with Mr. McDonald on the Wednesday, specially warned him to take the air with him if an exploration should be attempted; and he gathered from Mr. McDonald's conversation that he was anxious that an examination should be made.

After all that has occurred, and the unmistakable evidences at the present moment of a gob-fire being in active operation in these old workings, the obstinacy of Mr. McDonald in scouting the idea of there being such a thing in existence, and in accounting for the odour of "fire-stink" by the fermentation of old wood, is almost inexplicable.

The immediate object of the exploring party was to inspect the old workings, and to locate the position of the gob-fire, with a view to its extinction, if possible, or, failing that, to its being confined to a small area. This was a very obvious and very proper course to pursue—to conserve the interests of the proprietors and the safety of the employees. From the evidence of the inspectors and Mr. McAuliffe and his under-manager, it appears that there would have been no difficulty whatever in reaching the locality of the fire with perfect safety, except for the ever-present risk of a fall. The inspectors, however, seem to have anticipated some difficulty, owing to broken ground, in sealing off the fire—an opinion not shared by the management. Be that as it may, however, no effort was made either to extinguish the fire or to confine it within a limited area, although such action could have been taken promptly and with reasonable safety. It is to be feared that the shadow cast by these lamentable accidents warped the judgment of the gentlemen responsible for the decision to leave these old workings to their fate.

Having in view the only alternative left—if this fire was not to be conquered or controlled at its inception—namely, to seal off an immense area of abandoned workings charged with dangerous gases, and bounded on two sides by a main intake air-course and travelling road leading direct to the working faces, and that from this main road, bords had been broken off in a most reckless fashion in former years; that each of these old bords was closed by frail brick stoppings, up to 14 or 16 feet in length by 9 or 10 feet in height, and in thickness only 9 inches; that the conditions were as unsuitable as it is possible to conceive for the sealing off of a gob-fire; that, in point of fact, there appears to be no other instance known of a district being sealed off under such unfavourable conditions, fraught as they are with danger to the colliery, and greatly depreciating the value of the shareholders' interests;—it is a matter for extreme regret that the original intention of the management (bad as the methods proved to be), to confine the fire, was not vigorously carried out, and that the course recommended by the experts, in the absence of the manager and under manager, and without the benefit of their local knowledge, was not adopted only as a last alternative after all other measures had failed. The final stoppings had not been completed at the date of the Court's inspection; but sufficient noxious gases were present to indicate a gob-fire still, probably, in operation. To relieve the pressure of gas on the stoppings along the engine plane, an outlet might be provided at a point near the furnace on the main return, as, in Mr. Humble's opinion—accepted by the Court as evidently correct,—it is inexpedient to leave a large area of old workings absolutely sealed, with the almost certain result of the forcing out of noxious gases at various points, especially in the case of a fall of the barometer, and the possible forcible destruction of stoppings by sudden increases of internal pressure caused by falls or otherwise.

From the report of the inspectors to the Honorable the Secretary for Mines and Agriculture, and, in the course of this investigation, the Court has been made aware of certain misfortunes or difficulties the Stockton Colliery Company has experienced in the course of its comparatively short life. Water, and the intrusion, in former ages, of igneous rock "cinderling" the coal, have been a source of great expense; and the latter cause of trouble has considerably hampered the management in developing the colliery under ground. It has, however, been apparent that, apart from these difficulties imposed by nature, the colliery operations have been subject to serious interruptions, and the shareholders' interests have

have been sacrificed, by reason of a reckless and improvident system of mining, calculated to invite disaster. As early as 1889 (*vide* Mr. Humble), when the colliery was practically in its infancy, a crush took place, stopping work for some weeks; and similar trouble has been met with in later years. From an inspection of the plan, it is obvious that this trouble was due, not to unforeseen causes, but to the absence of adequate provision in the way of pillars to protect the workings from the pressure of the superincumbent strata, known to consist largely of water-charged sandy alluvium, the security of the main shaft even being from the same cause not above suspicion. This absence of provision for the protection of ordinary workings is regrettable enough; but, when main roads have suffered from the same cause, and as operations have extended matters have not improved materially, one is astonished that the management of a large colliery, warned by costly experience, should not adopt a system of mining fairly certain to ensure safety, and ultimately to prove the more profitable. The absence of sufficient barriers, or pillars of coal, to support main roads and isolate different districts, seriously increases the difficulty of sealing off this fire, and has certainly intensified the danger. Although the extent of an inspector's power and duties under section 20 of the present Act and section 25 of the Act of 1876 are debatable, we are of opinion that this section—practically identical in each statute—enables an inspector to question the mode in which a mine is being worked in relation to the size of the pillars, and, generally, the support left for the stability of the workings, and the disposition of the main roads as affecting ventilation; and we think it is a matter for regret—though we have no doubt that they were pursuing, in their own opinion, a proper course in refraining from interference—that the inspectors in the Northern District have not, seeing the very peculiar mode in which excavation of coal has been conducted, taken advantage of the powers conferred upon them by these sections, and so brought the question to an issue, whatever the immediate result might have been. We are also strongly of opinion that it is the duty of an inspector, where he has a doubt as to the extent of his powers, and believes that their exercise would be beneficial, to put them in force at all hazards, though he should always be careful to avoid unnecessary or irritating action.

The system of breaking off headings from a main haulage road, forming an intake for a large section of the mine, cannot be too strongly condemned. All such roads should have a return air-way on each side, to carry off the air from old workings direct to the up-cast shaft. In this particular instance the old workings are bounded by a main intake air-way for many hundreds of yards; and the effect of a large fall there would probably be the expulsion of a dangerous quantity of gas, which would be carried into the working places. The outlet to the return air-way suggested would, by putting a slight pressure from without on the stoppings, or inducing an indraught in the case of a blown-out or damaged stopping on this road, tend to check the emission of dangerous gases, or to confine them to the old workings. The objection to this course would be the tendency to feed the fire with fresh air, but it would be the less of two evils; and it is, under the circumstances, apparently necessary.

There has been, in the past, a general tendency to consider the working places and travelling roads as being the all-important parts of the mine; and it is to be hoped the lesson taught by these accidents will not be lost upon mining men, and that greater attention will be paid in future to the supervision and ventilation of old workings and parts of a mine other than the actual working sections. There can be no question as to the safety afforded by the continuous ventilation and inspection of abandoned districts—where pillars are not extracted, and where vast spaces are left for the accumulation of gases, fraught with peril to those employed in the mine. The ventilation at all collieries should be ample to provide for the constant renewal of the air in old workings, in addition to the places in actual operation; and, where this cannot be accomplished, sealing off the district altogether, or arranging an outlet properly regulated into a main return air-way, supplied with an overwhelming volume of air, should be imperative. Either of such courses could have been adopted at the Stockton Colliery, if good management had existed from the first; and it is evident that had proper forethought been exercised in such matters by the management, the lamentable loss of life on the 2nd, 3rd, and 4th of December last would have been averted.

We, therefore, taking into careful consideration all the circumstances attending these accidents, have arrived at the following conclusions:—

1. The immediate cause of the accident of the 2nd December was the extraordinary recklessness and obstinate disobedience of orders on the part of the men Smith and Curran; and, probably, of the former especially, inasmuch as Curran was, to a certain extent, under his control, and had not personally received, and may have been unaware of, the warning given to Smith.
2. The proximate causes of the accident were:—
 - (1) The permitting of a system whereby the only protection of the furnace-men from poisonous gases, known to be generated in No. 3 district, was a single stopping on hinges—as it has been appropriately called—placed in such a position as to tempt them to leave it open. In this relation, we think there was a serious want of consideration on the part of all concerned in the management of the mine. It is very unfortunate that the removal of the stopping in the rope road was not discovered by the inspectors before the accident happened; as they would, presumably, have called attention to its absence as a defect to be remedied; but we do not find that their failure to discover this danger implies any want of care on their part.
 - (2) A certain laxity in the discipline of the mine, which probably conduced to the negligence of the men.
3. In attempting to find out, at once, by exploration, the seat of the mischief which the inspectors had required to be remedied, the management acted properly; though the motive which partly operated on Mr. McDonald's mind—namely, the wish to prove himself in the right, and the inspectors in the wrong, before the close of the first inquest—was not a legitimate one; but—
4. The action of the management of the colliery in sending the exploring party into No. 3 district on the 3rd December was ill-considered; and the primary cause of the deaths of all the men who were killed on that occasion—as we find, by the inhalation of carbon monoxide—was, directly or indirectly, the adopting of a plan of entering against the air,—an act, under the circumstances, most injudicious, and one that no man of experience in coal-mining could reasonably approve.
5. It would have been better if Mr. McAuliffe had himself undertaken the leadership of the party of explorers. We assume that he really thought there should be no delay in the carrying out of the inspection; and we believe that he felt justified in delegating this very important duty to the under-manager, suffering, as he was, from mental distress and from fatigue; but we think he should, nevertheless, have made a real effort to do the work himself.

6. The course pursued by Mr. McAuliffe and all other officers of the mine after the second accident was proper and reasonable under the circumstances; and their conduct was that of brave men honestly doing the best that was practicable to save life, under conditions of great danger to themselves.
7. The inspectors, on their arrival, adopted a proper method to prevent further loss of life, and acted with discretion, vigour, and courage, in directing and personally assisting in the work of recovering the bodies of the rescuers who had lost their lives. Their conduct also on the occasion of the first accident was highly to be approved, and they displayed energy and quick perception. Mr. Dixon, especially, deserves to be commended for his action in placing No. 3 district in the same condition in which it was when Smith and Curran met their deaths, as a preliminary step towards discovering the cause.
8. The general course of working of the mine has been such as to tend unnecessarily to the happening of such accidents as these with which we have had to deal, by leaving abandoned districts in a dangerous condition; and, in this relation, the powers and duties of inspectors should, we think, be made the subject of special consideration.
9. As a conclusion naturally drawn from our former findings, we further are of opinion that both the manager, Mr. McAuliffe, and the under-manager, Mr. McDonald, are, by reason of incompetency and gross negligence, unfit to discharge their duties as manager and under-manager, respectively—their incompetency being shown by their inability to distinguish “fire-stink” from other and totally different gases met with in coal-mines, and their gross negligence consisting in their adopting, under circumstances of evidently considerable risk, and in the face of the warning given by the inspectors, a dangerous, instead of a safe and practicable, mode of entry into the old workings.

We have, &c.,
 C. E. R. MURRAY,
 President.
 D. A. W. ROBERTSON,
 Assessor.
 JOHN THWAITES,
 Assessor.

The Hon. Sydney Smith, Secretary for Mines and Agriculture.

[Here follows plan, with Depositions and Exhibits at Inquest on second fatality, Part II.]

No. 23.

Evidence.

EVIDENCE taken and addresses delivered at Newcastle on the 10th, 11th, 12th, and 13th February, 1897.

WEDNESDAY, 10 FEBRUARY, 1897.

The Court appointed to hold an investigation into the fatal accidents which took place on the 2nd, 3rd, and 4th days of December, 1896, at the Stockton Colliery, met in the old Court-house, Newcastle, at 10 a.m.

Present :

His Honor JUDGE MURRAY (President),
 DANIEL ALEXANDER WILBERFORCE ROBERTSON, Esq. (Assessor),
 JOHN THWAITES, Esq. (Assessor).

By His Honor's instructions, the Secretary read the following notification, showing the authority of the Court:—

COAL MINES REGULATION ACT, 1896—SECTION 23.

I, Sydney Smith, Secretary for Mines and Agriculture for the Colony of New South Wales, being of opinion that a formal investigation into the fatal accidents which took place on the second, third, and fourth days of December, 1896, respectively, at the Stockton Colliery, in the Colony of New South Wales, is expedient, do hereby, in virtue of the powers conferred on me by section 23 of the “Coal Mines Regulation Act, 1896,” direct such investigation to be held. And I hereby appoint Charles Edward Robertson Murray, Esquire, one of the District Court Judges for the Metropolitan, Suburban, and Hunter District of the Colony of New South Wales, being a competent person, to hold such investigation. And I hereby appoint Daniel Alexander Wilberforce Robertson, Esquire, and John Thwaites, Esquire, being persons possessing special knowledge, to act as Assessors to the said Charles Edward Robertson Murray in holding the investigation.

Dated this 22nd day of February, 1897.

SYDNEY SMITH,
 Secretary for Mines and Agriculture.

Mr. T. D. O'Sullivan intimated that he appeared on behalf of the Stockton Colliery Company.

Mr. James Curley said he was present on behalf of the Colliery Employees Federation, the Stockton miners, and the relatives of some of the deceased.

Mr. John Dixon, Senior Inspector of Collieries, announced that he represented the Department of Mines, in the unavoidable absence of Mr. E. H. Wilshire, of the Crown Solicitor's Office.

His Honor asked whether there was anyone else who wished to be represented, or to have a *locus standi* in Court. There was no response to His Honor's question.

Mr. William Humble, Inspector of Collieries, who was present in the Court, withdrew upon His Honor intimating that he would be called later on as a witness.

His Honor: I think that the fairest plan to adopt would be to call, first of all, Mr. John Dixon, Senior Inspector of Mines. Mr. Dixon is one of the most important witnesses, and did not give evidence at the inquest. I think he should give his evidence first.

This proposition was agreed to.

His

His Honor : As to the evidence given before the Coroner's Court, we propose to accept it as primary evidence, but not as conclusive evidence. The Court will, however, allow any witness to be further examined or re-examined by anyone concerned. Is there any objection to that course being adopted?

Mr. Dixon : I have no objection, Your Honor.

Mr. O'Sullivan : No, your Honor.

Mr. Curley : No, your Honor.

Mr. Curley : Will the evidence taken at the inquest be open to comment?

His Honor : Yes.

Mr. Curley : Has it already been carefully perused by the Court, your Honor?

His Honor : Yes.

* Mr. John Dixon, Senior Inspector of Collieries, was called and sworn :—

His Honor : Will you, Mr. Dixon, give your own clear account from beginning to the end of the circumstances within your knowledge attending the whole of this matter?

Mr. Dixon : I will, your Honor.

Mr. Curley : Before beginning with Mr. Dixon, I would like to ascertain, your Honor, whether the inquiry covers the whole of these accidents, or simply the later accident.

His Honor : The inquiry covers both accidents.

Mr. Dixon said : I have been inspector of collieries for fourteen years and eight months. I was appointed under the old Act, and continued under the present Act. Before that, I was employed at everything in connection with coal-mining and shale-mining. I have had forty-four years' experience as a miner in the old country and in this Colony. I have worked at everything in the pit, from the trap-door up. I have been through the whole curriculum. I managed a small mine at Mittagong for some time.

His Honor : Have you studied coal-mining from a theoretical point of view?

Mr. Dixon : I have studied the matter for a number of years from a geological point of view, and am a Fellow of the Geological Society. I am besides a practical man.

His Honor : Have you studied chemistry and mineralogy?

Mr. Dixon : Yes.

Mr. Curley : I would draw your Honor's attention to the presence in the Court of Mr. Thomas, manager of the Minmi Colliery.

His Honor : Do you wish, Mr. O'Sullivan, to call Mr. Thomas as a witness?

Mr. O'Sullivan : I have no intention, your Honor, of calling Mr. Thomas as a witness, but simply wish to receive instructions from him on matters of expert knowledge.

His Honor : Under these circumstances, I do not think there can be any objection to Mr. Thomas's presence. I understand that you, Mr. McAuliffe, are present as representing the colliery?

Mr. McAuliffe : I am, your Honor.

His Honor : Will you please continue your statement, Mr. Dixon?

Mr. Dixon : Yes, your Honor. On the morning of the 2nd December last a messenger sent by Mr. Humble informed me that two men had been found dead at the furnace at Stockton, and that Mr. Humble had already gone over. I at once proceeded to the pit, at which I arrived a little after 9 o'clock. I descended the shaft, and on landing at the bottom met Mr. Humble and Messrs. McAuliffe and McDonald. They had explored the vicinity of the furnace, and were about to take the cage to the surface. At my request, as I wished to see the scene of the accident for myself, they came back with me to the furnace where the two men had been found. We then went down the rope-road in the direction of the abandoned workings of No. 3 district. On reaching the point where a door had been taken down at some time or other, I thought that I should like to obtain the same conditions as we supposed the men were under when they met their death. To this end we opened the No. 3 door, which is the door leading to the furnace, and through which door would pass the air from the No. 3 district. Near this door, and where the heading turns off to go to the furnace, we placed a lamp on the floor of the rope-road to see what action the gas coming from the No. 3 district would have on it. We could at once see that it was something more than black damp, as it would not extinguish the lamp. The door had been opened about twelve minutes, as near as I can remember, before we noticed a peculiar smell, which I at once recognised as fire-stink. We shortly afterwards closed the door. I was satisfied, the moment the noxious gas came up the rope road, that it was fire-stink, or what we commonly call in a mine "gob-stink." I said, "That is fire-stink." I was positive of it, and made the remark in a rather surprised tone, having never heard of fire-stink in the mine before. After shutting the door the gas retreated down the slope and the surroundings became comparatively clear. We then came up the shaft, and Mr. Humble and I went home. In the afternoon we attended the inquest on the two bodies; also next day.

His Honor : The four of us were together when the conversation took place as to the fire-stink. At the moment I noticed the smell Mr. Humble said, "Yes, that is it." We all then had a general conversation on the matter. Mr. Humble and I remarked that the smell was no doubt accompanied by a dangerous gas, and that it was a menace to the men at the furnace, and might prove also a menace to the whole of the men in the pit. We had some considerable conversation over the matter, and I thought at the time, and think now, that we thoroughly impressed the position of affairs on the mind of Mr. McAuliffe; at all events he seemed to drink in with avidity what we said. We asked him, in accordance with our positions as inspectors, to have the difficulty remedied. Seeing the condition the mine was then in, any one at the furnace might at any time be overcome by the same noxious gas and lose his life, should the No. 3 door be left open. We impressed on Mr. McAuliffe that the matter should be remedied as speedily as possible, and I am positive that he was satisfied, and agreed with what we said. We did not suggest in what way the difficulty should be remedied. We thought the death of the two men had resulted from carbon monoxide coming from a gob-fire. Both Mr. McDonald and Mr. McAuliffe appeared to understand what we meant by carbon monoxide; but Mr. McDonald seemed rather sceptical on the point. He thought the difficulty was black damp.

His

* NOTE.—The evidence of this witness was put in at the Court of Inquiry as Exhibit No. 11 by Mr. Wilshire, and read 23rd March, 1897.

His Honor : Can you mention any remark that led you to believe that Mr. McDonald thought the cause of the men's death was something else than carbon monoxide ?

Mr. Dixon : I asked Mr. McDonald if he noticed the smell. He said he did not notice anything peculiar, and he did not seem to recognise it as fire-stink in the way I did. The smell was very strong to me.

His Honor : Was it stronger than the smell we noticed on our inspection of the mine yesterday which came out from the opening off the left side of No. 6 heading, near the furnace.

Mr. Dixon : It was just about the same strength, perhaps a little more pungent. I likened the smell to benzine.

Mr. Dixon (continuing) : After this conversation we came to the pit-top, and we renewed it when we reached the office. I left the colliery, and my colleague did the same, under the impression that the matter would be remedied as speedily as possible. From what we could learn from Mr. McAuliffe, he seemed to be anxious to remedy the matter, and appeared very sorry that the accident had occurred. I came away under the impression that the matter would be remedied as speedily as possible; but I heard nothing as to the way it was intended to remedy it. On the Thursday night following a messenger called on me at about five minutes to 12 at my house and told me that a certain number of men had gone into Stockton pit about 9:30 that night, and that some had lost their lives, while others could not be found. As the messenger had a cab, I sent him round to pick up Mr. Humble, and shortly afterwards, about 1 o'clock on Friday morning, I arrived at the pit and descended. I then met Mr. Humble along the road. We went to the first trapdoor (marked Z on plan). We saw a person in charge of the door, and some people sitting around. We asked how many men they thought were inside; but they did not appear to know. We then went up to No. 20 bord to see what was going on there. We found the stopping had been broken and a current of air was being taken in. We at once decided to close up that stopping and knock out the trapdoor in the stopping marked Z on the plan, so as to reverse the current of air, which would enable us to penetrate the workings safely with the air instead of against it, as had been done by the explorers. By this time some rolls of canvas, with hammers, nails, &c., had arrived. We at once started to erect brattice from the stopping marked Z. By taking this step we were able to search for the bodies without further loss of life. I measured the air at the orifice in the stopping that we had knocked out, and I consider that in from five to ten minutes we had a flow of 10,000 cubic feet of air coming in that way. We kept working at the canvas until we had it hung for, say, 66 yards, when we found the flow of air not returning up the rope road. It was continuing on, we did not know exactly where. We got some men to go ahead of the brattice, and by temporarily bratticing off the bord openings on both sides of the going bord—not, however, before ascertaining whether there were any bodies in those bords—we managed to keep a current of air sufficient for all purposes with us, in spite of the scaling coming through the brattice to the furnace, as we could not make the brattice air-tight. The bratticing was a very difficult work to carry out, and, with much trouble, we could only make it partially air-tight. We kept men bratticing up until we got to the top end of the going bord, and then, having found all the bodies except Fitzpatrick's, thinking he might be in one of the headings we had temporarily bratticed off, we took down the stoppings, and sent men to explore each heading, and then finally closed them up. After five hours' search we ultimately found Fitzpatrick's body at No. 10 bord. [*The witness here referred to the plan of the colliery workings, and described the headings and bords through which the air was forced, &c.*]

Mr. Dixon (continuing) : I am satisfied that the air was getting away and going over the overcast. It could not escape over 20 bord anywhere else. I measured the air at the top of the going bord, and reckoned there were 3,000 cubic feet coming in per minute. We were satisfied that 3,000 feet was good enough for us, especially as we were in a great hurry to get to the bodies.

To His Honor : For thirty men that would be 100 feet each. I forget how many men we had with us.

To Mr. Robertson : If we had had time to make better arrangements we could have obtained enough air to have reached the seat of the trouble. We would have bratticed up every opening we were suspicious of.

To His Honor : There was a certain amount of scaling along the rope road, as we could not successfully tighten the brattice. We started with between 10,000 and 11,000 cubic feet of air. We put the leakage down to the flow back along the rope road. If we had closed the rope road I think we would have very nearly doubled the current.

To Mr. Robertson : If we had had time to make proper preparations, we would not have had any difficulty in reaching any part of the district that was not inaccessible before; and, if the air could have been brought in with proper preparation, we might have got 10,000, 15,000, or 20,000 cubic feet. If it had been a matter of investigating the district only, and not an urgent one of recovering bodies, we would have had no difficulty in bringing in this quantity of air. [*The witness here further explained the plan to the Court.*]

Mr. Dixon (continuing) : I had to close the double heading so that the fresh air would not scale away instead of going up to the top of the going bord.

Mr. Robertson : Having found a scale of air coming through the double heading in the direction of No. 20 bord, that would imply that there was a contrary scale when the air was entering 20 bord ?

Mr. Dixon : Yes.

His Honor : The block shown on the plan is known as the 10-acre Block ?

Mr. Dixon : Yes.

His Honor : And was the subject of a dispute ?

Mr. Dixon : Yes.

His Honor : It is represented as clear on the plan—as not having been touched; but, in point of fact, how would you show on that where the actual workings had gone round the upper (north) corner of the block ?

Mr. Dixon : The top corner of this block has been entered by a number of bords and cut-throughs, and in consequence there is a connection.

Mr. Robertson : According to the plan there was no connection between No. 3 district and the other district (Gardner's Heading) ?

Mr. Dixon : No.

Mr. Robertson : The district to the east and north of the engine plane appears to be connected with No. 3 district by a sort of overcast at No. 17 bord?

Mr. Dixon : That is so.

His Honor : No. 17 bord connects the east side and the west side?

Mr. Dixon : Yes.

His Honor : Supposing foul air is being generated in No. 3 district, that would be the only way you could account for fire stink passing out on to C heading?

Mr. Dixon : Yes.

His Honor : C heading does not connect directly with No. 3 district.

Mr. Dixon : No; No. 3 is a distinct district.

His Honor : There is a connection which takes this stink over the main road into the east side?

Mr. Dixon : Yes.

His Honor : You have not been on the overhead connection at No. 17 bord?

Mr. Dixon : No, I cannot remember it; I may have seen it. I have not inspected Stockton Colliery regularly for many years. The other side of the main road appears to be very foul now from the fire stink cozing out of the bord end.

Mr. Robertson : The district has been shut off to the east of the engine plane; do you not think if the same time and money had been expended in blocking No. 17 it would have been spent to better advantage?

Mr. Dixon : There is a lot of fallen ground there, and it may be a difficult matter to get at it and remedy it properly. It would be rather a risky thing to get there now.

Mr. Robertson : There is fresh air there now?

Mr. Dixon : Yes; but when you are going through fallen ground you hardly know where to steer at times.

Mr. Robertson : Practically it would have been a very much more effectual way of sealing off the district?

Mr. Dixon : Yes.

To His Honor : We were ten hours recovering the bodies. We were five hours looking for one (Fitzpatrick's) body. During that time the whole of the rescuing party did not appear to suffer from poisonous gases until towards the latter end of the shift when Jury seemed to be a little affected; but I could not wonder at it, as he had been in the gaseous part so long, having been at the pit from the night before, when he went in with the first party. In our operations we sent two men at a time down a bord and made them come into the fresh air every few minutes.

His Honor : You were present when a sample of the air was taken?

Mr. Dixon : Yes; I filled one jar myself in Professor Threlfall's presence.

His Honor : Comparing the smell of the air from where the sample was taken by Professor Threlfall with what you observed when you first smelt the air coming out of No. 3 district, what do you say as to the relation between the two?

Mr. Dixon : Professor Threlfall mentions the word benzine in his report, and that is the name I gave to that smell myself. The place from where we took the air for analysis smelt the same as we smelt all the night long—just about the same strength. It was quite strong enough for anyone to be certain that it was a benzine smell which is one of the first products of distillation.

His Honor : How do you explain the formation of carbon monoxide accompanied by this benzine smell?

Mr. Dixon : Carbon monoxide is simply where there is one atom of oxygen taken up. Carbonic acid is two of oxygen and one of carbon. In carbon monoxide there is an atom of oxygen gone, and this CO is one of the first things that come off in distillation of coal in an old bord. There must be a red heat to bring it off, and as a rule it is accompanied by a benzine smell. Proper distillation can only be got with a liquid. This is a destructive distillation or sublimation, when a solid body is undergoing destruction by a red heat. There is of course incomplete combustion, which is brought about by a short supply of air.

His Honor : What experience had you before this in similar cases?

Mr. Dixon : This is the eighth colliery in this colony that I have had experience in in underground fires, and I must say that there was no mistaking the smell when it came from a gob-fire.

His Honor : What were the collieries?

Mr. Dixon : One was in Greta, Brown's Colliery at Minmi, Thornley Colliery, A. A. Company's Old Pit, Hillside (Merewether), and No. 2 Ferndale; also that at Lithgow, where eight men lost their lives in 1886. In each instance I have noticed the peculiar smell of benzine, which cannot be mistaken. Brown's Colliery was fired by soot accumulating in the return air-way, and so was Lithgow Colliery; Greta was fired by the furnace. The gob-fires I have experienced were in Thornley, Hillside, A. A. Company's Pit, and Stockton. In each case it was a gob-fire pure and simple. I watched its action in A. A. Company's Pit, having been a workman there. I can state pretty well now from past experience when gob is heating—that is, spontaneous combustion. I was the first person to discover the heating of coal in the A. A. Company's mine. My experience is, your Honor, that a gob-fire is more likely to take place where there is a great percentage of iron pyrites. Other people differ from me; but what I have stated I believe to be the case. I never knew these fires to break out until the clay-shale came away, and as soon as that falls it forms a sort of wet blanket upon the heated small coal. The heated substance must be covered over with something before this spontaneous combustion can take place.

To Mr. Robertson : The first place in the A. A. Company's mine where I ever found coal heating was a place where there was a current of air playing on the small coal at the bord end. I used to plant my tamping stick into it, and on one occasion, when I pulled it out in the morning, I could hardly bear it in my hand, it was so hot. I drew the attention of the foreman to it. I believe that the gob-fire was owing to the extra amount of iron pyrites present at the time.

Mr. Robertson : Would the circulation of a good current of air have a cooling effect and tend to stop a gob-fire?

Mr. Dixon : As a matter of fact, if you keep the place cool you would not get a gob-fire.

Mr. Robertson : But could you, in any large area, spare sufficient air to put it through every bord?

Mr.

Mr. Dixon : Well, if you could supply sufficient cool air, especially in old workings, and confined it to a given course down each bord, you might obviate a gob-fire. (*Continuing.*) I do not believe in furnaces. I do not believe in underground furnaces—the day has gone by for them; and I do not believe in having a reservoir of gas. The area of old workings is on the increase. There ought to be some system in a mine to cause sufficient ventilation. As regards the course I would recommend to be adopted in the absence of a sufficient volume of air to ventilate the old workings, I see no harm in having an open end to a return air-way, but not to a furnace; I do not believe in having any place of that kind sealed up. Of course you cannot help it in the case of a gob-fire.

To His Honor : I have known carbolic acid to put out gob-fires.

To Mr. Robertson : The conditions must be very favourable to get an effectual seal of a gob-fire. If I can hear certain sounds which my experience has taught me, I can tell whether there is any air going in. Here you have something like a mile of main road, and there would be getting on for fifty or sixty stoppings. As to whether I think it possible to seal up this gob-fire—supposing that there is one (and Mr. Humble and I say we believe there is)—until the other stoppings are sealed up and we get the normal pressure of the No. 3 district, I cannot say positively. My own opinion is that it would go through a plastered stopping. In the No. 3 district nearly all the stoppings are sealed up, but where the poisonous gases are now the stoppings are not built. The by-products coming from that gob-fire—we suppose there is one there—are bound to be coming out there, while being engendered, until the other stoppings are built. After I hear the sounds, after the other stoppings are built, I will be able to give a definite opinion as to whether there is a gob-fire there; I am awaiting the issue of events to see if the other stoppings will render it safe. I have never heard of a gob-fire, or seen anything of one, in a mine where there is such a large area with so many as fifty or sixty stoppings. It is unfortunate that it should be so, but it is so. As to the Lithgow accident, that was owing to a big fall in the roof. The small coal stoppings were forced out by a fall of the roof. I cannot say whether the pillars had been taken out between there (Lithgow) and Eskbank. I did not see the pillars. Several acres of ground came away in one big body.

Mr. Robertson : Can you state what were the recommendations of the Royal Commission on the Lithgow accident?

Mr. Dixon : That they have complete stoppings.

Mr. Robertson : Did not the Commission point out the danger of an old working being sealed off in proximity to working places?

Mr. Dixon : I really forget now; it is such a long time ago. I do not know that they recommended brick stoppings. The effect of a fall forcing out a stopping would be that some of the old noxious gas would come out. As regards the Lithgow accident, the question is about a fall of such magnitude coming away.

His Honor : Is there any risk of a gob-fire spreading in a mine;—if it is well sealed off, is there any risk of the fire, if there is one there, becoming serious to the surrounding country?

Mr. Dixon : Providing the fire were to come through, I think it would go through the whole district. If it is well sealed off, I expect it to be put out—that is, if it is hermetically sealed off.

His Honor : If the highest temperature in the mine is 78, what would that indicate?

Mr. Dixon : It would be a question of how much heat was coming from the seat of the fire.

His Honor : If "fire-stink" was coming from it, would it indicate that there is a large or small fire?

Mr. Dixon : I believe that the fire was not a month old when the accident happened. I believe it was only an incipient fire. I believe it will go out when that district is sealed off. I think I look for the extinctive gas being able to put that fire out. It must go out when it cannot get anything to live upon. I look upon a lot of small coal in a gob as a heap of porous matter. A certain percentage of oxygen enters the pores, and incomplete combustion takes place owing to the want of more oxygen. That tends to destructive distillation or sublimation. One of the first products given off by incomplete combustion is naphtha, which carries with it benzine, and is invariably accompanied by carbon monoxide gas. This distillation is caused by red heat, and, as a supply of oxygen cannot again be readily supplied to those pores, the gob-fire naturally dies out for want of oxygen. Take away the oxygen and it naturally dies out. Chemical action is done after the first oxidation. Away comes the naphtha and benzine, and then comes this carbon monoxide and free nitrogen. Hydrogen, to some extent, is also given off in the process of destructive distillation. Carbonic acid is a virulent poison, and, when inhaled to the extent of 10 or 15 per cent., it lays violent hands upon you, and you are dead directly. Carbon monoxide infiltrates into the blood. A person can live in it until the blood has about 2 pints in it. A person may travel a considerable distance in this gas without feeling its ill effects until the infiltration is complete. Then the person desires to lie down and death ensues. It is a direct poison through the blood to the brain. The whole system afterwards becomes affected, causing weakness in the limbs, dimness of sight, loss of memory, and then unconsciousness. I have seen men stricken down with it. Sulphuretted hydrogen is composed of about 95 per cent. of sulphur and 5 per cent. of hydrogen, and also acts on the blood and brain. It smells like rotten eggs, and as soon as a person smells it he ought to get out of it, as 1 per cent. is dangerous to life. That is quite distinguishable from carbon monoxide. When poisoning takes place from carbon monoxide, the blood is turned scarlet. When poisoning ensues from sulphuretted hydrogen, the blood is a dark brown. I knew Curran well. I have known him for twenty years. I have read Dr. Haldane's report on his examination of persons about the face and ear who have been poisoned by carbon monoxide. I noted Curran's appearance around the ears and jugular, and saw signs of pink in the skin. I came to the conclusion that Curran and Smith both died from carbon monoxide. Dr. Hester made a *post mortem* examination of Curran and believed it was a case of carbonic acid poisoning. I think he was well seized of the facts before he made that *post mortem* examination. I think Dr. Hester's attention was drawn to the question whether it was carbon monoxide or carbonic acid poisoning before he made the *post mortem*. Of course, the jury came to the conclusion that the death of the two men was due to carbonic acid and other gases, and that is a very wide range. After-damp is the product of an explosion of fire-damp, and the result of that explosion is free nitrogen, steam, and a percentage of carbonic acid and carbon monoxide; but it is only of late years that they have come to discover carbon monoxide in after-damp. Nitrogen is not a poison; it is a dilutant.

To Mr. Robertson : Carbon monoxide has only been suspected in after-damp in quite recent times. Inspector Atkinson and Dr. Haldane have been bringing these things to light. Everything used to be attributed to carbonic acid.

Mr.

Mr. Robertson: Is it not conceivable that at the time of Smith and Curran's death, carbonic acid may have been present in large quantities, and that it may have been followed up at a later stage by carbon monoxide?

Mr. Dixon: I would rather think it was through an extra supply of free nitrogen.

Mr. Robertson: Mr. Jury mentions an acid taste about the carbonic acid?

Mr. Dixon: I have never tasted that acid taste in carbonic acid. I have been amongst it many a time. I have travelled with 3 feet of it on the floor. I have a habit when amongst gases of keeping my mouth shut and breathing through my nose. That has, perhaps, saved my life. There is nothing improbable about carbonic acid killing these men.

Mr. Robertson: Is it not possible that Smith and Curran may have been suffocated by carbonic acid gas, and that after that, that gas was diffused?

Mr. Dixon: I want to know where the settlement of the carbonic acid gas would be to environ the carbon monoxide. There was a man mortally sick at the furnace the night before the accident to Smith and Curran. I noticed the pink hue in the skin of Curran about the lobe of the ear and about the neck. I am prepared to abide by what Dr. Hester has said after making his *post mortem* examination, because he is a scientific man in his own profession. I don't bow to him in coal-mining matters. I presume that it was at the meeting of colliery managers that it was decided to seal off the No. 3 district. We have had in evidence that the meeting was held. There was a meeting of managers, and at that meeting it was decided to recommend Mr. McAuliffe to shut the place off. I did not say that there was no difficulty in reaching the seat of the fire. I said the seat of the fire might be reached if proper precautions were taken. We might have reached further on than we did.

Mr. Robertson: Would it not have been better to have endeavoured to have extinguished the fire?

Mr. Dixon: That's a mighty question. If the fire was in the top drive, it would have been a heavy undertaking to extinguish it. It is best to try and circumscribe an underground fire. It was not a panic decision to do as was done, but we knew we had eleven men dead already. I knew most of these men who were killed, and it affects me more than anything else. Men, at a time like that, might not think at the time just the same as they do afterwards. I have said that, providing a current of air was forced into the No. 3 district, it might be possible to manipulate all the air current to get further round. It was thought by the managers that the best way would be to seal up the district. To carry fresh air on to 18, 19, and 20 bords would, if there was a gob-fire, probably blow the whole thing into a blaze. If you put fresh air on to a smouldering fire you will probably blow the whole thing into a blaze. It is a serious matter to seal off such a large area of the mine.

To His Honor: I have a knowledge that No. 3 district was cleared of noxious gases on two or three occasions in order to let certain gentlemen in who had to give evidence in a court case. And there was more than one case. I was present—I think it was on December 5th, 1895—when a visit was made in connection with a court case. The air travelled through 20 bord, and came through a slide door. The slide was pulled back to let the return air through. The party went through the slide door marked "Z" on plan. That was when I was in that district last. The procedure adopted was done to clear away the noxious gas in that district. There was a good current of air on that occasion; but it is so long ago that I can scarcely remember all about it now. There had been a falling bord, as far as I could make out. Sometimes the covering over a bord might be softer than that over another bord. Where the roof was soft it would fall; where there was a big stone it would stand. On the occasion of the inspection for the court case, the air was comparatively pure. It was pure enough to live in, and for us to be able to do what we did. There was not the slightest suspicion of benzine there; and there was no sign of fire or heat. I did not feel distressed in any way. Since this accident, the return air-way from No. 3 has gone by the name of the rope-road. After December, 1895, I did not go again to inspect the colliery. I do not, of my own knowledge, know that the stopping on the rope-road had been knocked out. I heard after this accident that this stopping had been knocked out. I had been under the impression that that stopping with the trapdoor had been left there and was there still. As an expert I say that it was not expedient to knock that stopping out.

Mr. Thwaites: When the No. 3 door was opened, had the foul air from No. 3 district a direct course to the furnace?

Mr. Dixon: Yes, a direct course to the furnace.

Mr. Thwaites: If the stopping and man-hole door had been rebuilt, would the air have had the same effect on Curran and Smith at the furnace?

Mr. Dixon: No.

Mr. Thwaites: If the No. 2 door had been opened, and the No. 3 door had been shut, would the poisonous gas then have had a connection with the furnace?

Mr. Dixon: No.

Mr. Robertson: When that stopping was down, on every occasion that a man had to pass through at No. 2 door, he was virtually getting into No. 3 district;—it was the neck or approach to the No. 3 district?

Mr. Dixon: It is a very crooked neck.

Mr. Robertson: If the gas was coming out, it was very unwise to leave that stopping out?

Mr. Dixon: If they knew the gas was coming out from that district towards the furnace—and they knew that gas was coming out—I think it was very unwise. The effect of that No. 3 door being opened every time skips had to pass in and out would be to allow the noxious gas from the No. 3 door to go direct to the furnace, and this would happen every time the skips would have to be taken to and fro.

His Honor: In some instances it is a fact that if you leave any patch of country underground alone, after it has been worked and abandoned, carbonic acid gas would be present. If I suspected any gas in pits in the old workings in this district, it would be carbonic acid gas that I would suspect. If I had a reservoir of gas, and a ventilating fan, I would not hesitate for a minute to clear the gas out, unless there was gob-fire. That is the way I look at No. 3 district.

His Honor: You would not expect a short or slight draught to blow out such a heavy gas as carbonic acid?

Mr. Dixon: No. I could understand it accumulating, but would not expect it to come up that hill so readily as the other mixture. Carbon monoxide has a lower specific gravity than carbonic acid gas.

Mr. Curley: I saw Mr. Curran's body, and from his appearance judged that his death was in consequence of inhaling carbon monoxide. I saw the whole of the bodies taken out later on, with the exception of one of the McAlpins. I saw Thomas McAlpin's body, but did not notice any frothy mucus about the nostrils or mouth. I did not notice him particularly about the face, and could not say for certain what appearance he really had. I paid more attention to his body. As a rule people poisoned with carbon monoxide are limp; but he was not—his was the stiffest body we got. I examined the bodies of Gascoigne and Sneddon closely; it was by lamp-light in the pit. I did not see Sneddon afterwards at the hospital. If there had been a frothy mucus at the mouths of these two men I would say it was an indication of any sort of gas. They might have died in some sort of throes—trying to vomit perhaps. I would not consider the mucus at the mouth anything to go by. It would not indicate to me sulphuretted hydrogen. That gas does not breed from a gob-fire. You get sulphurous acid but not sulphuretted hydrogen. Sulphuretted hydrogen is generated from water and decayed matter, and there is no water near the fire at Stockton. There is no considerable moisture given up in No. 3 district; it is a very dry district. There is no drainage from any other district into it. The Stockton Colliery is classed in the Northern district, which is one district.

Mr. Curley: The case of a man who was affected by gas in the mine prior to the death of the two men having been reported to the manager, do you, in your opinion, think he ought to have looked into the matter and seen for himself as to the cause of the complaint?

Mr. Dixon: The manager has got officers under him to do his work should he be absent. If he could have got to the place himself I would say yes, he should have made an investigation; but I do not say that it was imperative for the manager to do it. He has capable officers under him, and at this particular time the under-manager had the mine in hand, and made an inspection.

Mr. Curley: When a serious matter of this kind crops up, do not you think that the manager himself should attempt to make a personal inspection?

Mr. Dixon: If the manager is not urgently engaged on something else, I say yes; as a responsible person he should make an inspection, and try and get rid of the cause of complaint.

Mr. Curley: When you made inspection on the 2nd December, after the two deaths had occurred—when you made the experiment with the light, did you then know that the door in the stopping was out?

Mr. Dixon: Yes; I knew there was then direct communication with No. 3 district.

Mr. Curley: Did you ask why that door was removed?

Mr. Dixon: I do not remember; I do not think I did so right on the spot. I had heard that it had been removed. It had been knocked down to let the return air in when certain people inspected those workings in August last.

Mr. Curley: Did not the stopping being out surprise you into making some remark to the manager, seeing that there was only the furnace door to keep back the foul air from No. 3 district?

Mr. Dixon: It surprised me, but I do not think I made any specific remark to the manager about the stopping being out. Mr. Humble had been down the mine before me and made an inspection, and I therefore did not make any specific remark about it.

Mr. Curley: If that door had been put up at once would not that have allowed the management to look around?

Mr. Dixon: Yes.

Mr. Curley: How long would it have taken to put the stopping in—one similar to what was there before?

Mr. Dixon: Not many hours; the one there now was placed in position in about twenty-four hours after the second fatality.

Mr. Curley: How long did it take you to force the air into No. 3 district?

Mr. Dixon: We got up to the top of the going bord, as near as I can remember, about 3:30 in the morning. We would have been up quicker only we had the heading ends to shut off as we went up, to make sure of the current going upwards.

Mr. Curley: Can you tell us how long it took to get up to the cinder dyke, shown on the plan?

Mr. Dixon: It was about 3:30 in the morning when we got to the top of the going bord, which is beyond the dyke.

Mr. Curley: When you mentioned to the manager that the "fire-stink" indications were a menace to the colliery, did you not think it necessary to hand some communication to him?

Mr. Dixon: No, as it would be met by Rule 1, section 47 of the Act.

Rule 1, section 47: An adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases to such an extent that the working-places of the shafts, levels, stables, and workings of the mine, and the travelling roads to and from those working-places, shall be in a fit state for working and passing therein. The ventilation so produced shall be the supply of pure air, in quantity not less than 100 cubic feet per minute for each man, boy, and horse employed in the mine, which air (in that proportion, but with as much more as the inspector shall direct) shall sweep along the air-ways and be forced as far as the face of and into each and every working-place where man, boy, or horse is engaged or passing, main return air-ways only excepted.

Every mine, except such as are worked on the longwall system, shall be divided into districts or splits of not more than 70 men in each; and each district shall be supplied with a separate current of fresh air. The in-take air shall travel free from all stagnant water, stables, and old workings. In the case of mines required by this Act to be under the control of a certificated manager, the quantity of air in the respective splits or currents shall at least once in every month be measured and entered in a book to be kept for the purpose at the mine.

We considered, Mr. Humble and myself, that that warning was as good as any we could give. We talked the matter over with the manager and his over-man, and we took it that our verbal instructions to the manager were definite. We assumed that a gob-fire was in the abandoned workings, which, if allowed to burn, would be a very serious matter. At that time I thought a gob-fire to be in existence in an incipient state.

Mr. Curley: Does not section 33 of the Act stipulate that notice should be given in writing?

Section 33: All notices under this Act shall (unless expressly required to be in print) be in either writing or print (including lithograph), or partly in writing and partly in print (including lithograph), and all notices and documents required by this Act to be served or sent by, or to an inspector may be either delivered personally, or served and sent by post by a registered letter; and if served and sent by post, shall be deemed to have been served and received respectively at the time when the letter containing the same would be delivered in the ordinary course of post; and in proving such service or sending, it shall be sufficient to prove that the letter containing the notice was properly addressed and put into the post.

Mr. Dixon: I contend that notices can be either in writing or verbal and base my contention on section 20, and on Rule 1 of section 47.

Section 20: (1.) If in any respect (which is not provided against by any express provision of this Act or by any special rule) any inspector finds any mine or any part thereof, or any matter, thing, or practice in or connected with any such mine, or with the control, management, or direction thereof by the manager to be dangerous or defective, so as in his opinion to threaten or tend to the bodily injury of any person, he may give notice in writing thereof to the owner, agent, or manager of the mine, and shall state in the notice the particulars in which he considers the mine or any part thereof, or any matter, thing, or practice to be dangerous or defective, and require the same to be remedied, and unless the same be forthwith remedied shall also report the same to the Minister.

Mr. Dixon: I contend that section 20 provides that the inspector *may* give notice, not that he *must* give notice.

Mr. Curley: Does not section 33 apply to all notices?

His Honor: I think it is hardly a question of great importance whether Mr. Dixon wrote or gave verbal instructions to the manager.

Mr. Curley: I want to lead up to Part 3, Supplementary, of the Act, section 59, subsection (ii), which has a very important bearing on the point.

Part 3, Supplementary, section 59, subsection (ii): Every person who is guilty of an offence against this Act for which a penalty is not expressly prescribed shall be liable to a fine not exceeding, if he is an owner, agent, or manager, or under-manager, twenty pounds, and if he is any other person, two pounds for each offence; and if an inspector has given written notice of any such offence, to a further fine not exceeding five pounds for every day after such notice that such offence continues to be committed.

His Honor: That does not touch the question before this tribunal to any appreciable extent.

Mr. Curley: Should the inspector give a written notice about a defect, it imposes upon him the duty of being there the following day to see that the defect is being remedied; and I want to ask Mr. Dixon if he was there the following day.

His Honor: Whether Mr. Dixon gives a written notice or not it is his duty to be there.

Mr. Curley: I admit that; but it would be imperative if the written notice had been given. Did you attend, Mr. Dixon, the day after to make inquiries?

Mr. Dixon: No.

Mr. Curley: Did Mr. Humble?

Mr. Dixon: I cannot speak for Humble.

Mr. Curley: I thought you acted conjointly in this matter.

Mr. Dixon: Yes, we did; but I do not know whether Mr. Humble was at the pit the next day. We were at the inquest most of the time.

Mr. Curley: General Rule 7 says:—

“If at any time it is found by the person for the time being in charge of the mine, or any part thereof, that by reason of inflammable gases prevailing in the mine, or that part thereof, or of any cause whatever, the mine or that part is dangerous, every workman shall be withdrawn from the mine or part so found dangerous, and a competent person appointed for the purpose shall inspect the mine or part so found dangerous, and if the danger arises from inflammable gas, shall inspect the mine or part with a locked safety lamp; and in every case shall make a true report of the condition of the mine or part; and a workman shall not, except in so far as is necessary for inquiring into the cause of danger or for the removal thereof, or for exploration, be re-admitted into the mine, or part so found dangerous, until the same is stated by the person appointed as aforesaid not to be dangerous. Every such report shall be recorded in a book which shall be kept at the mine for the purpose, and shall be signed by the person who made the inspection.”

At the time that you made your inspection, Mr. Dixon, you considered that certain circumstances in connection with No. 3 district made it somewhat dangerous?

Mr. Dixon: Yes.

Mr. Curley: You informed the manager of that?

Mr. Dixon: Yes.

Mr. Curley: Is it your opinion that this district should have been thoroughly inspected before taking men into it?

Mr. Dixon: You could not make an inspection without taking someone in.

Mr. Curley: Do you think that an inspection should have been made?

Mr. Dixon: We have it in evidence that an inspection was made. Mr. McDonald says he got up 300 or 400 yards.

Mr. Curley: I think you are wrong; I think he said 150 or 160 yards. [Upon looking up the evidence, it was found that an inspection was made for a distance of 160 yards from point marked Z.]

Mr. Dixon: Mr. McDonald examined that district as a competent person, and satisfied himself that the place was safe.

Mr. Curley: Do you think that the point he intended to take men to should have been inspected?

Mr. Dixon: I cannot say, as there is no telling where he wanted to take the men to.

Mr. Curley: From the evidence, Mr. McDonald only inspected 160 yards, leaving 500 yards not inspected prior to the men entering;—would you regard that as a mistake?

Mr.

Mr. Dixon : I would regard it in this way : that it wanted inspection.

Mr. Curley : Do you regard the want of inspection of 500 yards a serious blunder ?

Mr. Dixon : I do not understand the way you are putting that question.

Mr. Curley : General Rule 7 provides for an exploration party, and the question is, how many men you would have go in with the manager to make up the party ?

Mr. Dixon : The manager could not go in by himself and make an inspection ; he must be accompanied by some one.

Mr. Curley : You say the underground manager, when you made your inspection, was sceptical about the views that you enunciated regarding what transpired in the locality inspected ;—do you think, in the face of that, he was the right man to send to lead the party, being so sceptical on the question.

Mr. Dixon : I could not answer that. I said he appeared to be sceptical ; not so sceptical.

Mr. Curley : You knew the dangerous gases that would have to be contended with, I presume, and you no doubt impressed that upon the manager ?

Mr. Dixon : I may say again I never thought they intended to penetrate No. 3 district, and the message coming to my place informing me of the accident was the first intimation I received on the matter.

Mr. Curley : You knew the under-manager's opinion ?

Mr. Dixon : Yes.

Mr. Curley : That he thought it was black damp ?

Mr. Dixon : Yes.

Mr. Curley : Did you not think there was a danger in sending this man on an expedition, with his peculiar view ?

Mr. Dixon : I never knew he was going to be sent on such an expedition.

Mr. Curley : Do you think the manager should have gone there himself ?

Mr. Dixon : Yes ; I think the manager should be on the spot as well as the under-manager if they are exploring, provided he is not engaged on other urgent duty. I believe the manager was fully seized of everything in detail as to what we said about gases being there.

Mr. Curley : Do men usually look for their lights to go out when penetrating a district containing black damp ?

Mr. Dixon : We know men do it, but it is not a wise thing to do.

Mr. Curley : Do you think it a mistake to imagine they can travel with impunity until their lights go out ?

Mr. Dixon : Yes ; wherever gas is met with, fresh air should be carried along with the party.

Mr. Curley : How would you look upon this exploration ?

Mr. Dixon : Simply in this way : that it was a grave error of judgment to go in from the rope-road in the face of the return current. It should not have been done. I never thought that anyone would have gone down the rope-road in the face of a current of air.

Mr. Curley : After you had made the inspection, and closed No. 3 door, did you discover at that time that the current of air was going in some other direction when the door was closed ?

Mr. Dixon : I discovered that the gas seemed to retreat down the rope-road.

Mr. Curley : Do you think it went over the overcast ?

Mr. Dixon : I do. I think it retreated down the rope-road until it found its equilibrium in the No. 3 district.

Mr. Curley : That being so, was there not a return over the overcast, and would not these circumstances be fully apparent to the management of the colliery ?

Mr. Dixon : Yes ; that there was an overcast there, and a return.

[The Court, at 1 p.m., adjourned till 2 p.m.]

Upon the Court resuming at 2 p.m. (Wednesday), Mr. John Dixon was re-called.

To Mr. Curley : I did not, when this inspection took place, ask the manager what experience he had had in gases ; and I did not ask the under-ground manager, because I do not talk to managers and under-managers as I would to a school-boy. I have been in the vicinity where gob-fires have been shut off in times gone by. Mr. Humble and I could see that everything hinged on that No. 3 door being open or shut. On making the inspection, we said that it was carbon monoxide which was present in the mine, and Professor Threlfall says the same. Professor Threlfall came to that conclusion upon examining the air which he took in the mine. There was one bottle which he said he did not expect to get any good result from because it had not been properly sealed. He told me so when we came to the surface the day the samples were taken. He was not properly satisfied with it at the time. The products from the kerosene pump never came down into the No. 3 district, but passed into the "C" heading-way. They never went into the No. 3 district. I cannot tell you how long that pump was in operation, but I think it has ceased to operate for eight or nine months or more ; it was put into the mine, I think, about three years ago ; I have seen it at work ; I do not know the quantity of oil used per day, but I saw it at work one time. I was present at the consultation of managers. I did not make any communications to the manager of the mine to the effect that it might be desirable to have a consultation with some of the other managers. I did not know that we were going to meet till the Saturday. I think the whole trend of the arguments was to shut the whole place up—to seal it up—so far as I remember. I do not think the matter of confining the fire into a smaller area was discussed. The only place where gas is now escaping is in the "C" headings, which have not yet been sealed off. That has not been done yet. I think there will be forty or fifty stoppings now alongside the engine-plane. They are 9 inches thick. There is a patrol stationed on the main road. There has not been any inspection of the top drive or bords in the top drive since the accidents. The top and bottom drives in the No. 3 district are now totally abandoned. Round the "C" heading the work of stopping is still going on.

Mr. Curley : Are you fully satisfied that the whole of these deaths were from carbon monoxide ?

Mr. Dixon : As I said this morning, I would not like to go in the face of Dr. Hester's evidence in regard to the first two deaths. In the case of Curran, I thought at the time that he had died from carbon monoxide ; but I do not say so much of the other man. As a matter of fact, after I have known a per-son I cannot bear to see him dead. I knew them alive, and did not want to see them after. I saw two

two when I came over—Coekburn and Bailey—and after that Sneddon, Charlesworth, McAlpine, Sweeney—about eight altogether. I think Dr. Haldane is the greatest authority on the high colouring of the blood in this sort of poisoning. I have not read “Taylor’s Manual of Medical Jurisprudence.” I have not read “Foster’s Text-book on Physiology.” It has been a moot question for many years in regard to colliery explosions, and, just now, they seem to be arriving at some settled conviction on the matter. In regard to the first two cases of death, Mr. Humble thought, as I did, that it was “fire-stink” that was in the mine. I think it was the duty of the manager to regard our opinions. Such a fall as McDonald described, if he could hear it, would have the effect of disturbing any noxious gas that might be there, and forcing it out. I have heard that it in no way affected the light. I know that most of the witnesses did not hear it; they only felt something slightly. On the following Monday, Mr. Humble and I heard a fall in No. 20 bord. No doubt that was caused by the fresh air which had been passed in. I am of opinion that it is highly probable that a fall had taken place. Well, it might have been only the morgan falling, and been just enough to displace the gas. The bords have stood there for years. There would be a certain heat in the old workings, and the fresh air passing in would tend to cool the strata, and that, I believe, is why there are more falls at night-time than in the daytime—owing to the cooling of the pit after the heating during the daytime. If it had been a big fall in No. 3 district, where the exploring party were, it would have affected the light; it would have deflected the light or put it out. I would not say the fall was one of any very great extent. When I made the inspection, I did not make any inquiries whether the managers had made inspection of the locality prior to that accident. I heard that McDonald had been down there a fortnight before. I do not think there would be any reports of inspections entered in the colliery books between the time of the accidents and now. I have not had time to go to the pit, owing to the work which I have had in the office. I know that inspections are to be made when anything dangerous takes place, and that the inspectors have to record them in a book. Yes; that is the law. In one or two places in the back return, the “C” heading way, I found this benziny smell. It has, at times, affected my light; it has put it out. I believe that it is nitrogen set free, as a product of a gob-fire, which has put my light out. I cannot remember whether the subject of free nitrogen was discussed at the time we had conversations with the manager and under-manager; so much was said. In my opinion, there was, at the time of the investigation of the accident to Smith and Curran, no effect upon the light, except that it was deflected a little. I think that Mr. McAuliffe could, at the time of the inspection, see the effect upon the light. I think he said in his evidence that the gas affected the light. From that, I judge that Mr. McAuliffe was well seized with what we said, and that he would know that it was a gas of a very dangerous character—a gas that would have to be approached with every caution. I did not feel anxious to be at the colliery on the following day. I was in Stockton. I was at the inquest, and that went on till about 5 o’clock. The colliery was idle. We knew that the colliery would not start work until the defects had been remedied—namely, until the pit had been cleared of the bad air which the inspectors had described as a menace. The manager had told me that. I had it from the manager’s own lips. It was on the Wednesday—the day after the first two men were found. At the time the inspectors cautioned the manager about the nature of the mixture in the mine, we did not call attention to the fact that the stopping and trap-door ought to have been replaced between the No. 3 furnace-door and the old workings. The policy of the inspectors had been, not to dictate how a manager should manage his colliery, which would mean taking complete control of the colliery. I, as an inspector, have no right to go and suggest to the manager how he is going to do his work. I have been inspector now nearly fifteen years, and that is how I have always acted, and I will stand or fall by it. I would step in and step a manager if I thought he was going to endanger men’s lives. Men’s lives were lost by what the manager did. If I had been down the pit the following day, or in the colliery office, I should have asked what they were doing. We—Mr. Humble and I—never dreamed that they were going to try to penetrate into No. 3 district as far as they went. I did not suggest any remedy at all. The place was stopped off on the Saturday evening after the accident. I did not suggest the rebuilding of the stopping and slide door; if I did, I cannot remember it. [At this stage, Mr. O’Sullivan put in a copy of the *Special Rules of the colliery* (marked Exhibit “A”).]

Mr. Dixon (to Mr. O’Sullivan): In regard to the samples of air taken in the mine by Professor Threlfall, the first sample was useless, the second contained carbonic oxide, and the third carbonic acid. The district in question would be an extremely difficult one to seal off effectually. In view of the decision arrived at at the first inquest, and of the evidence given by Dr. Hester, that the men, Curran and Smith, had died from inhaling carbonic acid gas, it was quite within the bounds of reason for a party of explorers to have entered the district with the idea of trying to locate the cause of the trouble. The smaller the space it (the gob-fire) could be confined to the better. The desire to locate it was, I understand, in order to confine it to a small area. I do not say it was imperative for them to get near the locality of the trouble. I do not say there was any great cause for them to go in and do it. My contention is that the fire was the cause of the trouble in this case. This gob-fire—supposing there is a gob-fire—would be generating noxious gases all the time.

Mr. O’Sullivan: When you went into No. 3 district in December, 1895, did you not go in facing the air current?

Mr. Dixon: Yes, I did; but the conditions were not the same in this case as they were then, as it was then black damp, and it can be swept out and would not generate again while we were travelling. I knew that all the gas that had been there was swept out. I was told that black damp had been found in that district. I have never crawled on my stomach in that district, and I have never seen others do so. I climbed up a fall once, but did not crawl up. I cannot remember being on my stomach. It was grave error of judgment for anyone to go in on the rope-road if the conditions were the same as Mr. Humble and I found them. I say if the same sort of odour was present as we found on the morning of the accident to Smith and Curran, it was an error of judgment. I am prepared to say that. I say if the conditions were the same, and if that benzine smell were coming out. At the time of seeking the bodies on Friday morning, we had 3,000 cubic feet of air with us in the innermost heading at the top of the going bord, and this returned to the overcast and into the “C” heading back to the pump at the bottom of the furnace shaft. I never said that the 3,000 feet reached the No. 16 bord; I said to bord No. 10. Probably we could have got enough air to have served our purpose as far as the exploring party went. We lost 7,000 feet of air going behind the brattice to the furnace. We were going in to get dead men—and, perhaps, a living man if we could; and, as long as we found enough air for our purpose, we were satisfied. I believe we could have got in in that fresh current, and could have got in as far as McDonald and his party

party went. Falls have been likely to take place in that district, and, as a matter of fact, have taken place there. The fall in No. 3 district was not of the magnitude of the fall at Lithgow, where the small coal stoppings were blown out. There is no analogy between the fall at Lithgow and the one at Stockton. I do not believe in anyone travelling in the face of a return air current. If you are going into gas, the plan is to take fresh air with you.

Mr. O'Sullivan : If it were wrong to go into these workings in this instance, why was it not wrong in the previous instance, when you went in with them?

Mr. Dixon : The party did wrong in going in against the current. With the air going with us we got to 16 bord, under Brackenridge's property.

Mr. O'Sullivan : At the inquest we were told by McDonald that the danger they expected to meet, if any, was black damp, and that he subjected the workings to a thorough clearing out of thirty hours, putting in 20,000 cubic feet of air a minute. On the previous occasion when you went in, the workings were subjected to a similar clearing out, and it was then found they were properly cleaned out; on this latter occasion I presume they were also properly cleaned out. In face of that, do you think there was an error of judgment in going in to the workings?

Mr. Dixon : Yes.

Mr. O'Sullivan : Was it not one on the previous occasion?

Mr. Dixon : As I have already said, the conditions were entirely different on the two occasions.

Mr. O'Sullivan : But Mr. McDonald disbelieved the gob-fire theory?

Mr. Dixon : That is his fault; he was too sceptical.

Mr. O'Sullivan : But we have no proof that there is a gob-fire there, or was one; moreover, the accidents that have occurred from carbon monoxide in this and other districts have not been serious ones, with the exception of Lithgow;—is that not so?

Mr. Dixon : Lithgow is the only serious one that I know of besides Stockton. No one has been killed by them in this district, except at Stockton.

Mr. O'Sullivan : Had there been sufficient men to take out the explorers that night, do you think they would have been got out safely, though overcome?

Mr. Dixon : According to the evidence—yes.

Mr. O'Sullivan : Do you think that Mr. McAuliffe's action, when he heard of the accident and the men being in there, in rushing through the trap door, was the best one, and that if a delay had occurred until more elaborate preparations had been made, lives would have been sacrificed?

Mr. Dixon : I quite agree that Mr. McAuliffe did what I would have done myself had I been in his position.

Mr. O'Sullivan : In point of fact, his prompt action saved two men's lives?

Mr. Dixon : Yes; and I believe if Mr. McAuliffe had had relays of men as resolute as himself and as strong, they would have recovered the party.

Mr. O'Sullivan : It would have been a mistake at that moment to have adopted your proceedings?

Mr. Dixon : Yes. When we got there we considered that there was no life inside, and that enough men had been knocked down, five men having been lost in endeavouring to recover one man. We, therefore, stopped the men from going in until the conditions were made more favourable.

Mr. O'Sullivan : Do you not think it probable that the return air you sent in in a contrary direction, might, perhaps, have found its way over 17 bord?

Mr. Dixon : No; I think it found its way over the overcast. It may have gone both ways, but I hardly think it went over No. 17 bord.

Mr. O'Sullivan : Dr. Hester had not given his opinion when you formed your idea that the cause of death was carbon monoxide?

Mr. Dixon : No.

His Honor : How does the ventilation come from No. 3 shaft?

Mr. Dixon : It comes along a main road to two districts, which it ventilates, and then passes on to the furnace.

His Honor : Does the direct draught from No. 3 join the return draught and come down C heading?

Mr. Dixon : Yes.

His Honor : The other air that goes up the main road for a considerable distance and returns along C heading is greatly diluted?

Mr. Dixon : Yes. The gas noticed at the inspection yesterday gets mixed with 5,000 cubic feet of air coming out of the inner workings.

His Honor : As far as the percolation of carbon monoxide out of No. 3 district across No. 17 bord is concerned, for every volume of oxygen that somehow or other gets to the gob-fire after the combustion, there are about two volumes of gas given off; therefore a very small percolation of air would cause a greater return than the quantity that percolated; consequently there would be a continual increase in pressure;—that would account for it forcing out at any point?

Mr. Dixon : Yes; the heat would cause expansion and turn solid carbon into a gaseous state. The benzine smell we noticed yesterday might simply be the product left. It may not be associated with the burning fire at present, nor with the carbon monoxide, but the probabilities are that it is.

Mr. Robertson : As to the fire-stink now being given off on the C return, do not you think it is from an act of combustion?

Mr. Dixon : No; I would not say so.

Mr. Robertson : You think the fire may now have been extinguished?

Mr. Dixon : I would not say that; I do not think it has had time. I would not say the fire could be extinguished under seven weeks. There is a lot of broken ground at C heading which may have been pretty well permeated with this foul air from No. 17 bord; but they are going on with the stoppings, thus confining it, and it is now taking the line of least resistance. We will never know where it is coming from until these stoppings have been built. The effect of your getting atmospheric air on to a fire is, that the porous body (small coal, &c.) swallows up the oxygen, and the nitrogen is set free and permeates the whole of the district.

Mr. Robertson : Is not the gas that extinguished the light yesterday, when we inspected the mine, likely to be black damp?

Mr.

Mr. Dixon : We could settle that point by having it analysed.

Mr. Robertson : When a manager is made aware that a door has been left open by some employee, do not you think it is the duty of the manager to deal with the offender ?

Mr. Dixon : Yes.

Mr. Robertson : Especially when knowingly and wilfully done ?

Mr. Dixon : Yes. I hold that if a man or a boy in a pit go through a door they should see that it is shut, the same way as they found it ; and the duty of the manager is to be stringent on this point.

Mr. Robertson : Would you consider it a prudent course for Mr. McAuliffe to have inspected the No. 3 district single handed ?

Mr. Dixon : No.

Mr. Robertson : Then, for safety, two or more persons should make the inspection ?

Mr. Dixon : Yes. It is not right for any man to go single-handed and inspect an old working ; you should take a good relay of men with you. We, when searching for the bodies, took the precaution of leaving men a few yards behind us, so that if any of us dropped they could rush up and bring us out.

Mr. Robertson : Is there any special rule being proposed in which the minimum number of men to enter old workings is two ?

Mr. Dixon : Not that I know of.

Mr. Robertson : It is so. Under certain conditions it would be a prudent and safe course for the manager to send nine or ten, or more, men into old workings ?

Mr. Dixon : Yes.

His Honor : You think the safest plan is to have the men so many yards apart, going in two and two ?

Mr. Dixon : Yes ; you should never go in singly, nor have your men in a body. In the rescue work at Stockton the men were placed a certain distance apart—never out of calling distance nor out of sight ; and the men were not allowed to remain any time in the foul air.

His Honor : You have given us all the evidence you can, Mr. Dixon, have you not ?

Mr. Dixon : Yes, your Honor.

His Honor : Have you any witnesses you wish to recall, Mr. Dixon ?

Mr. Dixon : No, your Honor.

His Honor : Mr. O'Sullivan, have you any further questions you would like to put to Mr. Dixon ?

Mr. O'Sullivan : No, your Honor.

His Honor : Have you, Mr. Curley ?

Mr. Curley : Yes, your Honor.

His Honor : Will you kindly put them ?

Mr. Curley : You have said, Mr. Dixon, that if more men had been there at the time that Mr. McAuliffe went through the trap-door, probably more men might have been got out ?

Mr. Dixon : Yes.

Mr. Curley : Would not that have aggravated the danger—would they not have been incurring more risk ?

Mr. Dixon : No, I do not think so ; because Mr. McAuliffe was carrying out two men at a time, carrying one on and dropping him, and then going back for the other.

Mr. Robertson : Was it not said in evidence that sixteen men were in ?

Mr. Dixon : Yes.

Mr. Robertson : You would not consider that a small number ?

Mr. Dixon : No.

His Honor : You would not have allowed a man to go in the second time ?

Mr. Dixon : No ; and that is where a number of men available would have come in. They would not all have gone in at once, but in parties.

His Honor : You stopped men from going in ?

Mr. Dixon : Yes ; when we first got to the place we did not think there was a living man in the workings, and would not let the rescuers go in. We took up the work, and were successful by reversing the current of air. The circumstances under which Mr. McAuliffe and I went in were very dissimilar.

His Honor : A man may be on the point of falling from carbon monoxide without suffering at all ?

Mr. Dixon : Yes ; he might go on for twenty minutes and feel all right, but at the end of that time he wants to sit down, and does not feel inclined to get up again. The gas has then saturated the blood, and he dies.

The Court, at 3:20 p.m., adjourned till 10 a.m. the following day (Thursday).

No. 24.

THURSDAY, 11 FEBRUARY, 1897.

The Court sat at 10 a.m., pursuant to adjournment.

Mr. E. H. Wilshire, of the Crown Solicitor's Office, was present.

His Honor : Unless you, Mr. Wilshire, wish to close your case, the case is now open for you to proceed with it. We have four witnesses here—John Gould, Henry Burt, Robert James Jury, and John Ellis ; but it may be that you wish to recall some of the other witnesses. It is open for you to do so if you so desire. However, those four witnesses are here now.

Mr. Wilshire : It may be that I may have some questions to ask Mr. Dixon at a later stage, but at present, having seen only what appears in the Press, I have nothing to ask him. We have nothing further at present, so far as the Department (Department of Mines) is concerned.

His Honor : You do not wish to call any evidence on the part of the Department ?

Mr. Wilshire : No, your Honor.

His Honor : Is there anyone else who wishes to ask Mr. Dixon any questions ?

Mr. Curley : There is one question, your Honor, I would like to ask Mr. Dixon.

His Honor : Very well.

Mr. Dixon was recalled.

Mr.

Mr. Curley: In regard to the pillars in the Stockton Colliery, is it not a fact that several pillars have been crushed there in the history of this mine;—falls have taken place, have they not?

Mr. Dixon: Yes; at different periods falls have taken place over some of the pillars. These falls may have occurred through the pillars being left too thin. An unusual quantity of timber has been required in the mine in consequence of the necessity for keeping the surface intact. The pillars are required to keep the surface intact; they do not want the surface to come away. It is possible that in some of the old workings the forest of timber keeping up the surface would be on the road to decay. The whole of the peninsula is water-logged. It is not desirable to have a fall of roof which would let this quicksand and water into the workings. The colliery is heavily timbered. It is the best timbered colliery in the country. There is a gang of men kept to renew the timber in the old bords. I suppose the timber is decaying in the old workings where the men cannot get to it to renew it.

Mr. Curley: Do you think there is any danger of the roof pressing on the pillars and affecting these stoppings in the No. 3 district?

Mr. Dixon: Well; it's a peculiar question. When I cannot see the place I cannot say that the falls which have taken place would indicate danger, as the fallen *debris* that comes down always acts as a buttress to the pillars. It is a question which wants careful consideration. I inspected that colliery for a number of years in years gone by.

Mr. Curley: Is it really not a question of doubt what will transpire in the colliery—that is, if there is a doubt about the pillars?

Mr. Dixon: Well; it's a question of doubt what will transpire in any colliery. I am not going to prophesy what is going to happen in the Stockton Colliery, or in any other colliery. I cannot speak as to futurity. I think that that is a question which should not be put to any mortal man.

Mr. Curley: I do not think you are the judge in this matter. What good will stoppings be if the pillars fine away?

To Mr. Robertson: I would sooner trust to the coal pillars than trust to timber, because timber must decay.

To His Honor: The whole district is water-logged. In some parts there are 80 feet of quicksand and clay.

To Mr. Robertson: Adequate pillars should be left in every colliery to ensure the safety of the main road. It is an exceptionally thick coal at Stockton, and very clean. The pillars in a 20-foot coal would have to be very much larger than in a 6-foot coal. The back main roadway travelling alongside the intake road has been crushed for a considerable distance. Bords have been driven away from the main road. This very much increased the difficulty of sealing off the old workings.

His Honor: This tracing of the colliery workings before the Court, as far as you know, is approximately correct?

Mr. Dixon: Yes.

His Honor: I understand it is not the proper practice to open the bords into the main travelling road?

Mr. Dixon: In laying out a pit on scientific principles there should be at least three roads, one main road and two branch roads. In the Stockton mine a great many of the bords were driven from the main road which was then termed a heading. In the early days of the mine the road was opened out more like a prospecting heading than anything else.

His Honor: The idea has not been originally to utilise it on the large scale on which it is now utilised?

Mr. Dixon: No. In laying out a mine my idea is that Nature should be followed as much as possible, but on scientific principles. I believe in always having a good retreat—that is, a wall of coal on either side of the main road.

Mr. Robertson: As a matter of economy in the working of the coal it is advisable to use large pillars?

Mr. Dixon: Yes?

Mr. Robertson: Have not the proprietors been put to great expense in this case owing to the mine not having been laid out properly at first?

Mr. Dixon: Yes. Of course they had a lot of cinder to contend with that other people did not. They had to prospect about many times to again strike the coal. The road is bottomed on a leader from a volcano, a big dyke, and this dyke threw everything out of reckoning. No one knew what was on the west side.

Mr. Robertson: But still the operations ought to have been conducted on good mining principles?

Mr. Dixon: Yes; I believe a place should be plotted down on paper first and followed if possible, if Nature will allow it. If Nature will not allow it then bring in art.

Mr. Robertson: From lack of good mining principles this property is very much depreciated.

Mr. Dixon: Yes; the Company has had difficulties to contend with ever since the pit was sunk. Nature's difficulties have been aggravated through the neglect of good mining principles at the inception of the pit.

John Gould, being duly sworn, said, in reply to His Honor: The evidence of mine, taken at the inquest, is correct. I was employed in the mine as a bricklayer. I cannot remember how long it was before my conversation with Smith that I was last employed only at the furnace. I think it was about a couple of weeks. I had not, on previous occasions to the one when I spoke to Smith, noticed any peculiar smell in the mine. I had not, on any former occasions, noticed any peculiar smell—nothing that affected me or anyone else. On the particular occasion when I noticed the smell I was helping the furnace men to unload skips. It was on December 1st—a Tuesday night. No; it was on the Monday night, I think. That was when I first noticed the smell. I noticed the smell as soon as I went in. I described the smell as something like benzine. I was working for about a quarter of an hour or twenty minutes before I began to feel any effects from it. I then felt a kind of shakiness. It affected my head. It was a sort of dizziness. When I felt too bad I went away. I think I was about there for about three quarters of an hour. When I felt bad I went and changed my things. They were lying on a table. I rushed out from where the smell was, and closed the door behind me. It was the No. 3 door. As soon as I got outside the door my lamp went out, and I fell there. I picked myself up eventually. I scrambled down to the bottom, where

where I sat for about twenty minutes—down to the travelling road. I came round in a bit. I went up to No. 48, where Burt, the night overman, was, and told him that there was a bad smell there, and that it affected my legs. He went directly up there to have a look. He left me. After that I was sent by the wheeler to unload props. For about an hour and a half I was working there. It was very hard for me to work. I was shivering. I was weak on the legs; but had no headache. There was a sort of general weakness about me. It went off eventually. I suffered altogether for a couple of hours, I think. The next day I got over the effects altogether. When I spoke to Smith he did not appear to express any opinion as to the cause of the smell. I only just told him about a smell being there. I did not tell him about the benzine smell. I did not describe the smell to him. No word was used by him or me to describe the smell. The word "fire-stink" was not used. I have not before, when working in the mine, felt the same sensations as I did on the night in question. The thing was quite new to me. I do not know anything about the knocking of the stoppings out of the rope-road connecting with No. 3 district. Brickwork was my work; but after that in the mine. I worked at the stoppings. I could not say who put in the stopping originally in the rope-road just where the rope turns off. That was done before my time. I know it was knocked down. In putting in the stoppings, the bricks were set in mortar. The work was done well—as well as we could do it. Parts were well cleared away to bring the work up to solid ground. It was 9-inch work, and it was made so as to get a good grip of the sides and top.

To Mr. Robertson: I did not mention to Burt that I had fallen down. My light was extinguished while I was in the mine. It was extinguished by the draught.

His Honor: As you went through the No. 3 door?

Mr. Gould: Yes.

Mr. Robertson: Who left the door open?

Mr. Gould: Smith. (*Continuing.*) I think it was quite unusual to leave the door open. I think that Smith, owing to his being an old hand in the colliery, would know all about the effect of leaving the door open. I could not say whether the men were in the habit of leaving the door open.

To His Honor: The doors were opened while the skips were being taken through. The door was not closed immediately skips were taken through. One skip was taken through at a time. We ran the skip in and then the door was closed. It was not left open longer than was necessary to take the skip in. We then unloaded the skip.

Mr. Robertson: How long might the door have been left open;—was it half-an-hour or three-quarters of an hour?

Mr. Wilshire: If Your Honor looks at the evidence of this witness you will see my note.

His Honor: Yes, I see it.

Mr. Robertson: How long might the door be left open?

Mr. Gould: It was left open on one occasion for a good while. Four or five skips were run in, and I think we took in the first two skips and closed the door, and then the other two were taken in, and the door was not closed. We did not close the door on every occasion.

To His Honor: We fixed the door open. It keeps open of itself. It falls to, if we leave it open almost too wide.

His Honor: Smith did make some statement to you about this smell, did he not?

Mr. Gould: Smith said, "It's rather strong to-night." There was no more conversation about the smell; none at all. There was no conversation about the orders to keep the door shut. There was no conversation about the source of the smell, and about where it probably came from.

To Mr. Robertson: I have been at the Stockton Colliery thirteen months. I got a copy of the special rules. There is something in the special rules about leaving a door open. If we left a door open it was a breach of the rules.

To His Honor: I do not look upon myself as a collier.

Mr. Wilshire: As to that night when you made the complaint to Burt, is it not a fact that you had the door propped open for three-quarters of an hour;—is it not so?

Mr. Gould: I cannot say so; I don't recollect.

His Honor at this stage decided to allow Mr. O'Sullivan, if he thought fit, to examine the witness first.

Mr. O'Sullivan: I would like to draw attention to Rule No. 28. It says:—

"No workman or other person shall injure any air-courses, brattice, or stopping, or leave open wholly or partly any door, or do any other act whereby the ventilation of the mine may be affected, or the lives of the men or the property of the owners may be endangered."

To witness: Do you know of that rule?

Mr. Gould: I know there was a rule saying we had to close doors. I did not, when I spoke to Burt, tell him that I felt ill. From what I said, Burt might treat it as a trifling affair.

Mr. Wilshire: On that night had not the door been open for over three-quarters of an hour?

Witness hesitated.

Mr. Wilshire: Just think. Didn't you prop it open?

Mr. Gould: We didn't prop it open.

Mr. Wilshire: About how long was it before you were affected.

Mr. Gould: I can't exactly say. It must have been three-quarters of an hour, I suppose. (*Continuing.*) I know that when the door was shut I felt all right. Smith also said to me, that when the door was shut it was all right, but that was afterwards—after I left him. When Burt got there the door was shut. By that time the furnace would have cleared the air, and Burt would not have noticed anything. I never mentioned to Burt that the door was kept open. I knew it was wrong to keep it open.

Mr. Curley: Didn't you tell Burt that night when you met him that there was a very strong smell coming from No. 3 district?

Mr. Gould: I never mentioned that. I never mentioned No. 3 district. When the door was open I said, "There's a very strong smell to-night." I think that's what I said, but I don't remember exactly

Mr. Curley: Did not you state that you had been affected that night, and that you had fallen down, or something like it?

Mr. Gould: No.

Mr. Curley : Did you mention it some time during the next day to the manager or anybody ?

Mr. Gould : No.

Mr. Curley : Then how can you explain it being reported to the underground manager ?

Mr. Gould : I believe it was reported to the underground manager. If it was reported to the underground manager, there must have been a complaint made.

Mr. Curley : Are you sure you did not say anything to Burt about the strong effect it had upon you ; how you were completely overcome by it ; how it affected your knees and you could not walk ; and how you had a difficulty in breathing ; and that you had never felt like that before in the colliery ?

Mr. Gould : I do not remember.

To His Honor : I did not tell Burt that I had been knocked over.

His Honor : Do you ask us to believe that ?

Mr. Gould : Yes ; that is the truth. I did not tell him.

His Honor : Do you say you did not tell Burt about being weak in the knees and falling down ?

Mr. Gould : I did not tell him. That is the truth.

His Honor : Then why did not you tell him ?

Mr. Gould : I was beginning to get all right then.

His Honor : Because you were beginning to get all right then, you did not tell him how you had been affected ?

Mr. Gould : No.

To Mr. Curley : I thought Smith would have told Burt about the occurrence. I had no particular conversation with Smith about it.

Mr. Curley : From the time you left that door open you appear to give a somewhat conflicting statement. I think you told us at first that there were only four skips taken through. When you were examined on a previous occasion, did not you say there were only four skips ?

Mr. Gould : Yes ; it was either four or five.

Mr. Curley : You said this morning you took two in and then closed the door, and afterwards took the others in ?

Mr. Gould : Yes.

Mr. Curley : Did not you tell us on the first occasion that you only took four altogether ;—is not that a fact ?

Mr. Gould : I do not exactly remember. My mind is partly erratic to-day. I was working hard yesterday and had not much sleep last night. My mind is wandering a little.

His Honor : Will you try and put it together again, please, if you can ?

Mr. Curley : Try and answer. All these statements cannot be correct. Would you rather rely on this statement as against any statement you made before ?

Mr. Gould : The statement I made before was accurate.

Mr. Curley : Would you rather rely on the statement you made previous to this as against any statement you are now making for accuracy ; you say your mind is wandering ;—now, would you rather rely on that previous statement ?

Mr. Gould : Yes, certainly.

Mr. Curley (to *His Honor*) : If the witness is incapable of giving evidence to-day, as he seems to be, I do not think he is a proper witness.

Mr. Gould (to *Mr. Curley*) : When I met Burt that night it was quite accidentally. I knew he would be where I saw him. I went to him to get instructions about my work. I casually mentioned to him about the smell in the mine. My memory was clearer on the previous occasion than it is now. When I saw Burt I said to him, "The air is very bad up there to-night."

His Honor : Is this correct : "I met Burt in the pit and said to him, 'There is a very strong smell up by the furnace to-night' " ?

Mr. Gould : Yes.

His Honor : You swore that you said this to Burt ?

Mr. Gould : Yes.

His Honor : Burt said, "I will go up and see." You then appear to have said, "I was completely overcome by it." You state now that you did not say to Burt that you were completely overcome by it. Is this your signature attached to the evidence which you gave at the inquest ?

Mr. Gould : Yes.

His Honor : And was the evidence read over to you before you signed it ?

Mr. Gould : Yes.

His Honor : In the face of that, you say now that you did not tell Burt you were completely overcome by the smell. Remember, you gave this evidence three weeks after the accident ; a much longer time has elapsed now. Did you or did you not tell Burt that you were completely overcome by the smell ?

Mr. Gould : I cannot remember.

His Honor : If you cannot remember now, and if you did swear to that effect on the 23rd December, was it or was it not correct ?

Mr. Gould : It was correct.

His Honor : If it was correct, then you must have told him you were completely overcome ?

Mr. Gould : Yes.

His Honor : You say that in point of fact you were completely overcome. Whether you told Burt that or not, you were in fact completely overcome ?

Mr. Gould : Yes.

His Honor : Did Smith tell you that he had himself not only noticed the smell, but felt the effects of it ?

Mr. Gould : No.

His Honor : Are you quite sure of that ?

Mr. Gould : Yes.

Mr. O'Sullivan : Are you not of a very nervous temperament ?

Mr. Gould : Yes.

Mr. O'Sullivan : After you fell you say you sat down, and afterwards met Mr. Burt. You tell us now that you did not tell him about the effect of this gas upon you. Could you explain why you did not tell him ? If you did not, would it be a kind of shame that you should have fallen over from the effects of the gas ?

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His Honor : That is hardly the style of question, Mr. O'Sullivan, to put to a witness who is in your favour.

Mr. O'Sullivan : Until this morning I was under the impression that this witness was hostile to my clients; he certainly was hostile at the inquest.

His Honor : Under the circumstances it is not judicious to suggest answers to the witnesses.

Mr. O'Sullivan : Do you remember being cross-examined at the last inquest, Mr. Gould?

Mr. Gould : Yes.

Mr. O'Sullivan : Were you in a fit condition at the last inquest to give your evidence?

Mr. Gould : Yes.

Mr. O'Sullivan : I would like, your Honor, to put the question to Mr. Gould why he did not explain to Mr. Burt.

His Honor : Without suggesting a reply to the witness, the question might be put.

Mr. O'Sullivan : Supposing, Mr. Gould, you did not tell Burt that you were affected in this manner, can you now explain why you did not tell him;—you are of a very nervous temperament?

Mr. Curley : I would like to know, your Honor, how Mr. O'Sullivan obtained knowledge of the witness' nervous temperament.

Mr. O'Sullivan : The witness' demeanour in the box signifies it. Your memory, Mr. Gould, about this occurrence is as good now as it was when you gave evidence at the inquest?

Mr. Gould : No; my memory is wandering at present.

[The witness withdrew.]

Henry Burt, being duly sworn, in reply to His Honor, said: I have already on several occasions given evidence upon this matter, and that evidence is correct. I am night deputy overman at the Stockton Colliery. On the Monday night, 1st December, I was down near the No. 48 district, when Gould came to me and said he felt sick and a little giddy, and that Smith felt the same. I asked him if he had left the No. 3 door open. He said, "Yes, while running the skips through."

His Honor : Whatever he said, you concluded it was some bad air coming through No. 3 door?

Mr. Burt : I could not imagine at the time that it was so, having never heard of bad air there before.

To His Honor : I made it my business to go and see what was the cause of the mischief. I found the door shut and everything all right. Smith, too, said he felt a little queer, but that after shutting the door he felt all right. When I made this visit there was no draught coming up the rope-road to the furnace. I did not try what the effect was in opening the door. I noticed a strong draught of pure air from the intake shaft when I opened the door to pass through. After that I went to Mr. McDonald and reported to him what Gould had told me. It was about 1 o'clock when Gould made the report to me. I did not go straight to Mr. McDonald then, but straight to the furnace, and made an examination. It was about 6 o'clock, some hours afterwards, when I saw Mr. McDonald. I see him every morning, when I report all matters to him that I think it my duty to report. I informed him of what Gould had said to me, that he felt giddy and sick; also that I went straight to the furnace, and found nothing detrimental; that the doors were closed and the air was pure; that Gould had told me that he had kept the door open while the skips were going in, and that Smith, too, had felt a bit sick and giddy. I could not form any conclusion as to the cause of the sickness and giddiness of the men, as there was nothing to go by. At the time I thought it might perhaps be black damp coming out of the No. 3 district; that was the only way I could account for it. I mentioned that to Mr. McDonald. I did not go with Mr. McDonald when he made the examination. As to the stopping that had been in the continuation of the rope-road leading to No. 3 district, there had been a regulating board there, but it had been knocked out. The door, which was a small, sliding one, was in a frame. The sliding door was the last there; it was knocked out about twelve months ago. Before that there had been a large door further up in the rope-road; I could not say when it was taken out. It was where the stopping is at the present time. The sliding door was substituted in place of the large door. The large door had not been specially put up to close off the No. 3 district when it was put out of work; it was there when the district was working. Subsequently nothing was put up there until since the accident. It did not strike me that if No. 3 door was left open, in the absence of the stopping there might be a draught to the furnace. I have never found anything there to complain of. No. 20 board had been opened on different occasions to let the air in from the engine plane; it was closed on each occasion after it was done with, and kept closed. There were other means for the air to get in; it could come over the overcast. But the overcast never worked properly; it never drew the quantity of air required. I cannot say why it was originated. I do not think the air-way between the No. 3 district and the overcast was completely stopped. I know that the air, when it was reversed at the time of the accident, passed away over the overcast. The communication was not a good one; I do not think it was completely closed at any time. I was aware that if the No. 3 door was left open it would draw from the No. 3 district, and I concluded that black damp was coming from that district when Smith and Gould complained. I merely reported these men's complaints to Mr. McDonald; no conversation took place. I accompanied the party who went into the mine to try and find out the cause of the mischief that resulted in Smith and Curran's death. We went a few yards up the double heading, as far as the fall. As we went along the going bord the air was fresh all the way in to the fall. The smell was about the same in the going bord as in the heading. The air was meeting us, but very slightly; you could not feel it. There was very little air coming down the heading; the main body of air was coming along the going bord.

To Mr. Robertson : When Gould reported that he was sick, and Smith likewise, I could not form an opinion at the time as to the cause of the sickness. When I went back, everything seemed to be correct. When it was reported to me that both Gould and Smith were sick, I thought there must be something wrong, and immediately went to the furnace to see what it was. I thought it must be black damp. The only way black damp could come to the furnace was by No. 3 door. It did not occur to me at the time to open the No. 3 door, to test whether foul air was coming in there. I went down the rope-road to see if I could find anything. The door was shut, and there was nothing to suggest anything wrong. When I reported this matter to Mr. McDonald, I suggested that it might be black damp. I did not have any conversation with Mr. McDonald as to opening the door to see where the black damp was.

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The bottom was full of men at the time who had to be attended to, and we could not converse further. I am aware that it is a serious matter for two men at the same time to report being giddy; if it had been one man only I might have thought it was due to something he had been eating. When I reported the matter to Mr. McDonald I thought that was sufficient. I was the responsible officer, and virtually in charge at the time. I felt it was my duty, on receiving a complaint of this nature, to investigate it thoroughly. I thought I did sufficient at the time; now I can see that I should have opened the door. There was no smell whatever when I went back to the furnace; the air was as pure as possible, and all doors were shut.

His Honor: Did it strike you, considering the enormous quantity of air coming to the furnace from all sources, that when the No. 3 door was open there must be something pretty bad to affect two men, since it would be mixed up and diluted with a large quantity of air before reaching the men?

Mr. Burt: It would not be mixed with the "C" heading air until it got within a few feet of the furnace. The air coming from No. 3 district would mix with the air coming up from the travelling road, and leaking from the shaft.

To Mr. Robertson: On this occasion I reported the circumstances of the doors being left open to Mr. McDonald. On one other occasion I found the No. 3 door open, and did not report it. I recognise that leaving a door open is a very serious matter—the most serious matter that can happen in a mine. The men have been cautioned a great number of times about the No. 3 door; but I have no reason to suppose they were in the habit of leaving it open.

His Honor: Was the caution because you suspected the doors had been left open, or because of the very great temptation there would be to the men to leave the doors open, on account of their having to bring the skips through three doors, one after the other?

Mr. Burt: Yes, because of the temptation.

His Honor: There was a very great temptation to leave No. 2 or No. 3 door open?

Mr. Burt: Yes.

His Honor: Did it never strike you that, in the face of that strong temptation, it was a very dangerous thing to leave the stopping out of the rope-road?

Mr. Burt: I did not think there was a great deal of danger in leaving that stopping down. I can see now that there was some danger in it, but did not see it before.

To His Honor: I had been in No. 1 bord some months previously, and found no bad air. There was no idea of ventilating the old workings by leaving the stopping down, because if a draught did go through it, it would only bring out the bad air, if any, in the district. If we wanted to ventilate the old district we would take the draught direct to the furnace without passing over any workings, or else dilute it with an enormous quantity of air should we have to pass it over any workings.

To Mr. Robertson: I know that on two occasions, when the No. 3 district was ventilated, black damp was met with.

Mr. Robertson: Knowing that No. 3 door, when opened, established a connection with No. 3 district, did not you think it a risky thing to leave the stopping down?

Mr. Burt: I did not think so if No. 20 bord was stopped off.

To Mr. Robertson: No. 3 door established a connection between the furnace and the old workings. These workings had generated black damp on former occasions. I cannot say why the stopping was not rebuilt. I have never had any conversation with the manager concerning it. I have had thirty years' experience in mining. As a practical man, considering the small quantity of black damp found in the old workings on former occasions, I did not think there was any danger should No. 3 door be left open.

Mr. Robertson: You consider, as a practical man, that the No. 3 district is now completely sealed off with stoppings?

Mr. Burt: Some more stoppings are to go in yet.

Mr. Robertson: Can it ever be properly sealed off?

Mr. Burt: I could not say. To a certain extent the stoppings will, I think, always leak, but not sufficient to do any damage.

Mr. Robertson: Do you know that there is a connection between the old workings on the east side of the main road and No. 3 district by way of No. 11 bord?

Mr. Burt: I have heard of a connection between the east and west side, but in what bord I could not say. I worked as a miner in No. 3 district; but, as a miner, I only travelled into my own workings and out again. I did not have any general knowledge of that district.

To Mr. O'Sullivan: I was in No. 3 district last three weeks before the accident. I found nothing but pure air; there was no effect on the light, nor any smell. I have never made any definite time for my visits to the furnace. I made it a regular practice to go once or twice every night, barring this Tuesday night. My approach could be known to the two men at the furnace, as the current of air leading to them would cause them to hear me some distance off, and in sufficient time to enable them to close the doors, if they were open, before my approach. I warned the men on several occasions about leaving the No. 3 door open, and Smith promised me that it would not occur again.

To Mr. Wilshire: I visited the furnace once or twice every night. I always found the air all right when the doors were shut. The doors were always shut when I visited the furnace, except on the one occasion that I mentioned to His Honor. I had been visiting the furnace about three months prior to the accident. It was in 48 district I met Mr. Gould. He appeared to be all right then, and had been working before I saw him. I at once went up to the furnace and found everything pure. The doors were shut, and everything was all right. I then went down the rope-road, but could trace no smell. The only words Gould said to me were "I felt a little giddy and sick when running the skips in." I asked him if he had the doors open, he said "Yes, all the time we were running in the skips." I remonstrated with him then. I said he knew it was wrong. They had done it for convenience more than anything else. Gould did not say he had fallen down; he only said he felt sick. He did not make out that he was very seriously effected, only slightly sick and giddy. Smith was at the furnace when I went there. I did not have any conversation with him about Gould. He said Gould felt giddy and sick. He said he felt the same, but not as bad as Gould. He admitted that as soon as he shut the door he felt all right again. It was then that he told me he would see that it never occurred again.

To Mr. Curley: When I was in No. 3 district, three weeks before the accident, I went in as far as the first right-hand heading. After leaving the furnace I generally used to walk down the rope-road a trifle,

trifle, but on this occasion I went further, and down into No. 3 district, to see whether there were any falls, or anything else that might want attending to. I usually ceased work at 6 o'clock in the morning. My visits to the furnace were at all times. I could not make any definite time for my visits. My first inspection, as a rule, could not be made at any particular time. I went after I had directed the men in their work—sometimes one time and sometimes another time. It was never two nights alike. I went there at whatever time I had a chance to get away. On the night that Gould complained to me I went direct to the furnace; it was then about 1 o'clock. Sometimes it was before and sometimes after midnight before I made my inspection. I know, by report, about the time Curran and Smith were found the following morning.

Mr. Curley: Seeing that these two men (Smith and Gould) made that report to you on that particular night, were you not anxious to visit the furnace again the following night?

Mr. Burt: Mr. McDonald reported to me that he had just left the furnace, after having inspected it all through. I thought that was quite sufficient, seeing that he is a more competent man than myself.

To Mr. Curley: That was at 9:30 when we went down. I did not make inspection again on that occasion until 4 o'clock in the morning.

Mr. Curley: Did it not occur to you that something might come up again with regard to the foul air there, and that it would be necessary for you to make an inspection?

Mr. Burt: I did not think it necessary to make an inspection. I did not expect any foul air so long as the doors were kept shut.

Mr. Curley: As Gould had told you that the doors were left open, as an official, did you not think it necessary to again visit the furnace and see whether the foul air was still present, or the doors left open against the rules of the colliery?

Mr. Burt: I took the man's word that he would see the door was kept shut in future.

Mr. Curley: But when men had reported to you that they felt sick and giddy, and had been affected by foul air, did not that make you desirous to see that those duties were carried out faithfully?

Mr. Burt: On that occasion I did see that they were carried out.

To Mr. Curley: It has been necessary all through for me to go to the furnace. Sometimes once and sometimes twice a night. I did not consider it more necessary for me to be there the following night any more than usual.

To Mr. O'Sullivan: When I inspected at 4 o'clock on the morning of the two deaths, it was within the time of my duty to inspect. I had before inspected at that hour, and sometimes later.

*Robert James Jury, on being called, said: Will I be allowed expenses, your Honor?

His Honor: Oh! that will be all right.

The witness was then sworn.

To His Honor: I have already been examined on two occasions; that evidence is correct. I have altogether been employed as fireman at this mine for nearly two years—that is, at the Stockton Colliery. I have also been employed at other mines. I also attend to the brattice at the Stockton Colliery. When I say that, I mean to say that it is part of my duty to see that the ventilation is in proper condition. On going into the mine we used to go to the furnace every morning to see that the furnace-men were there and at their positions. That was the first thing we did. The same system which was adopted on the occasion of the visit by the exploring party had been adopted on two other occasions—that is, in regard to knocking out the stopping at No. 20 bord and allowing the air to come up round the rope-road. I cannot say when it was knocked out on the second occasion that it was knocked out. The idea of knocking out the stopping in the rope-road was to allow the air to go direct that way to the furnace. I should say the stopping would be about 6 feet wide by about 8 feet high. I have never measured it; that is approximate. It is good solid ground there. I do not know, as far as I am aware of, that there would be any great difficulty in building it up again. I could not say whether some of the bricks would be taken for other purposes. I do not know very much about that stopping. I know the door must have been opened to admit of the air going in that direction. If not, the air could not have gone in that direction; I know it did go in that direction. I have no knowledge of the reason why the stopping was left out. I suppose it would take a bricklayer about a day to put the stopping up again. I took the thermometer in when the exploring party went in. I had the thermometer at the furnace on the night previous. On the night of 3rd December I asked McDonald whether I could take it down; it was on my own property. I took it from the furnace on the night of the 2nd December. I did it to compare the air coming from the No. 3 district as compared with that of other workings. I took it down after the death of Curran and Smith. I knew that the idea of a gob-fire was entertained; I could not say by whom. I could not say that it had been suggested by Mr. Dixon and Mr. Humble to Mr. McDonald that a gob-fire was there. I smelt a smell something like kerosene. There was not a high temperature. I did not suspect it was "fire-stink"; I do not know what it was. I thought this peculiar smell might arise from the decomposition of wood, or from the chemical action of water on the wood in the mine. There was a lot of water in the mine, and I thought the effect of that on the wood might cause it. I had some experience of a gob-fire on the A.A. Company's mine about ten years ago, but the smell from it was altogether different from the smell I experienced in the Stockton mine at the time of the disaster. The smell in the Stockton mine was a kind of kerosene smell, but in the case of the A.A. Company's mine the smell was just like the smell from heaps of burning refuse on the surface at a colliery; also the effect on the breathing at the two mines was entirely different. In the A.A. Company's mine the temperature was also very high. I had the idea that some process was going on causing this very disagreeable odour. Through the ventilation—as I suppose—on the Wednesday night it was very much better. I did not notice that peculiar smell at the furnace. When the No. 2 and No. 3 doors were open there was foul air coming on to the furnace. I thought there was a slight smell of sulphur. I did not take much time to notice, because we wanted to get out the men. I was not present with Mr. Humble when the experiment was made. On the Wednesday night I smelt an odour like "fire-stink." There was no smell to be detected, however, when the doors were closed. I had always found them closed up to the morning when

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NOTE.—The evidence of this witness was put in at the Court of Inquiry by Mr. Wilshire as Exhibit No. 7, and read, 23/3/97.

we found the two men. I noticed an acid taste in my mouth. I am not aware that sulphurous acid gas produces an acid taste in the mouth. I know, from reading the authorities on ventilation of mines, that black-damp has a slightly acid taste. That can be found in Williamson's work on Coal-mining; you can find it in Robert Peel's work on Coal-mining; you can find it in J. H. Merivale's work; and I believe also in Mr. Pameley's work. I would not say that I noticed a perceptible current near the double heading. We went in about 15 or 20 yards. There might have been a little air coming down. There might have been a little finding its way there.

Mr. Robertson: You took a thermometer with you, and had some conversation about a fire in the workings?

Mr. Jury: I had an idea that someone had said there was a fire. I got poking among the small coal. I did not suspect a fire; but I wanted to convince myself. I would not think it probable that there was a fire, because I should then have expected more heat coming along. In old workings, one wants to get all the information one can. I thought that there might be some chemical action going on on the old wood there—the action of water on old wood (I think I have read, somewhere) gives off some peculiar odour. I cannot say what I would have done if I had expected a fire. I cannot say that I ever heard, among the party of explorers, anything said about a fire. The way the exploring party went in was not conducive to conversation. We went in two or three feet apart. We did not stop anywhere for conversation, I think. I found an acid taste in my mouth at the furnace. Our lights were extinguished when we were going in for Curran and Smith. Our lamps died out from black damp. I am positively certain that the gas that killed Curran and Smith was not the same as that which killed the other men. I have been in both, and have been affected by both, and I am certain that they are different. In the case of Curran and Smith, found dead at the furnace, our lights were extinguished by the foul air; but, in the second case our lights burned brightly, and the effect on me, bodily, was entirely different. I do not know why this stopping on the rope-road was built. As regards whether I, as a practical man, think that only one door was sufficient to keep the bad air back, I don't know. We had no previous trouble. There was no smell. When these doors were as they should be, this small never came out. Through the doors being left open, the black damp came out. My belief is, that hundreds of thousands of cubic feet of black damp came off from these old workings previous to anything else coming off. Carbon monoxide might have come off after. The object of putting up double doors is to prevent waste of air.

Mr. Robertson: Is it not an additional precaution?

Mr. Jury: I know it is a practice to put up double doors. I think it is an additional security. (Continuing.) I am certain it prevents waste of air. It is also easier to pass through doors when they are double, especially when there is heavy pressure, as there is in that mine. There had been nothing to suggest the need of double doors.

[The witness then showed on the tracing before the Court the position in which bratticing was put up on the occasion of the visit of the exploring party, and showed also the course which the air travelled.]
Witness added: When we found Fitzpatrick, the air was very foul in that particular locality.

To His Honor: I am quite certain that the air was very foul where we got Fitzpatrick's body.

To Mr. Robertson: If Mr. McAuliffe and others had not rushed in right off, I don't think the two men—the two McDonalds—could have been saved. If they had stopped to make greater precautions they would have brought out corpses, that's all. I believe they ran a risk in going in to fetch out the bodies, and I believe that if there had been plenty of help at that particular time all might possibly have been got out alive.

To Mr. Thwaites: I said in my evidence that No. 2 and No. 3 doors were left open on the morning of the 2nd. If No. 3 door had been shut, and No. 2 open, I do not think the furnace would have drawn from No. 3 district. If No. 3 door had been shut, the deaths of Curran and Smith would not have occurred.

To His Honor: On going into the No. 3 district Mr. McDonald told us to keep 8 or 10 yards apart. We only went a short distance along the double heading; I could not say how far. We did not go in further than about 15 or 20 yards. We did not get as far as No. 16 bord in the double heading; we came out by way of No. 1 bord, and got as far as 16 bord. At that point (16 bord) the temperature was 78. I would not call that a rise sufficient to call for alarm in travelling through old workings. There was a smell all the way in. I do not remember hearing any fall; I was very busy doing other things, and a fall may have occurred and escaped my notice. I cannot say that I heard one. I felt no distress until we turned to come back. Then I felt myself going over. It is impossible for me to say whether it was Williams or the Government Inspectors who first suggested knocking out the stopping and carrying the air in with them. Williams was the first man I heard suggest it. No. 2 door is simply one of two doors to make an air-lock.

[The Court, at 1 p.m., adjourned till 2 p.m.]

Upon the Court resuming at 2 p.m. (Thursday) Robert James Jury was recalled.

To Mr. O'Sullivan: I was at the furnace on Wednesday night. The air was tested there with a lamp on several occasions during the night, and on each occasion it put out the lamp. The air was tried about every half hour. The light was placed close to the ground, and in other positions. On every occasion the air extinguished the light. Towards Thursday morning it did not extinguish the light so quickly as it did during the middle of Wednesday night. The air seemed to be clearing towards morning. I would gather from the light going out that there was a lot of black-damp coming out of the No. 3 district; so much so that it extinguished the light. The last test with the light was made towards 6 o'clock in the morning. The result then showed that the air was clear, as it did not extinguish the light nearly so soon as it had done a few hours previously. I have been reading up a lot about theoretical mining. I have been engaged on the study of mining a number of years. I intended to sit for the last examination, but was unable to do so owing to my illness, arising from this accident. I was not reading up solely at the time of the accident because of my intention to sit for an examination, but because I am always anxious to gain all the knowledge I can on mining. I could not say that that would account for my having carried a thermometer with me on the night we went into the No. 3 district. I generally like to make observations, and on this occasion took the thermometer with me for that purpose. I know the overcast marked on the top point of the plan. I have been given to understand from those who frequented that part of the pit that very little air can get over it on account of the fall. The overcast

has

has been bricked up since the accident. I have no idea of the quantity of air that was passing through 11 bord on the night of the accident. I cannot say whether there was a good, free current. I never measured the air on any occasion that night. Before the retreat of the party there was sufficient air, otherwise I would not have gone past that point (11 bord).

To His Honor: There was sufficient air, provided it was good.

To Mr. O'Sullivan: I was a member of the exploring party and one or two rescuing parties. The distance from the trap-door that the party entered and No. 16 bord is about 400 yards. I think that about an hour elapsed from the time that I went in with the exploring party through the trap-door until I got back to that point; but I am not borne out by other witnesses in this opinion. I cannot say, when I went in with the rescuing party, how long it was before the bratticing was put up. Some of the men who were overcome were in for about twenty minutes only, and I can instance one case where a man was carried out within that time.

To Mr. Wilshire: I was in this district for an hour—at least, so I think—and came out all right, although I was pretty well done up. Another man went in afterwards, and was carried out within twenty minutes overcome. The only conclusion I can draw from that is that either the power of the gas had increased or there was a very great difference between the powers of endurance of the two men; but my opinion is that the power of the gas had increased. I know that this district was cleared out on a former occasion. On the former occasion the air was not playing on the district so long by several hours as it was on this occasion. I would say that the air was playing on the district a longer time on this occasion than on any previous occasion that I know of.

Mr. O'Sullivan: We are told by Mr. Dixon and Mr. Humble that the amount of air at the top of the going bord after the brattice was erected was 3,000 feet;—what is your opinion?

Mr. Jury: I never saw the inspectors measure the air.

Mr. O'Sullivan: I do not think they measured it other than by their lights.

Mr. Jury: That is a very rough and ready way. I do not think there were 3,000 feet.

To Mr. O'Sullivan: The doors in the air-pit were slung so as to open against the current and close with the current.

Mr. Robertson: What was the area where the air was measured?

Mr. Jury: I should say about 48 feet.

Mr. Robertson: Might not 3,000 feet be passing almost imperceptibly?

Mr. Jury: I do not think there was 3,000 feet; there may have been, but I do not think there was.

To Mr. Wilshire: Prior to the accident, as fireman, I visited the furnace every morning. I went on at four o'clock in the morning, and always went direct to the furnace. I never found the air bad at the furnace, nor the doors open. I did not know it was the practice of the men to leave them open. If I had known that such was the case, I would have corrected them. I never heard anything about the complaint made by Gould to Burt until it came out in evidence. I never heard anything from Smith about the air being bad at the furnace. I saw Smith every morning at the furnace. He never made any complaint. He was always on the night shift, and consequently I always saw him at four o'clock in the morning. I always spoke to him, and he always had an opportunity to make a complaint if there was anything to complain about. I do not say that I am of opinion that this is not a gob-fire in the mine. I was under the impression that the chemical action of stagnant water on decayed wood would give rise to the smell said to be fire-stink. I have seen this view expressed in one of the standard works on coal-mining, that a peculiar smell is given off in this way. I am not thinking of sulphuretted hydrogen. I do not think that white damp is given off by decomposition of wood in old workings. I believe that foul smells do arise from that cause. I cannot quote the authority I refer to just now; I will very gladly look it up and send it along, if it is thought desirable. Smith had been at the furnace before his death about twelve months. I always found him a careful man. All the time he was there, I never thought he would carelessly leave open the door.

[At the request of the parties in the Court, Mr. Robertson scaled off the distances between several of the points marked on the plan: From trap-door marked Z to No. 11 bord is about a quarter of a mile; from the furnace to No. 16 bord, about 700 yards; from the double heading to No. 16 bord, about 420 yards.]

To Mr. Curley: It was very close to the furnace in the No. 3 return, where we tested the air with our lights. The No. 3 door was open at the time. There was a pretty good current coming from No. 3 door after the air had been introduced at No. 20 bord. The district was being cleared at that time. The last time we tested the air with a lamp was about six o'clock. We were coming off then; we had been there from seven o'clock or half-past nine on Wednesday night—half-past seven, I think. I had been in No. 3 district before I went in exploring. I have travelled through the old workings in No. 3. I would not say that I have a close knowledge of the places in that district. I went with those who knew the district well. We took plans, and with their aid I could find my way over such parts of it as could be travelled.

Mr. Curley: You speak about decayed wood and the action of water;—was there any water in that district?

Mr. Jury: Yes; water was lying in portions of it.

To Mr. Curley: So well as I can remember, there was very little water dripping from the roof. There was water lying in pools on the floor. I was not at any consultation that took place before the exploration party went into this district. I only heard a warning from the manager to the under-manager. I offered no opinion myself.

His Honor: What warning did you hear?

Mr. Jury: Mr. McAuliffe said to Mr. McDonald, "Be sure and take fresh men out for the exploration work"—that is, men who had not done a shift just before; men who had had a rest.

Mr. Robertson: Did you anticipate then that they would meet with difficulty?

Mr. Jury: No; I only thought that it was advisable to take precautions.

Mr. Curley: When you noticed this peculiar smell, can you account for you not being so distinct about it as Mr. Burt. Mr. Burt's evidence was very clear and distinct on the matter. He states that it was the same smell he had noticed when he went there after the two bodies were found?

Mr. Jury: I have nothing to do with Mr. Burt.

Mr. Curley: Can you account for that conflict in your opinions?

Mr. Jury: I cannot attempt to account for it. I am here only to give my own opinion.

Mr.

Mr. Curley : In those books you say you have looked into, do they not warn men against going into districts until thoroughly ventilated, where gases are given off in that way, such as sulphuretted hydrogen?

Mr. Jury : That is very vague.

Mr. Curley : Yet you say you noticed a sulphurous smell?

Mr. Jury : Yes, I did.

Mr. Curley : If a warning is given in that direction in a book, do not you think it is worth while taking notice of?

Mr. Jury : Yes.

Mr. Curley : I suppose it is understood that all exploration work is attended with more or less danger?

Mr. Jury : There is always some danger, otherwise it would not be termed exploration work, and experienced men would not be chosen to carry out the work.

Mr. Curley : Were you not aware that the return air was loaded with poisonous gases?

Mr. Jury : If I had been sure that the return current was loaded with poisonous gases I would not have gone in against it.

Mr. Curley : Had you not some intimation that there was something peculiar in the district?

Mr. Jury : There might have been something peculiar yet not very dangerous.

Mr. Curley : You knew two men had been found dead previous to this?

Mr. Jury : Yes; but I do not believe that that particular kind of gas killed those two men at the furnace. That was my belief, and I am still of that opinion.

Mr. Curley : You say that very large quantities of black-damp came out of the No. 3 district;—how do you reconcile that with the fact that the inspectors, in company with the manager and Mr. McDonald, when making an inspection on the Wednesday, put a light down on the floor, left it there, opened the door, brought out those deleterious gases, and the light still burned?

Mr. Jury : I think, previous to Messrs. Dixon and Humble and the manager going to the district that morning, there had been large quantities of black-damp drawn out, and I am quite certain that a large quantity was drawn off afterwards.

Mr. Curley : If drawn off before and afterwards, and this was an intermediate examination, how could the circumstances be different at this examination?

Mr. Jury : I do not know, except that they did not keep the doors open to bring the black-damp out. I feel sure that it was black-damp that killed Smith and Curran. I am quite certain that up to 6 o'clock on Thursday morning black-damp was coming from those old workings.

Mr. Curley : Did you make any protest against going into these old workings?

Mr. Jury : No; if I had thought there was any danger I would not have gone in.

To Mr. O'Sullivan : In giving evidence before the Coroner's Court, I stated that I had noticed a gob-fire ten years ago in the A. A. Company's pit. The smell it gave off was nothing like the smell met with at Stockton at the time of the accident. At the A. A. Company's mine at that time we could push our hands into small coal and experience considerable heat—this small coal had been thrown back only a few days previously.

To Mr. Robertson : I am of opinion that the gas that extinguished my light was black damp. I know that it has been suggested that the extinguishing of the light might be due to free nitrogen, and that might probably be the cause; but whether free nitrogen or black damp I am quite satisfied it was not a gas that supported combustion. I am quite sure that it was the gas that extinguished the lights on each occasion and not the draught.

To Mr. O'Sullivan : When we were testing the current, the following pit officials were present, Messrs. McDonald, John Ellis, Henry Jones, and others, I think. I know Mr. McDonald was there nearly the whole of the night. Sometimes he would go back and hold a light in the current and sometimes I would; alternately we would test it. The general conclusion arrived at was that the light was extinguished by the foulness of the air, and that it was black damp. If there had been any considerable portion of carbon monoxide in that gas, I cannot say whether the lamp would have burnt. There seems to be a great difference of opinion about carbon monoxide.

Mr. O'Sullivan : The latest books seem to indicate that it is rather the presence of free nitrogen that acts as an extinguisher?

Mr. Jury : Yes; but these new ideas must be borne out first by practice before they can be believed. The gas that killed Smith and Curran was a gas that would not support combustion, and therefore I think the causes of the two accidents are entirely different.

To Mr. Robertson : I think that the fact of some men being knocked over in twenty minutes, and others not until an hour has elapsed, might be due to difference of constitution. I can quite understand the fact that one man might last out for an hour, while another would go under within twenty minutes. The fact of a man getting out from these workings might be due to his persistent struggling and strong will.

His Honor : As to the length of time you were in the pit with the exploring party: When you are walking, say in a street, do you know your usual pace;—could you not reckon the time from the distance you cover?

Mr. Jury : I could not estimate the time in that way.

To His Honor : When I turned back I kept on walking at a steady pace. Now and then I made a very short stop only. I think I walked a little faster than 2 miles an hour. It occurred to my mind that we were an hour in the workings; but my mind was a little affected that night. The distance from the foot of the shaft to where I turned back is about 600 or 700 yards. It would have taken about twenty-five minutes to travel each way, if going at only 2 miles an hour. I cannot remember how long I stopped before turning back. I have always been of opinion we were an hour in the workings. I cannot say at what rate we came back as I was unconscious at times. I must have struggled out mechanically. The return I think took very much longer than going in. The other men who went in were all accustomed to the pit. There was only one who was not a miner, and he was a surveyor's assistant, and knew the pit workings thoroughly. I could not gauge their capabilities to stand the gas. I should think from their build that they could have stood it better than I, but yet some of them went down more quickly than I did.

John Ellis, being duly sworn, said, in reply to His Honor: I am trolly weighman at the Stockton Colliery. I gave evidence at the inquest, and that evidence is correct. I was one of the exploring party. I was asked to go in, but did not know exactly what was on. I made no question about it; I went in as a matter of duty. I noticed a smell at the furnace on the Wednesday night, when I was there; and I again noticed the smell when I was standing near the second door. My work would generally keep me on the main road looking out for horses and ropes. There was some talk about the timber on the part of McDonald and Cockburn. McDonald said he thought it was metals and water and the fermenting of timber. It was not thought to be the same gas as caused the death of the two men at the furnace. Black-damp was supposed to be the cause of the death of the two men, Smith and Curran, through their sitting down and falling asleep. Black-damp was known to have been present on former occasions in No. 3 district. It was—the No. 3 district—to my knowledge, sealed off, all but the rope-road, from the intake to the main air course. The object of clearing out the district was to find the origin of the smell which had been noticed. Curran and Smith were affected before the clearing out took place. I don't know whether it was the black-damp which killed them. There was a slight smell at the very time the men were killed. It was the smell that continued all along. On the Thursday night when we went in, the smell was much lighter, as if it had been reduced by the clearing out. It was something similar to the smell of an extinguished lamp—something like kerosene. I have had no experience of benzine; I don't know the smell of benzine. The smell becoming so peculiar, it was proper to find out what was happening in No. 3 district to occasion that smell. I am not aware that in the course of conversation which took place there was any allusion made to "fire-stink." I never heard what "fire-stink" was. I never heard the expression before. There was not in my knowledge any mention of a gob-fire burning. I was away from home from 6 in the morning till 9:30 in the evening. Mr. McDonald asked me to come to work at half-past 1 o'clock in the day. It was a little before 6 o'clock in the morning of the Thursday that Mr. McDonald asked me this. When I went at half-past 1, I saw Mr. McAuliffe and Mr. McDonald and others at the colliery office. Mr. McDonald told me to come back at 6 in the evening, but a message was sent to me afterwards at my home, telling me not to come till half-past 9 o'clock in the evening. We went down into the mine, and McDonald said, "It's a great deal clearer"; and I think it was generally spoken of as much clearer—much lighter. I did not notice any difference in the smell until we got to about No. 11, and then it seemed to be a little stronger if anything. The smell seemed to increase suddenly. I did not hear a fall. I observed a slight concussion. It seemed to come over me as a slight shock. I felt a sudden change come over me. Mr. McDonald was then just about giving the order to return. He was about 50 yards in front of me.

To Mr. O'Sullivan: When down the mine that night, it was at the furnace side of No. 3 door that the black-damp put the lights out. As time went on, the air got purer. We made the last test before I left at 6 o'clock in the morning. The air was a great deal clearer then. The conclusions drawn from the tests made were that the smell and the black-damp were decreasing rapidly. I did first receive instructions to come back at 1:30 p.m. I don't know if a test was made then. I did not make any inquiries about the test having been postponed. The smell was not as great, or as strong, on the Thursday night as it was on the Wednesday.

To Mr. Curley: I do not know that the test made at about 5 or 6 o'clock was the final test. The air, between 5 and 6 o'clock, was much clearer. The light did not go out then. On previous occasions it had gone out. The distance between No. 2 and No. 3 doors I could not exactly say; Mr. Robertson measured the distance and said it was about 23 yards.

To Mr. Thwaites: The No. 3 door was opened on the Tuesday night. On the next night the air was much clearer.

His Honor (to Mr. Wilshire): Are there any witnesses you wish to call, Mr. Wilshire?

Mr. Wilshire: Well, I sat all through the inquest, your Honor, and heard what the witnesses said. I don't know of any others who will throw any light upon the matter. I do not know of any to suggest.

His Honor (to Mr. Curley): Are there any witnesses you wish to call, Mr. Curley?

Mr. Curley: I would like to call Mr. Humble.

Inquiries were made as to whether the attendance of Mr. Humble could be secured that afternoon; but it was found that Mr. Humble was away attending to some of his duties. It was thereupon decided to call Mr. Humble on the following day.

Mr. Curley intimated that he would like to call the Minister for Mines as a witness. Under the Act, Inspectors were to be allotted separate districts, and he would like to know why that had not been done. He explained that he would like to examine the Minister as to the way he administers the Act in regard to the appointment of inspectors to different districts.

His Honor: How can that in any way appertain to the inquiry before this tribunal?

Mr. Wilshire: I must object, on behalf of the Mines Department, your Honor, as the Minister can throw no light upon the matters before the Court.

Mr. Curley: If it was the intention of the Act that these districts should be mapped out, why was it not done at the inception of the Act? They should be mapped out by the Minister, I presume, as he is at the head of the Department. Had that been done, each particular inspector would have been looked to as responsible for his particular district, apart from any other inspector.

His Honor: A line must be drawn somewhere.

Mr. Wilshire: All the Court has to do is to make an investigation as to the causes and circumstances of the accidents. How the Minister can come in as to the appointment of inspectors, and the way he should appoint them to any particular district, I cannot see.

His Honor: Inquiries have to be limited to immediate causes, and I think, Mr. Curley, that these circumstances which you wish cleared up by Mr. Sydney Smith cannot come within the province of the Court. I do not at present see that there is any need for sending for the Minister. I do not think that the question of his action can come within the province of this Court of Inquiry. Mr. Curley does not know of any other witness at the present time that he would care to call?

Mr. Curley: Only the Minister, your Honor.

His Honor: The presence of the Minister is not material to the case. That question can be gone into on the cross-examination of Mr. Dixon or Mr. Humble.

Mr. Curley: I could not get anything more definite from Mr. Dixon, because he has already said that the Northern district is one.

His

His Honor: Would Mr. Dixon kindly give the boundaries of the Northern district?

Mr. Dixon: The Northern Coal-fields district is approximately bounded by a line running from Lake Macquarie to Gunnedah in the north-west; thence to the Macleay River, following its course to the ocean; and then along the coast to the other side of Lake Macquarie.

To His Honor: The bulk of the work lies on the Hunter. There is some work going on at Gunnedah, also at Greta. Our work is geographically concentrated in one district, with some very much dispersed out-branches. When we had an Examiner of Coal-fields, and the three of us were inspecting, we each kept a certain run of collieries, and, as a rule, when an accident happened, the inspector who visited that district received direct notification of the accident without it going through the Examiner. That practice still obtains. The reason I went with Mr. Humble to Stockton was to assist him. If I were free of the Examiner's duties I would have my own collieries to visit. I have been taken to other districts. The last few years I have been going up as far as Capertee and down south in Mr. Rowan's district. I think it is impossible to parcel the Northern district into three or four divisions. The work could not then be properly carried out. It is better to leave it as it is. It is a very important thing for one inspector to have the assistance of another. I, as a rule, as senior inspector, have always travelled with an inspector if he wanted my advice. Our inspections cover coal and shale mines only. No mining is at present going on along the Macleay, but that part has been inspected. There is only a small area of carboniferous country in that locality. Our furthest workings are at Gunnedah.

His Honor: Have you any witnesses, Mr. O'Sullivan, you desire to call?

Mr. O'Sullivan: No, your Honor. Every question I would like to ask has already been asked at the previous inquiry. Possibly, however, Mr. McAuliffe and Mr. McDonald would like to be called.

His Honor: It is the intention of the Court to call those gentlemen.

[The Court, at 4.5 p.m., adjourned till 10 a.m. the following day (Friday).]

No. 25.

Evidence.

FRIDAY, 12 FEBRUARY, 1897.

The Court sat at 10 a.m., pursuant to adjournment.

**William Humble*, being duly sworn, said:—

To His Honor: I have given evidence before on this matter, and that evidence is correct.

His Honor: I would suggest that Mr. Wilshire ask Mr. Humble any questions he might wish.

To Mr. Wilshire: The stopping at the road leading into No. 3 was, I understand, knocked out in August last. The benefit of the stopping was that it separated No. 3 workings from the furnace. It sealed off No. 3 workings to a certain extent from the furnace. The No. 3 workings were connected with other parts of the mine at another point. The stopping prevented a free flow of air through the old workings up to the furnace. As long as this stopping was intact the air in the old workings would be stagnant; no current whatever would be passing through. In my opinion, it was advisable to have that stopping there. Seeing that it was put in in the first case, it was advisable to leave it in. Apart from the question of carbon monoxide generating in these old workings, it was advisable to have it there. If there were no fire-stink it would be as well to have those old workings separated from the other part of the mine, although, if there were no carbon monoxide, there would have been no danger to men at the furnace or anywhere else. There was always a possibility of carbon monoxide occurring in these old workings. It was not until after the accident that I became aware of the stopping having been knocked out. The reason given for knocking it out was that it cleared out the No. 3 workings in August last much sooner than if they had simply opened the door in the stopping itself. By taking out the stopping they made a bigger aperture. The knocking out of the stopping really converted No. 3 door into a stopping on hinges. This made it all the more necessary that the door should be kept closed.

Mr. Wilshire: If that stopping had remained intact, would this gas, in your opinion, have generated, there being no current of air?

Mr. Humble: There is still a possibility that gas would have been generated; but it certainly would not have harmed the furnace-men.

To Mr. Curley: A little air might have got into that locality from some other quarter, but the exit would have been in the "C" heading return, along which a large quantity of air was flowing. I was quite satisfied that there was an outlet to the "C" heading from No. 3.

Mr. Curley: Seeing that there was an outlet there, was not that all the more reason that the stopping should have been left intact?

Mr. Humble: I think the stopping ought to have been left intact.

To Mr. Curley: When I was examined before the Coroner's Court I did not recollect the last time I had been at the furnace. I said it was some considerable time before the accidents occurred. I have thought the matter over since. I have no clear recollection of the time; but I think it was some time during the strike last year. I really could not say positively. It was somewhere in the winter months. I made a note as to the dates that I visited the mine. I visited it in May and April, it must have been on one of those visits. I have not made any inspection of the furnace during the night time. I have made a night inspection of Stockton Colliery, but it did not include the furnace. I do not ask the furnace-men any questions in regard to the air during my visits of inspection. I claim when I go to a furnace, or when I go to any place, I can see the state of the ventilation myself. If I find it all right then, I conclude that, seeing it under ordinary circumstances, it is all right at other times.

Mr. Curley: You knew last time you were in No. 3 district that other people thought that there were some foul gases in that mine.

Mr. Humble: I knew that black-damp had been cleared out of No. 3 district.

Mr. Curley: After it had been cleared out, would you not expect it to generate again?

Mr. Humble: Yes, I would.

Mr. Curley: Having this knowledge, did you not think it worth while to put a question or two to the furnace-men.

Mr.

*NOTE.—The evidence of this witness was put in at the Court of Inquiry by Mr. Wilshire as Exhibit No. 9, and read 23rd March, 1897.

Mr. Humble: I did not think it necessary to put any questions to the furnace-men.

Mr. Curley: You have been the principal inspector of this colliery for some years?

Mr. Humble: Yes; about six, I believe.

Mr. Curley: When you made this inspection after the accident, you say you had no knowledge previously of the stopping being out;—did you get that knowledge that day?

Mr. Humble: I cannot say whether it was on the second or the third; it was certainly during the time we were investigating one of the two fatalities; I think it was on the second.

To Mr. Curley: I was present when Mr. Dixon, the manager, and under-manager were there on the Wednesday after the first accident, and when the manager's lamp was put down on the floor. The No. 3 floor was open, and we were testing what was coming out of the No. 3 district. A large volume of noxious gas was coming out. The principal ingredients were carbon monoxide and perhaps free nitrogen, they come together usually; but carbon monoxide was the predominant compound. So far as I could see, the light was not affected. The door was open perhaps fifteen or twenty minutes altogether. I believe I opened the door myself. About ten minutes passed before we got the strong disagreeable smell. The door might have remained open a few minutes after that, but not for very long. I know we closed it soon after noticing the disagreeable smell.

Mr. Curley: That would indicate to you pretty clearly that the other stopping had been taken away?

Mr. Humble: Yes, that indicated to me that the other stopping had been taken away; but I know it had been taken away an hour before that.

Mr. Curley: Knowing that it had been erected there before—and you have said already that its removal came as a surprise to you—did you not at that particular juncture, at the time you made the inspection after the first accident, think it necessary to point out to the manager that it ought to be re-erected.

Mr. Humble: I do not think we did point it out to the manager at that time, because he was fully seized with the idea that it would have been better if the stopping had not been taken out.

Mr. Curley: Did you think the stopping should not have been taken out?

Mr. Humble: Yes.

His Honor: Are we to understand, Mr. Humble, that you knew the stopping had been originally knocked out for the purpose of clearing the district, and you thought it had then been restored, and that you were surprised to find that it had not been restored; or did you not know even of the knocking out of the stopping originally for the purpose of clearing the district?

Mr. Humble: I did not know that the stopping had been knocked out until after the deaths of Curran and Smith. I assumed the same mode of procedure would have been adopted in August last as was adopted when I was in those workings in December, 1895—that is, opening the man-hole door in the stopping.

His Honor: Your surprise was that it had been knocked out at all, not that it had not been rebuilt?

Mr. Humble: My surprise was not so much at it being knocked out, but that it had not been replaced.

Mr. Curley: Having had six years' experience in that district, and knowing of these foul gases being generated, did it not occur to you when this inspection was made that a remark might have been made to the manager then that that stopping should be put up again?

Mr. Humble: I was not aware that the stopping had been taken out.

Mr. Curley: You admit that you were aware just before this inspection?

Mr. Humble: An hour or two before the accident to Curran and Smith, I was made aware that the stopping had been taken out.

Mr. Curley: When this inspection was made to investigate the accident to Curran and Smith, and you saw the foul air coming up then, and you had a knowledge of that stopping and the door being taken out, did it not occur to you then to point out the necessity of rebuilding the stopping?

Mr. Humble: No; I pointed out to Mr. McAuliffe that this mixture coming from No. 3 district was a danger to the men in the mine, and would have to be remedied. We left the matter of remedying it to himself.

Mr. Curley: But you know very well if that stopping had been there the No. 3 district would not have been a manace to the furnace-men?

Mr. Humble: Yes.

Mr. Curley: And knowing that the stopping had been there, surely the idea would have occurred to you as a practical man that it was necessary for that stopping to be put there again?

Mr. Humble: Perhaps it was necessary; but there was virtually a second stopping in No. 3 door if it had been kept closed.

Mr. Curley: But, according to the principles of scientific mining, you must know that No. 3 door is not a stopping in the true sense of the word?

Mr. Humble: I know it is not a stopping, because you do not usually move a stopping on hinges; but that door when closed was practically a stopping.

Mr. Curley: But had not the door to be opened several times to admit of skips coming into the furnace?

Mr. Humble: Yes.

Mr. Curley: It could not have been so good then as a stopping?

Mr. Humble: No.

Mr. Curley: And, even if it were desirable to penetrate into that district, there was a slide-door on that stopping which would make the workings accessible?

Mr. Humble: Yes.

Mr. Curley: With the knowledge of those facts, did it not appear to you desirable that the defect should be remedied?

Mr. Humble: We told the manager it should be remedied. We are not called upon to tell him what to do. We assume the manager knows his work, and will do it accordingly.

Mr. Curley: If you knew something had been done that made the mine defective, which you say yourself came as a surprise to you, would it not surprise you into making some remark?

Mr. Humble: I expressed myself that I was surprised that the door was taken away.

Mr. Curley: Did you tell the manager to replace the door and stopping?

Mr.

Mr. Humble: No.

His Honor: It did not occur to you to tell the manager to replace the stopping?

Mr. Humble: No.

His Honor: In regard to the opinion you offered at that time as to the gases coming out of that district, are you still of that opinion?

Mr. Humble: Yes.

Mr. Curley: Had you read Dr. Haldane's report before this accident?

Mr. Humble: Yes.

Mr. Curley: And you know what he states with regard to the appearance of the bodies?

Mr. Humble: Yes.

Mr. Curley: Were you anxious to see the bodies to ascertain yourself whether those conclusions were fully borne out?

Mr. Humble: No, I am not anxious to see a dead body at any time; I, however, noted one body particularly—the body of my friend, Cockburn. I thought at the time, when I saw him lying at the office, that he was not dead but asleep, his colour being so high and his features so calm.

Mr. Curley: Do you think that all the bodies presented the same appearance?

Mr. Humble: I understand that Dr. Hester swore they did so. I did not see any of the others except Curran and Smith. I did not notice anything particular about them, as they were covered with soot.

His Honor: I ask you again, do you think that the manager fully realised the statement that you made to him?

Mr. Humble: Yes, I think so. I think the manager was fully aware of the dangerous character of this gas from what we said.

His Honor: It is a very important question what was said on the occasion of the conversation when the manager and under-manager were present, just after you went into the mine after the death of Curran and Smith?

Mr. Humble: I do not pretend to be able to remember the exact words. The first part of the inspection was made by myself, accompanied by the manager and the under-manager. I travelled down the road leading into No. 3 district, and then detected what I thought was a smell of fire-stink, and said so to the manager. I said, "That smell is very like fire-stink," but it was very slight. We travelled further down; and the under-manager, I think, said, "Well, our lights are likely to go out." Our lights did not go out; and I think I then said, "That satisfies me it is fire-stink." We returned to the shaft bottom and met Mr. Dixon; Mr. Dixon accompanied us, and we went to the furnace a second time. In travelling down the rope-road we came to a point where Mr. Dixon proposed that we should place the mine under the same conditions as when those men were found. We did so by opening No. 3 door. Five or ten minutes after the door was opened we were assailed by a strong, disagreeable smell. The smell then came up much stronger than when we met it before. When the door was closed the air was stagnant. About 2,000 or 3,000 feet came up the second time, sufficient to give off a very strong smell. Mr. Dixon said it was fire-stink. We told the manager it was highly dangerous. Both the under-manager and manager were present when we stated this. We said it was a menace to those men working at the furnace, and that it would have to be remedied.

His Honor: Did you use any words to describe what it was?

Mr. Humble: Only the word "fire-stink."

To His Honor: Mr. McAuliffe—I do not remember what he said—practically agreed that it was not black-damp. At first Mr. McAuliffe and Mr. McDonald were inclined to believe that it was black-damp. After hearing our statement, Mr. McAuliffe was inclined to believe that it was fire-stink. His utterances led us to conclude that. He said the smell was quite different to what he usually experienced with black-damp; and, therefore, it was quite likely what we said was correct. Mr. McDonald held to the opinion that it was black-damp. He said, "There may be some other gas with it, but the large proportion is black-damp." After meeting Mr. Dixon we went down about half-way between the furnace and the road end leading into No. 3—some distance past the branch-off of the rope-road. We came down to that stopping which your Honor saw on Tuesday morning (to that point—the stopping was not there then). Mr. McDonald said that there might be some other gases mixed with it, but it was really and virtually a black-damp mixture. Although we reiterated our opinion, yet he seemed to be firmly convinced that it was black-damp. Mr. McAuliffe said that the smell was quite different from what he usually experienced with black-damp; and, therefore, he was prepared to believe what we said had some truth in it.

His Honor: Mr. McDonald then stood up against you while Mr. McAuliffe came to your opinion?

Mr. Humble: Mr. McAuliffe appeared to agree with us.

His Honor: Was it a quiet, ordinary conversation?

Mr. Humble: Yes; the conversation was quiet, ordinary, and calm. It was not a heated one in the slightest degree. Of course, we took very great pains to explain that this gas was the gas we had experienced with such deadly effects in other places.

His Honor: Did the conversation amount to as much as a discussion;—was it less or more excited than the little discussion that took place at point Z the day the Court inspected the mine?

Mr. Humble: I think it was even calmer than that conversation.

His Honor: As you came back, did the discussion continue?

Mr. Humble: I think not; the discussion ceased as we came back towards the cage and ascended to the surface.

His Honor: Did Mr. McAuliffe and Mr. McDonald, during the remainder of the time, appear to change their opinions?

Mr. Humble: No, I do not think either of them did.

His Honor: You did not change your opinion?

Mr. Humble: No, I still held to it. Mr. Dixon, I think, took the greater part in the conversation, because I recognised him as having greater experience than myself.

To His Honor: I think I said that that was the same gas that had rendered me unconscious in the Thornley Colliery. I would not say for certain that I said this; but I know when I was speaking, during our conversation with the manager and under-manager, I had that experience in my mind. All through we had the benziny smell. I believe whenever we get that smell it is always accompanied by carbon monoxide.

His

His Honor : If there be a dangerous proportion you can detect it whether anyone is in front of you with a lamp or not?

Mr. Humble : Yes ; the smell is so strong.

His Honor : The sense of smell to a man who is accustomed to mining is fairly well cultivated?

Mr. Humble : Yes ; he has to make much use of that sense. I have detected fire-damp where it could not be detected by a lamp.

His Honor : As far as actual smell is concerned, neither nitrogen nor carbonic acid has any smell of its own.

Mr. Humble : No ; but they are always accompanied in a mine with other ingredients that have a smell. We are told that fire-damp has no smell, but we can usually ascertain its presence by the sense of smell.

His Honor : There may be a feeling which is not exactly a smell ?

Mr. Humble : There may be. I can detect any of those gases by my nose before the lamp shows it.

To Mr. Robertson : I say that fire-damp pure has no smell, but it is usually accompanied in a mine with other gases that give off a smell.

Mr. Robertson : Would it not be more correct to say "accompanied by other ingredients?"

Mr. Humble : I have never found fire-damp but what it was accompanied by other gases which give the odour.

His Honor : Is there any taste in the mouth due to the presence of carbonic acid in the air in large bodies ; if you noticed an acid taste in the mouth, what would you put that down to, without noticing what any smell indicated?

Mr. Humble : I should put it down to the presence of either sulphurous acid or sulphuretted hydrogen.

His Honor : Would sulphuretted hydrogen give an acid taste ?

Mr. Humble : I have not had much experience with this gas. I understand it has an acid taste ; but it has a very strong smell. If it had a taste and no smell, then it would not be sulphuretted hydrogen.

His Honor : As to that question of leaving a disused part of a mine in what may be called a possible barometrical connection with a working part (say) with a furnace, as a matter of practice, what do you say of that ; is it a fairly proper course to pursue or otherwise ?

Mr. Humble : In my opinion, the proper course to pursue is to have at least one outlet ; but usually best if the outlet is into the main return, where the air is flowing away to the shaft. I do not think it would be the proper thing to seal off old workings completely. If a district is abandoned, I do not think it is advisable in all cases to seal it off completely.

His Honor : Would you then provide for a continual small draught through the district ?

Mr. Humble : No ; I should provide that there be an outlet, so that the pressure of gas inside would never exceed the ordinary atmospherical pressure in the mine.

His Honor : Then you consider that leaving out that stopping, supposing there were means provided for preventing the setting up of a draught through the old workings, was the proper course to pursue ?

Mr. Humble : I do not mean that leaving out that stopping was right, because it was not connecting that district by way of a return. Anything coming out of that stopping practically came straight to the furnace undiluted. If it had been connected with a large return of air it would have been different.

To His Honor : I believe there is a communication through the overcast. I have never travelled there. I was told there was one, and feel satisfied there is one. The plan shows it, and the officials who have been on the mine for many years say there is one. I do not think there was any need to take down the stopping, since there were two other outlets which were sufficient to allow of the gas exuding from the old workings so as to give a barometrical connection to the outside. If there was no barometrical connection the pent-up gases would probably blow out the stoppings.

To Mr. O'Sullivan : I remember inspecting the mine before the stopping was ever erected. I presume it was erected to remove the possibility of any black-damp or noxious gas coming from No. 3 district to the furnace. It is not conceivable that it was erected to save the scalings from the brick stoppings along the main heading.

Mr. O'Sullivan : If the brick stoppings were fractured along the main road, would not the air then come straight back to the furnace if some provision had not been made such as this ?

Mr. Humble : If that provision had been made the scaling would still have come back. It would prevent scalings coming back to the furnace by the rope-road, but they would come back by another road.

Mr. O'Sullivan : You remember that this district was left not sealed up for a couple of years after it was abandoned ?

Mr. Humble : No ; I do not remember that. I remember that when I passed through the district in 1894 with the overman the stopping and man-hole door were in then.

Mr. O'Sullivan : You cannot recall visiting that district seven years ago ?

Mr. Humble : The district was at work at that time.

Mr. O'Sullivan : Five years ago ?

Mr. Humble : Yes ; a few men were still working in it five years ago.

To Mr. O'Sullivan : I have no recollection of ever visiting the pit and this stopping not being in, after the workings were abandoned. I had no knowledge on the Thursday night of the state of the ventilation at 9:30 when the explorers went in.

Mr. O'Sullivan : Any opinion you have expressed on their action in going in has been founded on what you heard, I take it ?

Mr. Humble : No, on what I have seen ; because, if the conditions were the same, the circumstances were the same.

Mr. O'Sullivan : You have said they were foolish to enter, but you did not qualify your statement ?

Mr. Humble : I say so again. They were foolish to go in against the current of air, and there was no necessity to explore.

Mr. O'Sullivan : You had some slight knowledge that the exploring party were going to examine this district ?

Mr. Humble : I had no knowledge until a very short time before the exploring party went in, and then I was far away from the colliery.

Mr.

Mr. O'Sullivan : Did you, then, know the way the current was turned on, and the way they were to enter?

Mr. Humble : I was then informed.

To His Honor : I obtained that information from Mr. Cockburn, one of the men who was lost. Mr. Cockburn was a very great friend of mine. I met him at the Technical College. He had run away to get himself ready for the mine, and he told me then that it had been proposed to go into the district that night to explore. He had not been asked to tell me that. It cropped up in an ordinary way. He felt it his duty to tell me of his private affairs, as he thought there would be danger attached to the undertaking, and that is how he came to tell me that an exploring party were going in.

His Honor : As far as the action of the management was concerned in not communicating to the inspectors their intention of making this investigation, can you say, as a matter of practice, whether that was a usual or an unusual course to adopt?

Mr. Humble : I think it was a usual course to adopt. They do not, as a rule, tell us what they are going to do. It is quite usual to take such steps. They were under the impression that the exploration of these old workings was not a serious step.

His Honor : You had indirectly suggested to them that it would be a serious step?

Mr. Humble : Yes.

His Honor : The way you look at it is this : that they held a different opinion from yours?

Mr. Humble : Mr. McAuliffe was quite satisfied that what we said was worthy of attention, but he still thought that by putting in the air current in a particular direction they would be safe, even should our theory be correct.

His Honor : But neither the putting in of a current for the purpose of sweeping out the district, nor the sending in of a party, had been suggested to you in any way?

Mr. Humble : No ; it was mentioned to me indirectly by Mr. Cockburn as a secondary matter. He had previously told me about his private affairs, and thought he should tell me this.

To Mr. O'Sullivan : Mr. Cockburn had a fairly good knowledge of ventilation. He was a very studious man. He had a theoretical knowledge of all the gases, and had practical experience with two of them. His knowledge would be equal to the manager's knowledge as far as carbonic oxide was concerned. I remember meeting Mr. McDonald on the Wednesday before the big accident, at lunch time, and had a discussion with him then. I met him between the colliery and the hotel in which the inquest was being held. The mode of entry was then not mooted at all. I said to him that this mixture was highly dangerous, and that it was not safe to approach it unless he had a current of air with him. I was coming down from the colliery office to the hotel to attend the inquest. Mr. McDonald walked down with me. He talked in such a strain as to let me know they were desirous of knowing the cause of this fire-stink. I told him that it was highly dangerous to approach it without taking a current of air with them. I then had to go and attend the inquest.

His Honor : Did he agree with you, then, that it was a fire-stink, or did he stick to his old opinion?

Mr. Humble : He said then that he was not so strong in his opinion as he had been on the day before. His words were : "I am not so strong in my opinion as I was yesterday, although I still believe it is black-damp to a large extent." Of course my opinion that it was carbon monoxide did not vary. This conversation took place on Thursday morning.

Mr. O'Sullivan : Did you then suggest that he should take some brandy, or some such remedy as that, when exploring?

Mr. Humble : No ; I do not remember that.

Mr. O'Sullivan : Your suggestion that he should take the air with him was on account of yourself having been overcome on one occasion when neglecting to do so?

Mr. Humble : No ; I did not neglect to take the air with me at Thornley. I was overcome there because of my anxiety to detect explosive gas, of which we had some trace. We had the current of air close to us then—within 3 or 4 yards of where I got my dose.

To Mr. Robertson : When I discover a serious defect in the mine, it is my duty to notify the manager. It is not part of my duty to suggest a remedy. That would be taking the responsibility of the mine upon our shoulders, and that is not desirable, as we cannot always be at the mine.

Mr. Robertson : To remedy this defect, might it not have been necessary to leave the stopping open ; it has been suggested that it should have been built up ;—might it not have been necessary that it should have been left open?

Mr. Humble : They would have to close the road to remedy the defect.

Mr. Robertson : It was your duty, after giving warning, to inspect the mine, and see that your warning had been attended to?

Mr. Humble : Yes.

Mr. Robertson : You say that there was no necessity to explore?

Mr. Humble : Knowing as I do the physical conditions of No. 3, that it is practically broken ground, the pillars narrow, and the bords heavily fallen ; knowing that, I considered there was no necessity to explore with the view of getting close to the fire and sealing it off. It could not be sealed off. The only thing that remained to be done was to seal it off in the way that has since been done.

Mr. Robertson : Do you not think it the duty of the management to endeavour to reach the seat of a fire and discover its extent ; at all events, to ascertain whether it could be sealed off?

Mr. Humble : Had the district been an ordinary one, and not broken, perhaps it would then have been advisable to try and locate the seat of the fire ; but in this case, if they had found the seat of the fire, they could not have sealed it off, except at the places where it has since been sealed off.

Mr. Robertson : The sealing off that has been done is of a very extensive character, and not so perfect as would have been the case if only one-quarter the area?

Mr. Humble : No.

Mr. Robertson : But do you not think they should have endeavoured to reach the seat of the fire, to ascertain its compass?

Mr. Humble : No.

Mr. Robertson : If you had had time to make more elaborate preparations, would you have had any difficulty in reaching the supposed seat of the fire?

Mr. Humble : I think it might have been reached safely if proper precautions had been taken.

Mr.

Mr. Robertson : Do you not think it was premature to abandon that district without making any effort to subdue the fire or locate it?

Mr. Humble : Not under the circumstances. From what I know of this district it is broken ground; and even if they had got close to the fire they could not have sealed it off there.

Mr. Robertson : Do you not think the manager was justified in entering this district and exploring it?

Mr. Humble : Perhaps he was. I do not think it was his bounden duty to do so in the interests of his employers.

Mr. Robertson : You have said there would be no difficulty in reaching the seat of the fire?

Mr. Humble : Yes.

Mr. Robertson : Do you think a manager would be justified in abandoning a district without having made an effort to reach the fire?

Mr. Humble : Yes; considering the physical conditions I have told you of. If he had got to the seat of the fire he could not have made any practical attempt to seal it off there; he would simply have had to come back and seal it off at the place where it has since been sealed.

To Mr. Robertson : The district has been sealed off at the only place where it could be sealed. I admit that the work is not quite perfect. The sealing is about $1\frac{1}{2}$ mile in length. I do not know whether the fire will ever be put out. Short of flooding the mine, the method adopted is the only practicable way they could do it. In Stockton there is plenty of water, and the facilities for extinguishing a fire are very good.

Mr. Robertson : You said no danger would have been encountered in exploring if proper precautions had been taken?

Mr. Humble : Yes.

Mr. Robertson : You have spoken of bords being crushed;—do you approve of bords being broken off the main intake?

Mr. Humble : It is a very bad practice.

Mr. Robertson : The falls that have occurred in this mine did not indicate very good mining practices?

Mr. Humble : No; I think the main road should be flanked on each side by a large pillar of coal.

Mr. Robertson : The only danger to be apprehended from No. 3 district you said was from carbon monoxide?

Mr. Humble : I think that was the danger they had to meet the night the exploring party went in.

Mr. Robertson : You said the only gas to fear was carbon monoxide?

Mr. Humble : I mean that the only gas that would have endangered the lives of the furnace-men was carbon monoxide.

Mr. Robertson : The old workings were known to contain black-damp?

Mr. Humble : Yes; but there is this difference between carbon monoxide and black-damp; black-damp will put the light out before it endangers any lives.

Mr. Robertson : You are pretty positive that the deaths of Curran and Smith were due to carbon monoxide?

Mr. Humble : Yes; in my opinion all the deaths were due to that. I believe that the predominant compound in the mixture that killed those two men was carbon monoxide.

Mr. Robertson : Can you account for the fact that your lights were not extinguished, and yet you were in the same gas that killed Curran and Smith?

Mr. Humble : The mixture supported combustion, and that is why I consider Curran and Smith were not killed by black-damp. There may have been other ingredients, but still be a dangerous amount of carbon monoxide.

Mr. Robertson : It is quite possible then that Curran and Smith might have met their deaths by carbonic acid?

Mr. Humble : Yes; but it is my opinion that it was carbon monoxide. The carbonic-acid gas may have helped to kill them, but it is my opinion that if there had been nothing but carbonic acid they would not have been killed. I do not mean to say that they could not have been killed by carbonic acid; but if there was nothing but black-damp present, they would have been warned of danger by the extinguishing of their lights. They would then have recognised their danger and got away.

To Mr. Robertson : I do not believe these men would have sat down on that seat and died if their lights had been extinguished. Although the lights were fixed on the caps, I think these men would have known if they were out. Perfect safety would be secured, so far as ventilation is concerned, in old workings, by circulation of fresh air. If the volume of air circulating in a mine is sufficient to permit of the old workings being ventilated, that is the best means to ensure their safety.

Mr. Robertson : Could that have been done in this case?

Mr. Humble : No; because the supply of air was insufficient.

To Mr. Robertson : The aggregate amount of air circulating in the Stockton Mine varies from 45,000 to 50,000 cubic feet, according to the atmospheric conditions, and is just sufficient to ventilate the present workings. I am aware that the Annual Report states about 25,000 cubic feet; but that is the actual quantity of air used to ventilate the working-places only. The difference between 25,000 and 50,000 cubic feet is simply going to waste or passing through the old workings without reaching the men. In our report it is deemed necessary to give the number of men working in the mine, the number of splits, and the aggregate quantity of air being utilised for the men—not the aggregate quantity of air in the mine. I do not think they could have spared sufficient air to have aired that old district and other old districts in Stockton. I was not aware that 100,000 feet were circulated in 1887. That could be accounted for by the extreme point of the working-places being much closer to the shaft in 1889.

Mr. Robertson : It is hardly a proper course to pursue to reduce the air to 40,000 feet, and extend the workings at the same time?

Mr. Humble : The furnace was probably driven at its maximum when it produced 100,000 feet. At the same time the air circulated through a very small area. Now the workings are more than a mile away from the shaft, and the length of air-ways has been increased. The friction, therefore, has been increased; and now, with ordinary work at the furnace, you get about 50,000 cubic feet. If you have ample room in the air-ways you get better results than if you have them small and contracted.

His Honor : The angles of turning are very important?

Mr.

Mr. Humble : Yes.

His Honor : If you can only get a small quantity of air through some means must be adopted to prevent friction ?

Mr. Humble : Yes ; they have reduced friction by the connection of No. 3 shaft with the workings.

Mr. Robertson : With No. 3 shaft facilities for ventilation are better now than in 1889 ?

Mr. Humble : No ; if you made another shaft the furnace would not give any more air.

Mr. Robertson : As the area of operations increases, is it not the mining practice to maintain the ventilation, or, perhaps, increase it ?

Mr. Humble : Yes ; as the area opens out more ventilation is required, and I think it is well to have power sufficient to double the ventilation required for ordinary working conditions, so as to be prepared for any unforeseen circumstances that may occur.

Mr. Robertson : Did you observe in Mr. Threlfall's report that he shows no free nitrogen ?

Mr. Humble : Yes ; I am aware that he shows black-damp.

Mr. Robertson : Does that in any way qualify your opinion as to the probable cause of the deaths of Smith and Curran ?

Mr. Humble : No ; I still think that the predominant compound in that mixture was carbon monoxide. I think that wherever carbon monoxide is given off there is always free nitrogen with it.

His Honor : Does not Professor Threlfall say in his report that there was an insufficient supply of oxygen in the air which he took from the pit ?

Mr. Humble : Yes.

His Honor : And, that being so, that would account for the excess of nitrogen which you were assuming to be in the atmosphere ?

Mr. Humble : Yes.

His Honor : If a portion of oxygen was taken from the air to form carbonic acid and carbon monoxide, there would be a relative excess of nitrogen left ?

Mr. Humble : Yes.

His Honor : You do not assume that nitrogen is given off—because there is nothing to give off nitrogen—there is nothing in the pit to give it off ?

Mr. Humble : I do not assume it, your Honor. (*Continuing.*) As far as the exploration went, I was of opinion that if an exploration were necessary the explorers should have the air with them. If it was expedient to make a search for the fire, and try to put it out, it should have been done in the way your Honor suggests, namely, to carry the air with them. That method would only be to ensure the safety of the men. After the accident, it was not expedient to search for the fire. In point of fact, it was bad to feed the fire at all. The fire would be fed by the air passing over it. The difference consists in the men having to breathe the air coming from the fire, and, in the other case, breathing the fresh air going to the fire. All the conditions show that it must be an incipient fire if there is a fire at all there. In regard to the chance of being able to extinguish the fire in the No. 3 district, my experience is this—that it is scarcely possible in a mine where the stoppings are so numerous to completely seal it off. If there is a fire there, and it is not put out, the result will be the destruction of the mine. If the fire cannot be put out by stoppings, I think the next best thing would be to stop the mine working, and to flood it with water. To flood the mine would mean the stopping of work for an indefinite period, and would be throwing the mine entirely out of gear. I believe it is in some of those bords which have fallen. It will be almost impossible to get there to put it out with the hose. If they had a hose, they might play upon the fallen rock for a time, without, however, reaching the fire. The only justification which the managers had for making the exploration in the way they did was to ascertain the extent of the fire. It might have been of great satisfaction to the managers to know exactly what was going on. The percolation of a very small quantity of air would be enough to keep the fire going. The fire would keep itself alight if only fed to the extent of next to starvation. I am going by the experience which I have gained at the Seaham Colliery. In the case of the trouble there, there were only two stoppings—one in each shaft—and yet there was enough air to keep the fire alight for five months. The fire was confined to one bord when they first saw it. Probably one of the causes of this fire being alive for five months was that the mine was practically full of fresh air when the shafts were sealed off, and the fire would draw upon this fresh air by diffusion.

His Honor : I suppose, on the question of whether the working of the mine has been on a proper basis—I take it, it would have been better if those wide bords had not been turned off from the main road ?

Mr. Humble : Yes. On the north-east side, there are bords turned out of this back heading ; but that does not, in my opinion, provide sufficient coal to support a main road.

To Mr. Robertson : The fire at Seaham was sealed off about August, 1895 ; and, six months afterwards, it was reopened. When opened, it was found that the fire was more extensive than before. I believe that the reason of the shafts being sealed off was that a large fall took place at the front of the fire, and almost covered some of the men working at the fire. The falls brought out a large amount of extinctive gas, and they thought it was dangerous. The fire was, at the time, confined to a small area. There were exceptionally favourable conditions there for the sealing off which was afterwards done. It is quite permissible to try and seal off any part in a mine provided proper precautions are taken. I know rule No. 7. I certainly do not think that, to comply with it, it would have been prudent to send in one man to explore the district. The safety might lie in numbers. I see that rule 7 reads:—

If at any time it is found by the person for the time being in charge of the mine, or any part thereof, that by reason of inflammable gases prevailing in the mine, or that part thereof, or of any cause whatever, the mine or that part is dangerous, every workman shall be withdrawn from the mine or part so found dangerous, and a competent person appointed for the purpose shall inspect the mine or part so found dangerous, and if the danger arises from inflammable gas, shall inspect the mine, or part, with a locked safety lamp ; and in every case shall make a true report of the condition of the mine or part ; and a workman shall not, except in so far as is necessary for inquiring into the cause of danger, or for the removal thereof, or for exploration, be readmitted into the mine or part so found dangerous, until the same is stated by the person appointed as aforesaid not to be dangerous. Every such report shall be recorded in a book, which shall be kept at the mine for the purpose, and shall be signed by the person who made the inspection.

There were no men working in the affected district. The exploring party were admitted to comply with the provisions of rule 7. To send a number was more prudent than to send one man in. To

To His Honor : I think it would have been better to send less men in, but I think it was better to send ten men than it would have been to send one in. It is always assumed that the leader of the party is competent to lead, and that he will keep the men in comparative safety.

To Mr. Robertson : Cockburn was a very cautious man, and I think his caution was a little bit more noticeable than usual that night. He was a new official there. I think he had been at the Stockton Colliery three months only. He spoke to me about private affairs, and I was much surprised he should do so. He had been sufficiently long, and knew Mr. McAuliffe well enough to have offered suggestions if he thought them necessary, but he had not been there sufficiently long to know the geography of No. 3 district. I think that if he had been aware of any danger he would not have gone in as he did. I think it has been said that there was some conversation in the office as to what they were likely to meet. It is just possible that, Cockburn being young in official life, he thought he was justified in going by what the older men than himself thought.

To His Honor : Cockburn was a man of about 32 years of age. He had been out eight years in July. As a young man he was a miner; but he studied, and got a second-class certificate in Great Britain. I think he had been at the Colliery about three months. By studying text-books, a student would get a fair theoretical knowledge of the gases met with in mines. Cockburn would not have been likely to have had much experience of carbon monoxide, because, in the mines of South Durham, where he worked, gob-fires are few and far between.

His Honor : In your opinion, is the management of mines more careful in Great Britain than—we will not say in New South Wales—we will say in Australia?

Mr. Humble : Well, the managers in Britain have a great many more dangers to contend with. I think that if our managers here had as much to contend with, they would be just as careful. In Britain they go down a great depth; 1,000 feet is nothing. Cockburn, from his nature, was not likely to set up his opinion against that of an older man with more experience. He was not the kind of man to set up his opinion against Mr. McAuliffe's or Mr. McDonald's.

To Mr. Robertson : I think Mr. McAuliffe did right in going in as he did to rescue the two McDonalds. I think I should have done the same thing under the same circumstances. His prompt action saved these two men's lives.

To His Honor : It would have undoubtedly been the best way if the exploring party had carried the air in with them. I think that, considering the circumstances, I should have done the same as Mr. McAuliffe did when going in to rescue the McDonalds. I think that fifteen or twenty minutes after the change was made in regard to the ventilation there was a current of air flowing up the going-board. I believe that a certain amount of this air would have gone up directly the stopping marked "Z" was knocked out. Knowing Mr. McAuliffe as I know him, I do not wonder at him doing as he did in attempting the rescue of the McDonalds. I think that his anxiety to get the men out induced him to go in without considering the reversal of the current of air.

To Mr. Robertson : I think that if Mr. McAuliffe had stayed to reflect he would have done as I was suggesting just now. I am assuming that Mr. McAuliffe was at the trap-door, and had to do something by himself. If he had stayed to reflect the only thing he could have done would have been to knock out the stopping with the trap-door in it. By doing so the two McDonalds would have been supplied with fresh air in a very short time; and, therefore, their lives would not have been in danger, for we know that William Sneddon was taken out alive after he had been in the noxious atmosphere five or six hours. He was lying in one of the side bords, and would, therefore, not get the benefit of the air-current so much as if he had been in the going-board, where the McDonalds were found. It was a natural thing for the manager to do as he did. The great point was to recover the bodies safely, and without further loss of life.

To Mr. Thwaites : Two sections of the one seam have been worked in some part of the No. 3 district. The ground there is very much broken. That is why I do not think they could have sealed off at the point near to where the fire was supposed to be. This being so, the only sealing off that could be done was at the point where they have since done it.

Mr. Thwaites : Do not you think it would have been better for the party to have taken steps to satisfy themselves of the existence of a fire, seeing that they were so near to where it was supposed to be?

Mr. Humble : On general lines it might have been better; but owing to the physical conditions existing in the No. 3 district it was almost impossible to do the sealing off near to where the fire was supposed to be. It is possible that the fire could be put out, and thus far they were justified in going to search for it. If they had found a fire, and it had been a very small one, they might have put it out by other means than sealing off. There was not, when the managers were there, a strong smell of gas.

Mr. Thwaites : This leads me to think it would have been better for the management to have found out whether there was a fire, considering the possibility of their being able to get enough water to put it out.

Mr. Humble : It is quite possible that they could have got enough water to put out the fire if it had been a small one.

Mr. Thwaites : Was the No. 3 door open when they cleared out the district?

Mr. Humble : Yes.

Mr. Thwaites : When the gas was being cleared out the furnace-men would be working in it?

Mr. Humble : When they were feeding the furnace fire, yes; but there was one good place where they could remain in the intervals in comparatively fresh air.

Mr. Thwaites : Had the furnace-men to remain at the furnace?

Mr. Humble : The furnace-men had to be on, attending at the furnace; but, as you know, it only takes a man two or three minutes to poke up a fire, and after that he can come back and sit down in a mixture of comparatively pure air. If Curran and Smith, instead of sitting where they did sit, had rested a short distance from this point, they would have been in a roadway along which was passing 28,000 cubic feet of air, which was comparatively fresh.

His Honor : Where they did sit was at the seat near the No. 3 door?

Mr. Humble : Yes.

To Mr. Wilshire : One of the reasons for the men sitting where they did was that there was no draught there.

To Mr. Robertson : There would be a draught when No. 3 door was open. They were sitting in the draught, then, of course. I know nearly all the managers who, by invitation, went to the colliery—went down

down the mine. I am pretty positive that one or two of the number did not go down the mine. I remember one saying that he did not intend to go down; but, if you ask me his name, I cannot now say. Those who did go down did not get very far, I think. The managers went down soon after the Minister for Mines, Professor Threlfall, and others came up. I do not know how far they got into the going bord. I was at the meeting of mine managers, but left before the finish. Mr. Jonathan Dixon was there as the manager's representative. I am not sure about Mr. McDonald being there.

To Mr. Curley: As regards whether the air went in more than 160 yards, I heard at the inquest one of the officials say he had been through the top end of the going-bord, and that it was clearing out nicely. There would be two bords between 16 bord and where the fire was supposed to be—a distance of 28 or 30 yards.

Mr. Curley: Taking into consideration that the inspection was only made for 160 yards, would you call that a sufficient inspection, knowing that foul air was coming out?

Mr. Humble: No; I would not call it a sufficient inspection—certainly not. (*Continuing.*) I know that clause 7 says that when the person in charge of the mine finds danger he must withdraw the men, make an inspection, and afterwards record the result of the inspection in a book. I felt pretty certain that the manager did not intend to start working the mine until the defect was remedied. It is highly probable that the manager told Mr. Dixon so. The exploring party were simply an inspecting party. They were simply going in to make an inspection—what they termed an exploration. I consider an exploration as simply an inspection. If you go to explore, you are also going to inspect. I say I do not consider that ten men were necessary; but it was better to take ten men than to take one or send one. I consider that all of the ten were not necessary. A smaller number would have done. The number of men would depend on the number of points they had settled on in their minds to go to. If they settled on many, it would take eight or ten men. If they decided to go as they did, I think less than ten men would have done. All these things must be judged by the circumstances surrounding them. There was an inspection in the first instance. We have had it in evidence that an inspection was made by at least two of the officials to the top end of the going-board. I know that an inspection has been made in accordance with Rule 7, but that no report has been made as to the result of that inspection. I know that when an inspection is made it should be recorded in a book. The managers present by invitation to advise were:—Messrs. William Turnbull, Croudace and his son, Frank; Thomas (Minmi), Thomas (East Greta), Croft, Fletcher, Mathieson, Neilson; but several more as well that I forget the names of just now.

Mr. Curley: In regard to the samples of air taken by Professor Threlfall, I suppose they can only be taken as approximate of the state of what the air was?

Mr. Humble: Yes; I think Professor Threlfall only regards them as approximate. The 3 per cent. of carbon monoxide which he gave was the mean of several percentages.

Mr. Curley: So that there might be several constituent elements there not shown in the report of the analysis?

Mr. Humble: Well, if they are searching for one element or compound they may reject anything else not material for the purpose in view. Professor Threlfall says nothing about free nitrogen, except inferentially, as His Honor has pointed out—that the analysis showed there was an insufficient supply of oxygen; therefore, there must have been free nitrogen. The whole trend of Mr. Dixon's and my own experience is that this gas was the same as that which overcame me at Thornley Colliery. As regards the difference of opinion between Mr. McDonald and Mr. McAuliffe, I think the under-manager ought always to submit to the orders of the manager—not to the opinions of the manager.

Mr. Robertson (after drawing attention to Rule 7) asked: Were these men admitted for the purpose of working in the district?

Mr. Humble: No; not for working, as we look on it. They were going in with the under-manager to try and find out where this fire was. (*Continuing.*) Rule No. 7 evidently takes in exploration as well as any other kind of inspection. Those men were admitted for the purpose of exploration. Exploration is, practically, inspection. I think Rule No. 7 covers a contingency of an exploring party of ten men.

To Mr. O'Sullivan: The management have complied with Rule 7 with regard to the exploration. The rule allowed them to send in an exploring party. As regards the help which was given to the explorers when they were overcome I think it had to be given immediately. I think it took upwards of an hour to fix the brattice up. Directly the first few yards of brattice were put on there was air passing along the going-bord. Mr. McAuliffe did, I think, under the circumstances, what I would have done if I had been in his place.

**Daniel McAuliffe*, manager of the Stockton Colliery (being duly sworn), said, in reply to Mr. O'Sullivan:—That the stoppings indicated on plan was knocked out about the middle of last year. It was knocked out so as to allow a bigger current of air to travel the engine plane and enter the old workings at No. 20 bord for the purpose of clearing them out. It was originally put in to save sealing through the brick stoppings in the main heading, and so to prevent the fresh air returning to the furnace. [*At this stage the witness showed on the plan and tracing before the Court the methods adopted for ventilating various parts of the mine.*]

Mr. O'Sullivan to witness: With regard to the methods used for clearing out the No. 3 district, on occasions prior to the accident—what methods were adopted on previous occasions?

Mr. McAuliffe: The methods were exactly the same on those occasions. On previous occasions, however, the district was cleared out in about six or seven hours. On this occasion the process was carried on for about thirty hours.

Mr. O'Sullivan: About what volume of air passed through every minute?

Mr. McAuliffe: About 20,000 to 25,000 feet.

Mr. O'Sullivan: Did you brattice across the main heading?

Mr. McAuliffe: Yes.

Mr. O'Sullivan: While the party went in, Mr. McAuliffe, was your furnace specially watched?

Mr.

[*NOTE.—The evidence of this witness was put in at the Court of Inquiry by Mr. Wilshire as Exhibit No. 13, and read 24th March, 1897.]

Mr. McAuliffe: I think there were three men at a time attending the furnace. To keep the furnace bright we ran three men at a time.

His Honor: As far as you are personally concerned, you had nothing to do with the way the mine was worked in the early days.

Mr. McAuliffe: Well, I have been ten years at the colliery. I have been manager for seven years on the 19th June.

The Court, at 12:50 p.m., adjourned till 2 p.m.

Upon the Court resuming at 2 p.m. (Friday), Mr. Daniel McAuliffe was recalled.

His Honor: Have you any questions, Mr. Wilshire, you wish to put to Mr. McAuliffe?

Mr. Wilshire: No, your Honor.

His Honor: Have you, Mr. Curley?

Mr. Curley: Yes, your Honor.

To Mr. Curley: The reason why the stopping was put in in the first place was to prevent scaling from the main intake to the furnace. Owing to a movement in the ground along that roadway, we found the stoppings becoming broken, and consequently we had to put in this stopping to prevent the air returning to the furnace through No. 3 district. It was put in about three years ago. A door was put up first, and afterwards a stopping with a slide door in it. The stopping was removed when we entered that district to examine it at the time the lawsuit was on. No. 3 district was supposed to be cleared out with the slide door open, according to the evidence; but I am not positive about that. The overman and Mr. McDonald cleared the district out. I was manager at the colliery during the time that was going on. When we got word to examine that district I told the under-manager what was wanted, and the next day the district was cleared out ready for examination. The first examination took place in December, 1895. Three or four examinations have been made since then. I cannot say exactly at which examination the stopping was removed. I presume it was removed at the first examination. I cannot give any definite time when it was removed. I know the district was cleared out, and reported to me as ready to be entered, which I did on the different examinations. The stopping was removed to clear out the district.

Mr. Curley: If you could have cleared it out sufficiently when the slide door was there, what was the reason for taking it out?

Mr. McAuliffe: I think that is proof, and the greatest reason why it was knocked down, that the district was not cleared out sufficiently.

To Mr. Curley: Previous to the exploration party going in, I received no word from Mr. Cockburn that he had seen Mr. Humble. I have only learnt that lately. Cockburn did not make me acquainted with any conversation that had taken place that night between him and Mr. Humble. I think it was the under-manager who suggested that the chalk-marks should be put up.

Mr. Curley: Had you no apprehension with regard to the men being overcome when they went in?

Mr. McAuliffe: Our intention was to play the air on until we were satisfied the district was in a state to allow of their entering without danger.

Mr. Curley: But that is not a direct answer;—on that particular night had you no apprehension that there was a possibility of the men being overcome in going into that district?

Mr. McAuliffe: No; I had no apprehension, because it had been reported to me early in the day that everything was cleared out nicely, and that they could have then entered easily.

Mr. Curley: Had you been down there yourself?

Mr. McAuliffe: No.

Mr. Curley: Did you never think about making a personal inspection yourself?

Mr. McAuliffe: I was so engaged with looking after the bodies of Curran and Smith, and arranging for the burials, that my time was pretty well taken up, and the overman was, therefore, reporting to me from time to time.

Mr. Curley: At the time the consultation took place, did the question of distance away from the main current of fresh air that you would have to travel, to the point you intended to reach, never engage the attention of the parties to the consultation?

Mr. McAuliffe: We had the plan before us, examining it, and discussing which would be the best way to approach the fire, and where it would likely be.

Mr. Curley: Did you not discuss the probability of something unforeseen happening, and the necessity of fresh air being required?

Mr. McAuliffe: We considered we were providing for that by a good strong gang of men. If anything happened, the men in advance would have a sufficient gang behind them, who would go forward and bring them out quickly. That was our object in having a good strong body.

To Mr. Curley: We thought that possibly some danger would arise if the party reached 18 or 19 bord. The question was fully considered as to the distance that would have to be travelled to reach that point. I knew the men were going in against the current of air; but we decided there should be no approach against the current of air until we were sufficiently satisfied that we could go into the district with safety.

Mr. Curley: It amounts to this, that you never thought about any other contingency arising?

Mr. McAuliffe: I am satisfied if the contingency (the fall) did not occur, the whole of the men would have got out without any difficulty. The fall wafted the bad air on to the men.

Mr. Curley: My question relates to the time before the party went in?

Mr. McAuliffe: All I can say is, that the overman had made several visits of examination along the road previous to the party going in. Once or twice in the morning, and then in the middle of the day, when he went to the further cut-through, and came back and reported to me that everything was favourable and nice and clear.

Mr. Curley: Still, that does not answer my question.

Mr. McAuliffe: It would answer the question in this way: if men, at 12 o'clock in the day, could get up so far, allowing the air to still play on another nine and a half hours, would put that district in a still better position.

Mr. Curley: Would it not occur to you that no matter what was cleared out, unless the origin of this gas was dealt with, it would still exist there?

Mr.

Mr. McAuliffe : That is why we wanted to get in there, to deal with it as promptly as possible.

Mr. Curley : Would the idea not forcibly strike you that, independently of this clearing out that you speak so emphatically about, there would still be existent the cause that was promoting this very deleterious stuff?

Mr. McAuliffe : But we were trying to locate the gas, so as to deal with it.

Mr. Curley : But the question I want you to answer, if you will, is this ;—did any other contingency about the introduction of fresh air, &c., arise at the consultation?

Mr. McAuliffe : At the consultation we unanimously agreed to adopt this principle, not to enter the workings unless they appeared to have cleared sufficiently to allow us to do so with perfect safety.

Mr. Curley : Did anything occur to your mind that something would happen while the men were in the workings?

Mr. McAuliffe : We considered that an emergency might arise, and that is why we provided for a strong gang of men, so that any emergency that might occur could be coped with.

Mr. Curley : Well, you do not appear to have thought about anything else?

Mr. McAuliffe : We considered we were dealing with all the things we were likely to meet with, and that we were using every precaution we could to deal with the matter.

Mr. Curley : When you went in with the rescuing party, did you not think of placing the mine at that particular time in the hands of some efficient man prior to your entering?

Mr. McAuliffe : You are, of course, aware that a mine is handled by the different officials according to their grade?

Mr. Curley : But did you personally, as manager of the colliery, appoint anyone in that capacity?

Mr. McAuliffe : The duties of the officials placed them in that position.

Mr. Curley : You knew McDonald was down, and you went in with the purpose of trying to rescue him and others, and you knew how some of the other officials had been affected; who then was there to fall back upon?

Mr. McAuliffe : Ellis, Jury, and Sampy. It is their duty to take charge of the mine when officers above them are knocked down.

His Honor : Did it strike you from the first that there was no risk other than meeting black-damp?

Mr. McAuliffe : I recognised in our discussion that there was something else, but that black-damp was predominant. The smell was to be accounted for, and that was the reason why the overman, Mr. Cockburn, and myself went into consultation. We could not understand this smell.

His Honor : Did that conversation, coupled with what the inspectors had said to you before, lead you to suspect that there might be a gob-fire burning?

Mr. McAuliffe : I thought if there was one that it was simply generating.

His Honor : Do you not think that the fact of letting air on to a gob-fire would excite it?

Mr. McAuliffe : Probably; but we considered we had sufficient air to dilute it.

To His Honor : We could detect a slight odour, but it was nothing like it was previously. That was the odour that the inspectors contended was caused by a gob-fire. When I put my lamp down I recognised that the biggest percentage of the mixture was black-damp. At the same time I recognised that the smell was to be accounted for. The peculiar smell might indicate the existence of a fire.

To His Honor : From the first, is it a fact that McDonald set his face against that theory? He did not think it was a gob-fire that gave rise to the smell. The smell, he contended, arose from the water in the vicinity of bord 20 decomposing the wood. Cockburn referred to his book, and considered that the predominant element was black-damp without a doubt. He admitted that the smell was to be accounted for. I think he was inclined to believe that there might be a fire generating, but in a very early stage.

His Honor : As to the conversation between Cockburn, McDonald, and yourself, what question was raised as to the smell of fire-stink accompanying carbon monoxide;—you, McDonald, and Cockburn understood that even if in infinitesimal quantities only it was a very dangerous gas?

Mr. McAuliffe : Yes; but we thought we could dilute it sufficiently to render it so harmless as to allow of our exploring, and thus locating it.

His Honor : Did you not recognise that a man might be in it for some time drinking it in slightly and then suddenly go down;—was that not known to you?

Mr. McAuliffe : I think that point was considered by us.

His Honor : When you came to the double heading, if any air was coming down there it would be clear of the gob-fire, if the position of the fire, supposing there was one, was, as you think, in bord 18 or 19, and the further you went along the going-bord the larger would be the proportion of air coming from over or near the fire?

Mr. McAuliffe : We considered that the fire was generating and in a very early stage. We did not think it was in a very active stage.

His Honor : But still, your air would have got worse and worse the further you went on?

Mr. McAuliffe : We considered that the fire, if there was one, was in a very early stage, and that the current of air we had was capable of dealing with it.

His Honor : But the further you went on to the west, the worse the air would get, whatever stage the fire was in?

Mr. McAuliffe : That would not be necessarily so.

His Honor : If you are correct as to the position of the fire, the further you went on the greater the chance would be of meeting with air vitiated with gases coming from the fire. Very little, you say, would be flowing down the double heading. The main body of air current would be going along 19 bord into furthestmost heading, and thence along the going-bord. Once you got past the point where the cindered ground intercepts the cross-cuts, you would get none of that air; then you would begin to get the air that came right round, and that would pass the point where you assume the fire would be, if there was one;—did not that strike you?

Mr. McAuliffe : But we thought that the fire, if there was one, was in a very early stage. We considered that we should have sufficient fresh air to dilute the foul air and render it harmless.

His Honor : Did Mr. McDonald, by expressing his opinion very strongly, cause you to give up your opinion?

Mr. McAuliffe : My opinion was not given up. We discussed the matter, and decided not to approach the seat of the fire until we were satisfied that everything was clear.

His

His Honor: It never struck you all through that you might approach the fire to windward instead of to leeward?

Mr. McAuliffe: We would like to have got into 20 bord if possible, and went down that way; but that place was too dangerous. We considered that we would let the air travel down bord 20 to play on to the place until we could get in safely the other way—down the going-bord.

His Honor: As it struck you that it would be very much better to get into the windward instead of to leeward, did it not occur to you that it would be very much better to reverse the air?

Mr. McAuliffe: It could not be done. To go into 20 bord was our best plan, but if a fall occurred there, we should be locked in.

His Honor: The men at the furnace were those you considered, on the question of reversing the draught?

Mr. McAuliffe: Yes.

His Honor: Was not the difficulty you suggested first of all that the horses would have to be taken out?

Mr. McAuliffe: No; the horses were not in the road; they could have been shifted away in half an hour.

His Honor: The current put round that way would have shifted the bad air in the "C" heading?

Mr. McAuliffe: Yes.

His Honor: But that could have been provided for by preventing the men from going to that side of the furnace, and bringing them round to the other side where Curran and Smith had been killed. That would have been safe?

Mr. McAuliffe: If we had put up a partition as we have since done it might have been safe.

His Honor: Did it not look to you like a risky proceeding in face of the fact that you were obliged for safety to take in such a very large number of men;—did you not consider it such a very important question that you should try experiments with the air itself first?

Mr. McAuliffe: The greatest danger I anticipated was after we got in the district, in trying to locate the seat of the mischief in the various bords.

His Honor: The progress of the men up to the vicinity of the cause of the mischief you really considered not risky?

Mr. McAuliffe: No; I did not think there would be any danger up to that point.

To His Honor: I had no knowledge of chemistry before I became a mine manager. I have read up a little since. I had been for thirty-five years connected with mines, inclusive of the time I have been manager. I was deputy for three months, and overman for four years, at the Stockton Mine previous to becoming manager of it. Before that I was engaged on all classes of mining, but principally coal-mining. I was appointed to the managership of Stockton Mine about seven years ago. I have been eleven years altogether on the colliery. The colliery was opened about fourteen and a half years ago. It had been opened about three and a half years when I went to it first. Deputy was my first position in the Stockton Mine. I held that position for three months.

Mr. Robertson: When you had to clear out the No. 3 district before, you had only to deal with black-damp?

Mr. McAuliffe: Yes.

Mr. Robertson: After the conversation with the inspectors did you not think it probable that a gob-fire was there?

Mr. McAuliffe: Of course there was the smell that had to be accounted for.

Mr. Robertson: The smell would be produced by combustion?

Mr. McAuliffe: Yes; that is what the inspectors said.

Mr. Robertson: Did you not perceive, with regard to the two different opinions on this matter, that in the one case the more air you swept through the safer it would be, while in the other case, having a fire to deal with, the more air you swept through the more gas would be generated?

Mr. McAuliffe: But if it was generated would not the more air we swept through produce a different kind of gas?

Mr. Robertson: The more air you coursed in the more dangerous would it become by reason of generating more poisonous gases.

Mr. McAuliffe: But the greater the quantity of air coursed through the more the quantity of poisonous gases would be lessened.

Mr. Robertson: It does not follow that increased air will reduce the quantity of poisonous gases. 5,000 cubic feet of air might produce 1 per cent. of black-damp, and 10,000 cubic feet might produce 10 per cent.;—did it not occur to you that in taking the men against the air you were walking into danger?

Mr. McAuliffe: We considered that by going into the place carefully, and paying all attention possible to it, the way would be clear.

Mr. Robertson: With such a serious matter as this to deal with, do you think you were justified in delegating your duties to the under-manager?

Mr. McAuliffe: The curious position that I was in, attending to the bodies of Curran and Smith and the funeral arrangements, which kept me up all night, obliged me to take to my bed at the time. I was completely knocked up. I was satisfied that McDonald and Cockburn and the other men attending that party were good and careful men, and that they would not run any risks. We discussed fully the best things to do, and how to approach it; and if any difficulty was thought probable to be met with they were not to venture.

Mr. Robertson: You mentioned to His Honor that in reversing the current there would have been the difficulty of the men at the furnace;—had you not the same difficulty with the system you adopted; were the men not at the furnace?

Mr. McAuliffe: Yes, they were.

Mr. Robertson: No matter which way the current went it would pass over the men at the furnace?

Mr. McAuliffe: Yes.

To Mr. Robertson: After the stopping was removed on the rope-road, I did not have any conversation with Mr. McDonald or my other officials about replacing it. We did not think it necessary to replace it, as we had bricked right along the main heading and secured the place again. I cannot remember having had any conversation to that effect. The replacing of the stopping was not overlooked, and the

the necessity of it did not arise. We are in the habit of periodically examining the whole of the old workings of our mine. I did not see that there was any necessity for this stopping. It had been closed prior to the inspection by the colliery managers. It was then knocked out and never replaced. The stopping was first of all put in when the necessity arose to sustain the ventilation along the main intake. After the main intake was bricked all along we did not bother about the stopping until we opened it when we went into the district. I do not know whether any particular question ever arose between Mr. McDonald and myself that the stopping was not needed. The stoppings on the main road were bricked up some considerable time before the inspection by the colliery managers.

To His Honor: The door was first put in when the district was working. It was found not to be a sufficient stopping. We then put in a brick stopping, as being more effective.

His Honor: When the stopping was knocked out was it not really supposed that there might be further investigation required, and to save trouble it was not put up again?

Mr. McAuliffe: That was never discussed, because we had the stoppings in our main road attended to, and the necessity for building this one up again did not therefore arise.

To His Honor: I was confident all this time that no air could get in over the overcast into the No. 3 district. The overcast is blocked up as tight pretty well as a bottle, for about 60 or 70 yards. I have examined that corner of the district dozens of times. A line of cut-through goes through the top corner of the rectangular block (shown on plan). A small amount of air would perhaps go through that cut-through, but it would be very small. There is another in-let at 11 bord, but it is of small account.

His Honor: That being so, there would be a risk of a draught being established from No. 3 district to the furnace, if No. 3 door was opened?

Mr. McAuliffe: Only scalings coming back to the furnace.

To His Honor: It is always essential that all doors should be kept closed, irrespective of the presence of noxious gas, otherwise the air would not be diverted into the inner workings.

His Honor: Did it not strike you, as men had to go with skips through No. 3 door, that either that door should have been a double one, or else that the stopping should have been replaced for safety?

Mr. McAuliffe: No, I never anticipated any danger from that quarter. Only a little while previous to the accident both the deputy and overman inspected that district.

To His Honor: It never struck me that black-damp would be generated there, and suddenly rush up. I do not think it would come up in sufficient quantities to do any injury.

To Mr. Thwaites: I cannot tell you the exact date when this stopping was knocked out. Our present foreman says it was knocked down in December. The managers were in the mine in December as well as in August.

Mr. Thwaites: After the accident, and the inspectors said it was "fire-stink," they said to you that you ought to be very cautious—that you were to use every care?

Mr. McAuliffe: There were words used to that purport. I do not know that the words which you have used were the exact words. Everything was done to the best of our power. The inspectors told us this verbally, and I claim that I took more notice of it than if it had been in writing, because it had been under discussion.

Mr. Thwaites: I understand you to say that in the neighbourhood of 17, 18, and 19 bords it is pretty well solid ground?

Mr. McAuliffe: Yes.

Mr. Thwaites: Well; that being so, do you not think that there was no hurry to penetrate the old workings;—do you not think it would have been better to have taken the air with you, and taken more time to get to that part?

Mr. McAuliffe: Well; we thought we were getting to it, and we were making a reasonable attempt to get there as quickly as possible.

Mr. Thwaites: And that you were more likely to have got to it?

Mr. McAuliffe: Well; we discussed the matter, and we considered that we could clear it out and watch events, and that if we found that we could clear it out we would then go in. We had cleared it out before on other occasions.

Mr. Thwaites: You went in right against the current, and you were informed that the experts thought it to be a menace. I think it would have been better if you had gone with the current, and I think you would have been more likely to have got to the seat of the trouble. You say that adjacent to 17, 18, and 19 it is pretty solid ground?

Mr. McAuliffe: Yes; but it was to prevent the wide spread of the air that we were trying to get in the way we did.

Mr. Robertson: Was it ever reported to you that any of these three doors were left open by the workmen?

Mr. McAuliffe: You often hear the overman say he has been told of a door being found open. As to whether any action is taken when it is found that a door has been left open, it depends whether the person who does it does it wilfully. It is a very serious breach of the rules of the colliery. I think it would be my duty to prosecute a man if I found he did such a thing wilfully; but it is hard to prove when anyone does it wilfully.

Mr. Robertson: When you were warned by the inspectors of a serious defect which required a remedy, did you set about remedying it?

Mr. McAuliffe: Yes; and I think that the exploring party going in was giving effect to the inspector's instructions. (*Continuing*): I conceived it to be my duty to try and locate the fire and to confine it to as small a space as possible. I would, in any case, like to keep it to as small an area as possible. As regards the meeting of managers, I cannot say whether some of those managers had never seen the mine. The conditions for sealing off this No. 3 district are very difficult. When the trouble arose it was certainly my intention to get to the seat of the trouble if possible; but I left it in the hands of the managers to decide.

Mr. O'Sullivan: The night these men went in was the Thursday night, between the adjournments of the inquest, was it not?

Mr. McAuliffe: I think so.

Mr. O'Sullivan: At the inquest, you have already told us, there was a difference of opinion as to the cause of this trouble; did that cause you people to go in a little earlier than you might have so as to bring fresh evidence on Tuesday?

Mr.

Mr. McAuliffe: We were wanting to try and locate the fire as soon as possible.

Mr. O'Sullivan: How often would No. 3 door require to be opened to feed the furnace and bring in the skips?

Mr. McAuliffe: About a dozen times daily. (*Continuing*): It would not require to remain open very long. On each occasion when it had to be opened it would have to be open for a minute or a minute and a half; otherwise, that door was supposed to remain closed. The mining managers did not express any surprise at going in against the current of air. I heard no remark from any of them.

His Honor: As experts, outside of their own position as inspectors, did it strike you at any time that it would be a very good idea to see what they (the inspectors) thought about this exploring party?

Mr. McAuliffe: Well, when they were available I have been glad to ask them. I did not ask them on this occasion.

His Honor: Practically, your action left them in the dark as to what you were going to have done?

Mr. McAuliffe: I thought that we would deal with the subject successfully.

His Honor: Did it or did it not strike you that your action was, to a certain extent, in opposition to the views of the inspectors?

Mr. McAuliffe: It might have been in opposition to the inspectors. They pointed out that a certain smell was a sign of a fire generating in an early stage. They did not suggest what should be done. I thought that the seriousness of the position would depend on the hold which the fire had got.

His Honor: That is a very dangerous gas—carbon monoxide;—that has been recognised of late years, but might not have been recognised some years ago; it caused the death of these two men, and was still coming off?

Mr. McAuliffe: One of the inspectors said so at the inquest, but Dr. Hester did not.

His Honor: Did it strike you at that time that there was a certain amount of antagonism between Dr. Hester and the inspectors?

Mr. McAuliffe: Well; I think there was a difference of opinion. We all thought that if black-damp was being given off from a fire it was in such an early stage that we could deal with it effectually. We held the opinion that it was black-damp which was in the mine. All the time I knew that black-damp could be detected by the light and that carbonic oxide could not. Some authorities tell us differently; but that is only when the proportions are rather large.

* *William McDonald*, Under-ground Manager of the Stockton Colliery, being duly sworn:—

Mr. O'Sullivan: Tell us the time you knocked that stopping out on the rope-road?

Mr. McDonald: I think, as far as I can remember, it is close on two years ago.

Mr. O'Sullivan: Perhaps you do not understand the stopping I mean. In your evidence, you state that it was knocked out two or three months ago;—was it three or four months ago?

Mr. McDonald: It would be fully that. I recollect the Wednesday and the Thursday nights at the beginning of December. I was at the furnace on the Thursday night and tested the gas with the lamp for about ten minutes. It put out the light. I continued on till 6 o'clock in the morning. Then the two men who were left in charge after that tested it regularly. [*The witness showed on plan the way the exploring party went.*] (*Continuing*), he said: My reason for changing the time for some of the men to come was because we did not think the air was clear enough to stay in any longer. The question of the desirability of moving the horses had no weight in deciding what should be done. When it was decided to knock out the stopping, there was something said about the different gases to be found. Cockburn brought a book, and I did too. He had a higher theoretical knowledge than I had, but I would not give way to him on a practical point. I was carrying a big lamp in my hand. I did not observe much deflection of the light at the time. There might have been a small deflection of the lamp, and I may not have observed it at the time. As to the mode of going in, when we started away from the furnace we left two men there with instructions to keep a good fire there while we were away. The men who went in kept 10 yards apart. Each pair kept 10 yards apart. We put chalk-marks so that any one coming after us could find their way out. I cannot say that we anticipated anyone coming in after us. I was present at the mine when the mine managers entered against the air-current. There was no surprise expressed at that. If a fall had taken place inside the workings, it is hard to say where we should have been. Some of us had to creep on our hands and knees. The air was comparatively fresh.

Mr. Wilshire: You say to-day that the horses were not considered at all?

Mr. McDonald: There was not very much consideration taken about the horses. I said on the last occasion that we should have had to take all the horses out if we were to reverse the current of air. We could not have taken in a good current of air by bratticing. The inspectors only got 3,000 cubic feet to reach 66 feet up the going-board, and they had to carry the brattice all the way with them. There is a great leakage through brattice. We could have stopped up all the cut-throughs. The way we ventilated the mine was the best to get it cleared out quickly—that is, by taking it into 20 bord. I am still of the opinion, notwithstanding what has been said to the contrary, that black-damp was the greatest thing we had to fear at the furnace. That is the only gas we expected any harm from. I was of that opinion all through, and am still of that opinion. It is safer to travel with the air; but, if a place is thoroughly cleared out, it is very little odds where you enter it.

To Mr. Curley: I think the temperature was 70 when we came down the pit, and the highest temperature observed was 78. It occurred to us to put the chalk-marks when we were going in. We always do it when we are going into these old workings. We always do that for the same purpose—so that if anyone got lost he could find his way out. It was in case anyone did not know the road, and he would have these chalk-marks to help to get him out. Always when I am going through old workings I look for some danger.

Mr. Curley: From the books in your possession, was it not indicated to you that other gases than black-damp would come from a gob-fire if there was one there?

Mr. McDonald: It had first to be established that there was a gob-fire. (*Continuing*): I know that a gob-fire had been mentioned, and that the inspectors had referred to "fire-stink." I took that phase of

* NOTE.—The evidence of this witness was put in at the Court of Inquiry by Mr. Wilshire as Exhibit No. 4, and read 23/3/97.

of the matter into consideration. It did, to a certain extent, impress me with the idea that there might be other gases. The smell was very slight when we went in. I know that a very limited percentage of carbonic oxide would affect the system. It took us from about three-quarters of an hour to an hour to go in. I am quite sure of that. That was from the time we started from the rope-road till we got to 16 bord. It is not more like twenty minutes. When the exploring party went in I cautioned the men about the trap-door, and said that would be the way out to the fresh air. In doing as we did, we recognised that time was an object. The sooner you can locate a thing of that kind the better, I think. The longer you let a thing of that kind remain the stronger it will be getting—that is, if it is a fire. In going in when I did, I was not thinking of getting anything fresh for the inquiry which was being held. As regards the opinion of the inspectors in thinking they could have reached 16 bord quicker their way, considering that they got only 3,000 feet over whole ground I do not see how they could have continued with it over broken ground.

Mr. Curley: Having the experience you have, and knowing something about carbon monoxide, and having read those authorities you speak about, do you now regard it as a very dangerous business to travel against the air-current?

Mr. McDonald: Yes.

To Mr. Curley: But I still say my method was the best, as everything was cleared out. Any man being there at the time we penetrated those workings at half-past 9 that night would have had no hesitation in going into them. The air was very fresh, and the smell very slight all the way in. I know that a gob-fire when fed with air will produce noxious gases. A gob-fire always gives off steam and smoke. That has not been so in this case. I have never yet experienced a gob-fire but what there was either steam or smoke given off. I have never got nearer to them than in this case. I knew the inspector's opinion, and I paid a good deal of attention to it.

Mr. Curley: Did you not feel anxious before the exploration began to have the manager with you?

Mr. McDonald: We consulted about that, but the manager was not altogether in a very fit state to go down at the time.

To Mr. Curley: Mr. Cockburn did not express to me any apprehension of danger prior to going in. He did not say that he had seen one of the Inspectors of Collieries. The manager never expressed a desire to me not to proceed until he was there. I looked upon myself as being in charge of the whole affair, and as responsible for everything.

To Mr. Robertson: When Mr. Burt reported the matter of Gould's complaint to me I at once inspected the neighbourhood of the furnace. I went up to the double heading in the morning and found that all right. I went from the trap-door of No. 3 and then came back. I went down the pit the following night about the same time the gas had been detected the night before, and found everything right. From that I anticipated danger could only come from the old workings, and that noxious gases reached the furnace through the No. 3 door, which had been left open. It did not occur to me to try the effect by leaving that door open. It had not been reported to me that the door had been left open occasionally.

Mr. Robertson: Knowing that danger could only come from No. 3 workings, I should have thought that you would have tried the effect of the door being left open, since it was the only connection between the two?

Mr. McDonald: After going in so far, and finding nothing there, I thought the door would have to be left open for a long while before anything came out. (*Continuing*): On reflection now, I think it would have been better to have opened the door. Under similar circumstances again I would certainly do it. The stopping on the rope-road was built to prevent the leakage from going through there and getting to the furnace. It was knocked out when the colliery managers examined the district. There was no need to replace it afterwards. The matter of replacing it was not overlooked.

Mr. Robertson: Knowing the old workings generated at least black-damp, and that there was only this one door between, do you not think it was unwise to leave that stopping as it was?

Mr. McDonald: But we like to keep these old places clear.

Mr. Robertson: You have said that there were difficulties in the way of taking the air in with you?

Mr. McDonald: Yes.

Mr. Robertson: Could you not have replaced that stopping on the rope-road, put a good brattice-stopping beyond No. 1, and made the stopping at 20 bord the return?

Mr. McDonald: The air would then have had a good deal further to travel. (*Continuing*): It is a good road. The air would have about 600 yards further to travel in going that way. There was no difficulty in the way of adopting that method, excepting that the distance was greater. We would not, however, have got the same quantity of air; but still, I admit, we could have done it that way. It would have been much better if the area sealed off could have been reduced. I could see no difficulty at the time in reaching the seat of the fire. I do not approve of the district being shut off in the way it has been done. I do not think it will ever be perfectly sealed. If the area had been much smaller it would have been much better. Many of the stoppings are very large. It is not a question of two or three, but of fifty or sixty stoppings. They are all very large and of unusual size. I have had experience of gob-fires in Scotland, some of which cost several thousand pounds to get out.

Mr. Robertson: If you were told by a competent person that a gob-fire was in existence at Stockton, you would be very anxious?

Mr. McDonald: We were very anxious. (*Continuing*): I still hold to my opinion that the cause of the trouble is black-damp.

To Mr. Thwaites: When Mr. Burt reported to me of Gould being affected with the bad air, I paid a special visit to the furnace. It is not a fact that the furnace did not act right, through the day—the day I paid the special visit. The furnace always acted well. I reported to the manager what Burt told me. The stopping in the rope-road was taken down about four months ago. The manager knew that it was knocked out.

Mr. Thwaites: Was there no other outlet for any noxious gases that might gather in No. 3 district but by the rope-road;—you said in your evidence that there was no other outlet?

Mr. McDonald: All the others are intakes.

Mr. Thwaites: That being so, any foul air that might gather in the No. 3 district would, in the event of the No. 3 door being left open, go to the furnace?

Mr.

Mr. McDonald: Yes. (*Continuing.*) We had a conference among ourselves about going in to explore this district. The manager did instruct us to be cautious, seeing that the inspectors had already said how dangerous was carbon monoxide gas. We had a definite understanding among ourselves as to what we were going to do. I have not noticed the same smell, said to be fire stink, in any other part of the pit. The reason I think that by reversing the air it would have taken five times the time to clear the district, is because of the distance it would have to travel. The overcast would not have been an outlet for the air if it had been reversed. It did strike us as being dangerous to go in in face of the return air.

Mr. Thwaites: But seeing that there was nothing much to be gained—only getting to know where the fire was, if any—do you not think it would have been better to have gone with the current?

Mr. McDonald: If it had been possible to get in with the current we should certainly have done so. (*Continuing.*) We could not have gone through 20 bord with the current. We might have changed the current.

Mr. Thwaites: Would not that have been much better, seeing that you wanted to find out where the trouble was;—would it not have been much better to have taken time, and taken the air with you? Perhaps, then, there might have been a possibility of sealing off a less area of the old workings.

Mr. McDonald: Yes, that would have been much better. (*Continuing.*) The manager did not go with us; I had full control of the party.

His Honor: Supposing you had been able to get at the fire, would you have expected to be able to extinguish it with water or seal it off in a small compass?

Mr. McDonald: We would have expected to be able to either seal it off in a small compass or remove it altogether. (*Continuing.*) There was a very fair chance of putting it out if we could have got to it. There was plenty of water and a very heavy pressure. I do not believe there is a fire in these workings in a burning state—that is, giving off a flame. I do not believe the gas that we smelt was caused by a gob-fire. I think it arose from decaying timber standing in stagnant water. I gave the inspectors all due credit for their opinion, but did not agree with them. Mr. McAuliffe was inclined to agree with them at first. I could not say whether he changed his opinion afterwards. The three of us had a talk in the office afterwards about it. After we had finished the talk we came to the conclusion that it was best to go into these old workings and examine, and make sure. It was thought then that the smell was from stagnant water and decayed timber. The idea of a fire was put on one side. We thought there was just an off-chance of one. We went in to prove whether the inspectors had made a mistake—whether they were right or wrong. If there was a fire, and if we had kept the district sealed up as closely as we could, not opening up No. 20 bord or doing anything to let any more air in, the chances are, if there was a fire that it would have spread quickly. If we had shut off the rope-road again, that would not have left the workings in such a state that very little air could have got in, as there was broken ground all along there. Not much air can get through the overcast. No. 17 bord is the only other place I know of where air can get through. A little air could get over there. There was nothing to show us then that air actually got over there. There was no smell to show us that air was getting into the "C" return. I believed a heat was being given off, but did not think there was a fire. We thought the heat did not come from a gob-fire, because there was neither steam nor smoke. When the inspectors came to the conclusion that it was a gob-fire, I came to the conclusion that it was not. In my mind, and in Mr. McAuliffe's and Mr. Cockburn's, there was no fire there at all.

His Honor: Believing the chance of a gob-fire being there to be so small, how came it that it became so urgent to locate the fire which you did not believe in?

Mr. McDonald: We thought it possible there might be one.

His Honor: Is it a fact that the great anxiety to get at it was not to put the fire out so much as to prove, before the inquest on the two men was over, that the inspectors were wrong and you were right;—was not that the principal reason for your action?

Mr. McDonald: No; it was to get there so as to prove whether there was a fire or not, and, if so, to have it attended to as soon as possible.

His Honor: You expected there would be no fire there?

Mr. McDonald: We did not know exactly whether we would find a fire or not. (*Continuing.*) We found it hotter inside than outside. We found that out when we went in on Thursday. When we made up our minds to adopt the course we did adopt, we did not know it was hot there.

His Honor: So it comes back to the same thing, that when you made up your minds to clear the district out, and sent in an exploring party, you were of opinion that the cause of the smell was not fire, but rotten wood and water?

Mr. McDonald: Yes.

His Honor: And yet you thought it very necessary to do the thing as quickly as possible, on the off-chance of it being a fire?

Mr. McDonald: Yes.

His Honor: And then you swear your action was not rather for the purpose of getting some correct explanation of the death of Currau and Smith for the inquest?

Mr. McDonald: It was for both reasons. To locate the fire (if any), and to ascertain the cause of the death of Currau and Smith.

His Honor: Did it not strike you to mention to the inspectors that you were going in to see whether there was a fire?

Mr. McDonald: No.

His Honor: Were you aware that they did not know anything about the intention to send a party in?

Mr. McDonald: I know Mr. Dixon did not know anything about it.

His Honor: Did you think that Mr. Humble knew anything about it?

Mr. McDonald: He should have known about it, because we disputed in the office as to there being a fire. (*Continuing.*) I told Mr. Humble then that I was going in to see it. He told me to be very careful. He understood that I was personally going in to have a look. I said that I would see the district was properly cleared out before I went in. He understood that I meant the air would be turned in. I thought he understood that there would be some sort of inspection made. At that time he still had one opinion and I had another.

Mr. McDonald having withdrawn,—

His Honor inquired: Are there any more witnesses to be called;—do you wish to call any more witnesses, Mr. Wilshire?

Mr. Wilshire: No, your Honor; we have no more witnesses.

His Honor: Have you any more witnesses, Mr. Curley?

Mr. Curley: I have no more, your Honor.

Mr. O'Sullivan: I have no more, your Honor.

His Honor: Then there is no other witness at the present time. Now, the question is, whether any of you gentlemen who represent different interests wish to address the Court?

Mr. Wilshire: I do not wish to say anything, your Honor. I am here representing the Department to assist the Court in this investigation, but would not think of addressing the Court.

Mr. Curley: I certainly wish to address the Court on one or two points.

Mr. O'Sullivan: At present I have no desire to address the Court, your Honor.

His Honor: Possibly, after you have heard what Mr. Curley has to say, you may have something to say yourself.

Mr. O'Sullivan: Possibly, your Honor.

[The Court, at 4:45 p.m., adjourned till 10 a.m. the following day, Saturday.]

No. 26.

Addresses.

SATURDAY 13 FEBRUARY.

The Court sat at 10 a.m., pursuant to adjournment.

Upon the opening of the Court His Honor intimated to Mr. Curley that the Court were prepared to hear his address.

Mr. Curley: Before addressing the Court I would like to draw Mr. Robertson's attention to page 22 of the Royal Commission's Report on the Lithgow Colliery, where special reference is made to the pillars. (*Continuing.*) Are the points where the bodies were found shown on the plan before the Court?

His Honor: Yes.

Mr. Curley: I would like to obtain definite information as to the actual number of rescuers?

His Honor: That question could perhaps be settled by asking Mr. McAuliffe.

Mr. Curley (addressing Mr. McAuliffe) asked:—Can you inform me of the total number of rescuers who went to the colliery on that particular morning when the rescues were undertaken?

Mr. McAuliffe: No; I cannot tell you.

His Honor (addressing Mr. McDonald) asked:—Do you know, Mr. McDonald, the actual number of rescuers?

Mr. McDonald: No; I cannot say.

Mr. Robertson (addressing Mr. McAuliffe) asked:—Were these men paid for their services?

Mr. O'Sullivan: I can supply a return from the books showing what men were paid for the rescue work; and I will undertake to supply this information.

Mr. Curley: I want the total number of men called upon to go down the pit that night, also the names.

Mr. O'Sullivan: I will have this information supplied from the books.

Mr. Curley thereupon proceeded with his address. He said:—Your Honor and Gentlemen, in reviewing the circumstances that led up to the cause of the catastrophes at the Stockton Colliery on the Tuesday night or Wednesday morning, and on the Thursday night following, probably I had better begin from the time that Gould was assisting the furnace-men at the colliery on the 30th November—the Monday night prior to the first fatality. In looking over Gould's evidence we find a discovery was made on that Monday night that highly deleterious gas was coming from the No. 3 district when the No. 3 door was open. It was of such a character that it affected Gould seriously—so seriously that he tells us in his evidence he fell down. Subsequently he reported to the night-officer, Mr. Burt, that he was completely overcome, adding that the door was open at the time. Thereupon Mr. Burt promised to make an inspection of the place. He did make an inspection, and found the doors closed and everything satisfactory, so far as he was concerned; but he also found that Smith, too, had a similar complaint to make, although in not quite so aggravated a form. Now, this was reported on to the under-manager, Mr. McDonald; and I wish the Court to bear in mind that Mr. Burt, having been told that this occurred when the door was open, would very likely in his report to the under-manager inform him accordingly. If we take that circumstance into account it would very naturally follow that the underground manager, in making an inspection of that locality, would endeavour to see whether this was borne out. He would experiment. He would open the No. 3 door. He would endeavour to see whether it was an actual fact that these deleterious gases were coming in that particular way. Whether he did that has not transpired in the evidence taken, so far as I am aware. Mr. Humble, in his evidence, said that he could account in two ways for Mr. McDonald's not having discovered the gas that Gould and Smith complained of. First, when he made this examination probably the door was shut. Secondly, he went there simply to look for black-damp. If that is so, we must come to the conclusion that he did not attempt to experiment in any shape or form; and that, in making this inspection, he thought these men who had reported were erratic; that they had no good grounds for complaint. It is to be presumed that the night-officer, when he went down with his workmen on the Tuesday night, received a report from the under-manager that everything was satisfactory and all right. It has not transpired whether he told Burt that he was to go at any stage during that night-shift to make an inspection, or to ascertain if the doors had been kept open. Now, it must be apparent to your Honor, that this question of open doors, especially in the vicinity of a furnace, is certainly a very serious matter in connection with the operations of a mine. Gould told us in his evidence that the door had been open for three-quarters of an hour. Now, there were other men in the mine on that particular night; and, whenever a volume of air in a colliery is deranged by circumstances of this character, it must necessarily seriously affect the air in connection with the workings of the mine. It, therefore, does appear certainly surprising

surprising that the night-officer did not make his appearance up to the time that we know the bodies of these men were found. At 4 o'clock in the morning, following upon this, taking the inspection of the underground manager, taking the absence of the night-officer's visit to that place up till 4 o'clock in the morning, what do we find? A discovery is made; two men are found dead at the furnace. They are found about 4 o'clock in the morning by the two men, Jury and Coulson, who made any early inspection of the colliery. These men stated the position the bodies were in. Smith was lying on the ground with his face to the floor of the mine. Curran was sitting on the seat—the usual place where they sat. They also stated they found No. 2 and No. 3 doors open. When the overman (or under-manager), Mr. McDonald, followed these gentlemen into the mine, this is the position that he stated he found the doors in: No. 2 door was shut, and No. 3 door slightly ajar—there was a small piece of coal preventing it from getting to. The position of the doors was not left as Jury and Coulson found them; nor were they so left until the Inspector of Collieries subsequently made an inspection of the locality in accordance with the Act. I am ready to admit that these doors not being left in the position in which these two men found them may probably be accounted for; and I know that there is some reason for it, by the fact that it was necessary to close them as speedily as possible, and so rectify the derangement. Of course, that would not apply very much if the furnace was actually out. It would not then be of any serious consequence, as in that case the furnace would not act as a drawing power from the No. 3 district in the same way as it would while in full blast. I only mention these circumstances incidentally, in order to point out that by leaving the doors open any longer the danger would, probably, under the circumstances, not have been increased. Now, let us take the evidence of Dr. Hester with regard to what was the cause of the death of these two men. It is not nearly so conclusive as it appears to be, when we come to examine it. Let it be strictly looked into. With regard to Curran we find the doctor states: "In my opinion, the cause of the death of George Curran was from asphyxia; I cannot say from what cause—probably, from his appearance, it was caused by carbonic acid poisoning." The doctor says he cannot tell from what cause; and then when he does say carbonic acid, he only says "probably." That is the extent of the weight of the doctor's evidence with regard to Curran's death. What does he say about Smith? He says, "In my opinion, the cause of the death of Charles Smith was syncope, due to poisoning of some kind, and not to asphyxia. In all probability Smith died a short time before Curran, on account of his heart not being thoroughly sound." If this evidence influenced the method of exploration in any way, I am afraid the decision arrived at was built on a foundation somewhat weak. To go on, we find that Inspector Humble appeared on the scene of the accident early on the Wednesday morning, and that after making an inspection of the colliery, in company with the manager, Mr. McAuliffe, and the under-manager, Mr. McDonald, he was of opinion that the fatal gas was fire-stink. At that particular time that opinion does not appear to have been of too bold a character. However, on the way out, Mr. Dixon was met, a return journey was made, and the workings were again inspected. Mr. Dixon having suggested that the mine should be placed under similar conditions to what obtained when the two bodies were found, an experiment was tried, at which were present both Mr. McAuliffe and Mr. McDonald. The No. 3 door was opened. Of course it was immaterial at that particular time whether No. 2 door was opened or not, as it was only a check door to No. 1 door. What was the result? After the mine had been put under these conditions, and a lamp had been placed upon the floor, at the expiration of about thirteen minutes according to Mr. Dixon, and from about fifteen to twenty minutes according to Mr. Humble, a strong pungent odour was noticed coming out of the No. 3 district. It did not put out the light; and the expression used by Mr. Dixon was, "By heavens, that is fire-stink." Well, after this test was over, and the door was closed, Mr. Humble walked a certain distance down the rope-road—he tells us in the direction of No. 3 district—and he discovered that, when the door was closed, he could go down the rope-road for a considerable distance without noticing any appreciable smell, as the tendency of the air-current was then in an opposite direction. At about this time, the opinion that there was "fire-stink" in the mine was emphasised; and the manager was informed of that definitely, clearly, and unmistakably, and verbally—that it was a menace to the men in the colliery; that it was a defect in the colliery; and that they (the inspectors) would expect it to be remedied. The only thing I regret is that Mr. Humble did not deem it prudent, under the circumstances, as inspector of the Stockton Colliery, to hand in a written notice to the manager. Perhaps he could not have done it on the moment, but he could have done it later. However, Mr. McAuliffe, in his evidence, goes this far: he says he took more notice of this verbal communication than if it had been a written document. Well, I cannot understand that. I think that, on such an important question as this—and a matter of such importance—a verbal statement is not of the importance of a written communication. It appears that some consultation had taken place between Mr. McAuliffe and Mr. McDonald early on the Wednesday morning, and that on that day a stopping at No. 20 bord had been broken through. It had been decided to introduce the air that way, and to make No. 3 district a return. Knowing at the time that that was the district that they would have to explore, they must have known that, unless it was cleared out thoroughly, they would have to inhale the gas coming from the No. 3 district.

Referring to the text-books on mining, Mr. Curley then drew attention to the Colliery Manager's Catechism, by W. Fairley, and said he thought that this was a book which Cockburn, and also Messrs. McAuliffe and McDonald and Jury were acquainted with. He quoted from the book the following question and answer:—

What is the composition of carbon monoxide; by what other name is it known; what is its symbol and specific gravity; and what are its properties?

It is composed of one volume of carbon and one of oxygen; its symbol is CO, and specific gravity 0.968; it is known as carbonic oxide; air containing only $\frac{1}{2}$ per cent. of this gas, by prolonged breathing, would prove fatal. It is inflammable, has no taste, but a peculiar odour. Carbonic acid formed at the bottom of a coal, coke, or charcoal fire, is sometimes converted into carbonic oxide by being deprived of a part of its oxygen as it passes upwards through the red-hot embers. It is found in mines after an explosion of gunpowder or dynamite, and is engendered by gob-fires.

(Continuing.) Mr. Curley said: So that your Honor will see that men being familiar with text-books of this character in connection with gases and mining work must have been familiar, at least in a theoretical way, with them. The probability of the presence of "fire-stink" must have been present to their minds when those inspectors were there. They admit, in their evidence, that they would expect something of that kind to be given off if a gob-fire existed in the workings. Now, what evidence have we that there

was

was a gob-fire? Well, some will say none. At least, that has got to be qualified by Mr. Macdonald's own statement. During the time he was in No. 3 district some months ago, he states that he noticed about No. 18 bord that it was very warm. I suppose that if he noticed that it was warm, this in itself should have indicated something to him at that time; and that appears to have been the time for close inspection. I point this out to show that Mr. McDonald himself states that it was very warm there. Therefore, there was a very high temperature. That is an indication of something. Coming back to the exploration business, I do not know that I can say very much on this point; but it appears worth noticing in some way that even Mr. Cockburn did not appear to be over confident, judging from the fact that he put all his affairs in order that day. Being acquainted with Mr. Humble as a friend, he arranged his affairs in the interest of his children, and put his things in his friend's possession. There must have been something in Cockburn's mind about something being likely to happen. We know that Mr. McDonald stated to the jury that, "if anything happens while we are in here, that's the shortest way out to the fresh air," pointing to the trap-door—the slide door. Then there were the chalk-marks, which were put as they went along the road. Even the manager, Mr. McAuliffe, does not appear to have been free from anxiety. In reply to Mr. Wilshire, he stated it was not his intention to go with the exploring party, but on the evening of the Thursday he had fixed in his mind to go, but when he went to the mine he was too late, as the party had gone down. He went down the mine, and lingered about the furnace until he was apprised by Burt of what had taken place regarding the explorers; and, while I have to express my regret that the manager was not with the party, leading it, it is some satisfaction to know he was in the mine at the time of the occurrence, and rendered some service later on in the rescue of the McDonalds. The under-manager was entrusted, it appears, with leading the exploring party, although he was sceptical from the beginning on the quality of gas from No. 3 district; and no matter what Cockburn's views might have been theoretically on these gases, he said yesterday, when giving evidence, that while he would give place to Cockburn in regard to theory, he would not do so in practice. In practice he regarded himself Cockburn's superior, but not in theory. It is surprising that, when the exploring party went in, they did not take the air current with them. I know it may be remarked "that we are all good Generals after the battle"; but Mr. McDonald has admitted that there was an outlet for air as a return in the No. 3 district over the old overcast away into "C" heading. He states in his evidence, in answer to Mr. Humble, "There is an overcast in connection with the return and No. 3 workings which would have provided an outlet for a current of air driven into No. 3 workings in the reverse way to what the air was put in." Then, again, he gives a peculiar answer further down: "I was not warned by anyone of the danger of meeting these gases. No one spoke to me of the necessity of taking fresh air in with me." Surely Mr. Dixon and Mr. Humble's idea about this matter would have been of some weight. Mr. McDonald's own knowledge of what he had read in the several standard works on the subject should have given sufficient warning itself. These works told him that carbon monoxide was one of the most poisonous gases in connection with coal-mines. How, then, in the face of that, can Mr. McDonald make this statement? Mr. Cockburn, it appears, was warned in a way. He met Mr. Humble, whom he informed that he was going into No. 3 district. If what I gather from Mr. Humble's evidence is correct, he warned Mr. Cockburn that he should not go. I do not know whether the fact of Mr. Humble not being more active in warning these men, or stopping them from doing an absurd act, would have any weight with your Honor in drawing up the report. As it is, I bring it under the notice of the Court. I am not aware that Mr. Dixon was cognizant of the intention to explore this old district. If I was, I would ask the Court to also give that fact their notice. But your Honor must not forget that Mr. Humble is the inspector for the Stockton Colliery. Coming back to the situation at the entry, the limited precautions adopted for getting out to fresh air if anything happened, and the chalk marks, if they became separated—admitting the arrangements to be bad—does it not appear to your Honor that getting on towards midnight was a most peculiar time to enter upon an exploration, especially taking into account that there was no need for hurry. At that hour everybody would be retiring to rest. You would imagine that an exploration of that character, surrounded with peculiar danger, as they must have known from the way it was carried out, would have been entered upon through the day, when everybody was about. I think this is a very pertinent question to the whole business. Again, there was a slight current, so it has been stated, coming out of the double heading. How is it men were not located in that fresh air in the double heading, a considerable distance away from the trap-door, and partly intermediate between the trap-door and where the men were found? Or, if that was not thought about, why not have had some more men about the mine in case of any unforeseen circumstances occurring, especially when it was known that ten men were going in? It appears to me that the daytime should have been chosen for the work. A staff of men could then have been handy, and at the trap-door, in the event of unforeseen occurrences taking place. The exploration takes place; ten men are in it; some are very young, and without much experience; some are experienced. Mr. Burt, of course, is an experienced man, so far as mining is concerned; but he had no knowledge of gases. Mr. Jury is a student in gases; but, notwithstanding that he has been schooled a good deal in these matters, we have the melancholy fact that he never raised any protest whatever against the party's going in. We have had no mention of any protest from Cockburn. Mr. Humble explained that from his temperament he was hardly likely to make one. Besides, he was a newly-appointed official, and would not care to question the management. It does seem surprising to me that these men, with their education, when confronted with this danger, did not raise a manly protest, and object to the men being taken in on false lines. With regard to the other men, probably some had a fair practical knowledge. One thing about Mr. McDonald that cannot pass unnoticed is that, while he went in with his own life, his son's life was with him at the same time. I admit there is that much to be said in his favour; but I do not say that it militates against the foolishness of travelling in against the intake air. It only proves that Mr. McDonald had formed a strong opinion, and was determined at all hazards to hold to it. The unfortunate part of the business is that, even after the casualties, Mr. McDonald will not come down and admit that carbon monoxide is there, notwithstanding Professor Threlfall's report and the opinion expressed by Dr. Hester. Mr. Jury, too, appears to be somewhat sceptical about the matter. We are told that some of these men were volunteers. The principal officials (Burt, Jury, and Ellis) were simply told to come to work in the ordinary way. Ellis tells us that he was at the furnace on Wednesday night, and that he was affected and felt very bad. It does not appear that he mentioned this to anyone; but he made such a statement in his evidence. How long were these men in there? What evidence have we on that point? The evidence is not very clear, and the only thing we can do is to get a fair approximation. That can only be worked out from the circumstantial evidence that has been given. For instance,

Dr. Hester states that he got word in Newcastle that he was wanted at the Stockton Colliery, some time before 11 o'clock. He went over to the mine in the 11 o'clock boat, and arrived on the pit-top at 11:10 p.m. Ellis tells us that when he came out of the mine he knows it was not 11 o'clock. James Goodwin, one of the rescuers, then tells us that he went down in the first cage between 10 and 11 o'clock. Roberts, another of the rescuers, says that he heard the whistle blow or give forth the warning between 10 and 11 o'clock. I think we may say that half-past 9 had just turned when the explorers entered the mine. Mr. McDonald, Jury, and one or two more went down to the furnace after they arrived at the pit bottom. Ellis, with others, stayed near the No. 2 door until they came back. Ellis also states that while at that No. 2 door he noticed even there this same smell before entering. Afterwards Mr. McDonald came back; he had not been to the furnace many minutes when he returned. They then entered the rope-road, and walked quietly on until they came to the double-heading, which they entered, and stayed there for a few minutes. Although they would be inhaling that peculiar atmosphere down to the double-heading, once in there, there would be some partial relief. They, therefore, stayed there a few minutes. I do not think it would be an unfair computation to say that when they left the double-heading it would be probably a quarter to 10. After they moved on from there (I assume that it was then a quarter to 10) they went quietly on, marking the road (the different turns) as they went with chalk; and they went on till they came to No. 16 bord; and, as soon as they got there, they had just about halted when an order was given to each of them to go back, Mr. McDonald remarking at the time, "Bailey will take the lead." And the next thing we hear of is Bailey falling into the arms of James McDonald, and exclaiming, "I'm done." In regard to the time the men were in the mine, I am inclined to think that they were not in more than twenty minutes when they became affected. Bailey was the first to be overcome. Jury, at the same time, says he felt shaky, and a dizziness came over him. Shortly after this Burt says he fell down, and that appears to be the time when the race for life unfortunately began. Bailey's condition would be a warning to all parties that the danger signal had been exhibited unmistakably. Mr. McDonald, in his evidence, says that they got to No. 16 bord, and that during the time that he stopped there he said to Cockburn, "Did you hear that?" He says, Cockburn answered, "Yes, Mac.; that's a fall." Well, Cockburn is, unfortunately, not here to speak as to what did take place. Jury says he heard no fall, and felt no concussion. Burt says he heard no fall, and felt no concussion. Ellis says he felt a slight concussion, and James McDonald says he felt a slight concussion; but they both state that they heard no fall. It did not affect their lights. McDonald says he noticed a draught come on to them. The witnesses say that they did not feel anything up to this time, and from the time the order was given to return to Bailey's being overcome was simply a matter of a few minutes. I think a fair conclusion to draw—and the only one—is that these men having been in that atmosphere for something like twenty minutes from the time they left the double heading, I think they had inhaled that much poison that it began to take effect. That they were all affected at that time is not quite borne out by some of the evidence. It is stated that some struggled out, and we know that Ellis himself states that he felt nothing peculiar at the time—not till he was partly on the way out. Well, now, these are the circumstances in connection with this business. The men start to return, and eventually we find that there are only four who make their escape—Ellis, Burt, Jury, and William McAuliffe. I take it they must all have been somewhat affected. As regards the rescue work we find that the manager, as soon as he gets the information, makes all haste to give an alarm and get a rescue party formed. I suppose it was the best he could do at that particular time. The rescue party went in, and following this, a good deal of unfortunate business takes place. The manager remaining at the pit-top, after having been doing rescue work in connection with the McDonalds and Mr. Sampy, the engineer of the colliery—who, by the way, had never been taken into the consultation, although a man possessing good mining knowledge in a general way—takes charge of the trap-door. Parties of rescuers are admitted, and there is no time specified as to how long they should stay, as far as I have been able to discover. There was no standard set up that a man should not remain in more than a certain time. And it does not appear that any standard was fixed with regard to the interval which should elapse before a man was admitted a second time. It was left as a matter of endurance. It was left to them to go in and to get bodies out, dead or alive, or to become exhausted and then attempt to get out the best way they could. I will admit, your Honor, that these men acted no doubt nobly in responding to the call to go and rescue the men in the mine in the hope of saving life; but the clear, intelligent, control of the mine, under any circumstances, must never be overlooked; we have no right to give it up at any time. If not retained by the manager, surely it should be by somebody to whom he is able to delegate his authority. Anyhow, we find that men were going in more than once, and, I believe, in some cases more than twice. The men, when they got in, were permitted to wander away out of the main road—to the by-ways, so to speak—and there lose their lives; and I believe that in pursuit of Thomas McAlpin no less than five lives were sacrificed. And we have it from the evidence of Mr. Roberts—one of the rescuers—that there were no less than sixteen men in there at one time. Dr. Hester states in his evidence that he warned Sweeney and Charlesworth against going in, and that he believed Mr. Sampy heard this warning given; yet these men were allowed to run into what proved to them a death trap. And these are some of the unfortunate circumstances in connection with this business. I will again draw the Court's attention to these clauses of the Act in regard to the issue of notices by the inspectors that I have already referred to. What does the thirty-third section of the 1896 Act say? That all notices under this Act, by or to an inspector, shall be in writing, or partly in writing and partly in lithograph. I think all notices dealing with danger in a mine should be given in writing, as it is well to have a record that instructions have been given. Besides, a written notice has a much more potent force than any verbal instructions. Notwithstanding your Honor's opinion on General Rule 7, I would again bring it under the notice of the Court. The reason I am emphasising this matter is this: In the old Act of 1876 there was a clause giving the inspectors power, where men had been brought out of a mine in consequence of danger, to say that they should not go back until that mine was declared safe. It was, however, deemed expedient by the legislators to eliminate that clause when the Bill was under consideration. With regard to General Rule 7 of the present Act, it says:—

If at any time it is found by the person for the time being in charge of the mine, or any part thereof, that by reason of inflammable gases prevailing in the mine, or that part thereof, or of any cause whatever, the mine or that part is dangerous, every workman shall be withdrawn from the mine or part so found dangerous; and a competent person appointed for the purpose shall inspect the mine or part so found dangerous, and, if the danger arises from inflammable gas, shall inspect

inspect the mine or part with a locked safety lamp, and in every case shall make a true report of the condition of the mine or part; and a workman shall not, except in so far as is necessary for inquiring into the cause of danger, or for the removal thereof, or for exploration, be readmitted into the mine or part so found dangerous, until the same is stated by the person appointed as aforesaid not to be dangerous. Every such report shall be recorded in a book, which shall be kept at the mine for the purpose, and shall be signed by the person who made the inspection.

I still contend that the first part of this Rule intends that an inspection should be made. I admit that the exploration comes in later on; but I take it that the intention of the Rule is that at least there shall be an inspection, and that such inspection shall be recorded in a book, which shall be kept at the colliery office for the purpose. I wish your Honor to give this Rule a little further consideration.

His Honor: You contend that before an exploration is undertaken some sort of an inspection should be made as a preliminary to allowing workmen to go in and explore?

Mr. Curley: Yes, your Honor.

Mr. Robertson: Your contention is, that the person inspecting should go as far as the exploring party intend to go?

Mr. Curley: My idea of an inspection is this: the man in charge of the mine has a right to see that an inspection is carried out of that part to where it is intended to proceed with the exploring party; and, as manager, he should be one of the men to make the inspection, if it is a case of peculiar danger.

Mr. Robertson: In this instance, you contend that an inspection should have been made as far as the explorers went.

Mr. Curley: Yes; as far as it was intended to go. That is my idea of an inspection. I contend that a manager has no right to send men where he cannot go himself. I admit that an inspection might not be made by one man only; but it is an extraordinary thing to call that an inspection where a party of ten men is engaged.

His Honor: I take it you mean that the person inspecting should first of all make a general examination?

Mr. Curley: These are my views: if it is desirable to enter any portion of a mine to explore it, an inspection in the first place should be made of the locality in the proximity. I do not say every detail should be carefully gone into, as that would be a matter for the explorers; but the particular locality somewhere near the vicinity should be inspected before an exploration party is taken in, more especially in such a case as that under notice, where there was no hurry, as the manager states.

Mr. Robertson: What would be the necessity of an exploring party if the district had already been inspected? If it had been inspected in the immediate locality, then I would say it was not necessary for explorers to go in.

Mr. Curley: But my contention is, that there should be an inspection prior to the explorers going in.

Mr. Robertson: But is not an exploration an inspection?

Mr. Curley: Not altogether. If explorers went into a locality and noticed anything wrong, they would set to work and remedy it. I consider that the question of inspection supersedes everything, and that it should be held as a vital principle.

Mr. Robertson: You cannot define the number of people for an inspection?

Mr. Curley: I should say two or three people, or four at the outside, would be quite ample for an inspection.

Mr. Robertson: But that may be a matter of opinion?

Mr. Curley: Yes; I am only giving my opinion.

Mr. Robertson: When you admit three or four, another man might think seven or eight?

Mr. Curley: Yes; but you can go on to the absurdity, and say that one man might think a thousand necessary. (*Continuing.*) I also wish to emphasise the fact that we have no record of any written notice having been tendered to the inspector for the district with regard to the deaths of Curran and Smith. A verbal message only was sent to Mr. Humble. Coming back to the fact of the Inspector for the Stockton Colliery, and I think also Mr. Dixon, not appearing at the colliery the day after their inspection to make some inquiry; both Mr. Humble and Mr. Dixon were at Stockton at the inquest on Thursday, which adjourned about 1 o'clock; and it does not appear that they thought it worth while to go to the colliery office and inquire what was going on. I want that matter considered as well. Why they did not appear to me difficult to comprehend, especially as they knew what was transpiring when they made the inspection; and moreover, Mr. Humble admits in his evidence that that door's being out in No. 3 district came as a matter of surprise to him. I think it must appear as a surprise to your Honor that that stopping was taken out. The idea of calling the door at the furnace a stopping on hinges: why the whole thing is absurd. It seems to me singular that an inspector of this colliery did not think it worth his while to get down to the furnace, seeing that it is the most vital part of the colliery, a little oftener, and pay some attention to it. It is a surprise to me that Mr. Humble, on the last occasion he visited the colliery, did not deem it worth while to inspect the furnace. Again, it is rare that an inspection is made at night time. Surely there could be a casual inspection made now and then other than during the day time. There is another matter. The inspections made by the colliery officials should be embodied in their report books. Good administration is certainly what I would like to see exercised in connection with the practical branch of the Mines Department of this Colony. I would like to see the Act administered in a little firmer manner than appears to be the case at the present time. I hope I have not wearied your Honor. I have to express my thanks for the courtesy the Court has extended to me, and for the patient hearing it has given me.

Mr. O'Sullivan said:—I should not have thought of addressing the Court if Mr. Curley had confined himself to the facts. I ask—Have the provisions of the Regulations of the Coal Mines Regulation Act been complied with? What evidence have we that they were infringed? What evidence of the kind is there, except that the manager neglected to enter in his book the accident which happened to Smith and Curran? It is known that the manager, at this time, was ordered to his home by the doctor. I ask—Was this accident due to an unforeseen occurrence, or to an error of judgment which any man might make, or was it due to neglect? There could have been no neglect, for, when the Government inspectors and the colliery managers visited this particular district some time back, they also went in against the return air. Now, as to the stopping, the manager explains that the No. 3 district some years ago was worked out. It remained unsealed for more than three years. It was then found that the stoppings on the main intake of No. 2 district

district were leaking, and it was on account of this that the stopping which was knocked out afterwards was erected. During the three years this district was open, the only stopping was No. 3 door, which proved in every way effectual. On each occasion of the managers visiting the mine, they entered against the current of air; and no surprise was expressed either by the inspectors or managers. It was in order to clear out the district more effectually on one of these visits of examination that this stopping was knocked out. As regards the leaving of the doors open, that was contrary to Rule 28 of the Special Rules of the colliery, a copy of which is served upon all the colliery employees, and was certainly served upon Curran and Smith. This Rule reads:—

“No workman or other person shall injure any air-courses, brattice, or stopping, or leave open, wholly or partly, any door, or do any other act whereby the ventilation of the mine may be affected, or the lives of the men or the property of the owners may be endangered.”

On the Thursday night there is evidence that the door was left open.

[Mr. O'Sullivan then proceeded to refer to the verdict of the jury at the first inquest upon Curran and Smith, and Mr. Curley took exception to the construction which Mr. O'Sullivan put upon it. His Honor thereupon quoted the verdict, and said that it was “That Curran and Smith died in the Stockton Colliery, and that their deaths were caused by inhaling noxious gases, commonly called black damp, the said gases being accumulated and caused by the doors Nos. 2 and 3 being left open; but there is no evidence before us to show how these doors came to be left open.”]

Mr. O'Sullivan: Well, the doors were left open. I submit that the exploring party was necessary in any case. First of all, it was necessary for the purpose of locating the seat of the fire, if one existed; and the reason for making the exploration as early as possible was to avoid the fire, if there was one, spreading, and to get it sealed off at an early stage. As Mr. Humble told us yesterday, it is a very difficult thing to seal off a fire in a mine where the stoppings are so numerous as they are in the Stockton Colliery. In regard to Mr. Curley's contention that Dr. Hester was not positive as to what caused the death of the men, there is what the jury thought. All the men who went into the mine were of opinion that black damp was present, though they were certainly on the look out for other gases as well. As regards the action of the manager, it is in evidence that he was at his home nervously prostrated on his bed; but when he hears of the exploring party going in, he repairs rapidly to the mine and finds that he is just too late to join; so he attends to the furnace. The air was evidently pretty good when the exploring party went in, for one of them, now dead, remarked “I could live in this for a week”; and we have it in evidence that McAlpin said, “I could live in here for a week.” The evidence of all the survivors is that the air was very good. Concerning the cause of what took place, what more likely than that it was what was thought by Maedonald—namely, a fall? Mr. Humble and Mr. Dixon themselves heard a fall after the accident; and is it not likely that that was a continuation of what was going on in the mine? Ellis speaks of sickness on the Wednesday night. He was employed at the furnace to clear out the black damp. He knew of the danger. As to Gould's evidence, I do not think anyone would call Gould a reliable witness. His evidence has been given in such a way that very little weight can be placed upon it. If he was completely overcome, it was very strange that he could walk a mile to report what had happened very shortly afterwards. These are two very conflicting statements. There is this smell noticed on the Wednesday night. I do not pretend to be able to account for it. All the authorities I have looked up tell me that carbonic acid is odourless, tasteless, and colourless. Professor Threlfall took samples in the mine. The first was no good; in the second, carbonic oxide predominated; and, in the third, carbonic acid—black damp. That supports McDonald and his opinion of black damp. I will just quote Dr. Hester. He says, “Judging from what happened to the rescue party, I should say that the poisonous gas must have increased very considerably while the exploring party were in the workings.” And again, “Restraint had to be placed on men to prevent their going in to try and rescue; and in many cases men went in who had been in before, in order to lead and show other men the way.” That is how several were lost. They escaped from those who were in charge, and that is how they were lost. Dr. Hester also said that one of the effects of carbonic oxide was to occasion dimness of sight. In conclusion, I say that whatever happened was purely accidental, and that it happened from some unforeseen occurrence that the management could not have contended against.

Mr. Robertson (addressing *Mr. McAuliffe*) asked: Can you tell me the names of your under officials who were unaffected by the gas, and were at liberty to take charge when you, Mr. McDonald, Jury, and others, were affected by the gas?

Mr. McAuliffe: I sent Jury and Ellis out into the fresh air to recover themselves. There were no other deputies except Jones, who, however, was not one of the exploring party. (Continuing.) Jones was fresh, and could have taken charge. He was assisting in the rescue work. All the officials except Bailey, senior, were there that night. Jones was not one of the explorers; he was one of the rescuers. He was physically quite able to take charge. Bailey was not on the scene at all that night. He was not aware of the accident. He was deputy at that time.

Mr. Dixon (in the absence of Mr. Wilshire, whose attendance had not been deemed necessary), addressed the Court. He said:—Your Honor and Gentlemen forming the Court,—I wish to draw attention to the fact that, as far as the inspectors are concerned, everything we have done in connection with the Stockton disaster has been made transparent to the public. We have not kept anything back; and I venture to assert that, in getting out the evidence, the questions put by the inspectors at the inquest were intelligible and lucid to everyone. We tried to make the inquiry as simple as possible, and to get all the facts we could with regard to the disaster. Mr. Humble has been referred to as the inspector of the Stockton Colliery; but in relation to the written notice which was not served, and the verbal notice which was given, I wish the Court to bear in mind that I consider myself as one with Mr. Humble in this respect; and if any blame is due to Mr. Humble it is also due to me, as senior officer. We understood, both of us, that the verbal instructions were as good as written instructions, so far as the management was concerned. All through the Stockton case I went with Mr. Humble, and I stood by him. Of course, there has been no reference made to what we did other than merely going to the pit. I think it is only right that the Court should take notice of what we did in the ten hours of rescue work. I do say that there are not two inspectors in the British Empire who could have done better than Mr. Humble and myself. I can only emphasise what I said before—that if there is any blame attributable to Mr. Humble for not having written the notice, I am here to stand by his side, and share that blame. In conclusion, I have to thank your Honor and the Court for the way the inquiry has been conducted.

At this stage the Court adjourned *sine die*.

APPENDIX TO REPORT OF PROCEEDINGS.

MR. CURLEY having undertaken to supply the Court with a copy of certain recommendations made by a Royal Commission appointed in England to inquire into the cause of mining accidents, and the means to be used for their prevention, forwarded, under date of 15th February, 1897, a document in the following terms:—

[Copy.]

“The Colliery Managers’ Hand-book”; by Caleb Pamey, 1896, page 820, Appendix.

Measures for dealing with Casualties.

WE consider that measures should be adopted to deal more systematically, and, if possible, more expeditiously with casualties resulting from the various sources of accidents dealt with in this report.

Collieries or mines should be required to provide an ambulance and stretchers for the purpose of conveying to their homes sufferers from injuries received while in the discharge of their duties.

Arrangements should be made for the establishment of centres in mining districts where additional appliances for accour and relief, and also special appliances for exploring purposes, should be maintained in an efficient condition, so as to be ready for use at the shortest notice.

It is most desirable that facilities should be afforded for the instruction of men in the use of special auxiliary appliances for exploring purposes, and in simple measures connected with the provisional treatment of injuries.

SPECIAL RULES for the conduct and guidance of the persons acting in the management of the Stockton Colliery, in the District of Newcastle, and all persons engaged in or about the Colliery.

N.B.—One or more copies of these Rules shall be fixed up in the principal office at the colliery; and all persons accepting employment in the colliery shall be engaged subject to the Regulations contained in them.

A printed copy of the Rules shall be supplied to every person before he is employed in or about such colliery.

Special Rules.

1. The colliery manager shall have the daily supervision and control of every shaft in the course of sinking, and every level and inclined plane in the course of being driven for commencing or opening any mine, or for searching for or proving minerals, and all shafts, levels, planes, works, machinery, tramways, and sidings, both below ground and above ground, in and adjacent to the mine, and any such shaft, level, and inclined plane belonging to the mine.

2. He shall comply with the requirements of the Coal Mines Regulation Act, 1876, and shall, to the best of his power, enforce the observations of the said Act, and of the General and Special Rules.

3. He shall appoint such competent persons as may be necessary for carrying out the provisions of the said Act, and to provide for the safety and proper discipline of the persons employed in the mine or mines under his control.

4. The overseer shall have the daily supervision and responsible charge of the mine, under the direction of the manager, and shall give all necessary instructions to the men and boys in the pit respecting their work; and shall see that they pay due respect to the Rules and Regulations of the colliery; and shall visit every working-place in the pit daily, or as often as may be practicable, and see that the air-courses and stoppings are in a good state of repair, and that an adequate quantity of fresh air is constantly supplied to the men.

5. In the event of any sudden discharge or accumulation of inflammable gas in any part of the workings, the fact shall be immediately reported by or through him to the manager, and he shall also adopt such measures as may seem to him most advisable for the immediate removal of the gas, and work shall not be resumed in such place or places until the gas has been removed.

6. In any place where there is a dangerous appearance of fire-damp, locked safety-lamps shall be used, and no workman shall be permitted to remain where fire-damp shall be accumulated in such quantity as to burn in the inside of, or to heat the lamps dangerously.

7. The overseer, or some other person specially appointed in his place, shall personally see that the air furnaces are kept in good repair and carefully attended to, and shall examine daily, or as often as practicable, the state of the roof in the main roads and the working-places, also the state of the shaft and the guides therein; and in the event of any of the above-mentioned places being found insecure, he shall cause them to be repaired at once.

8. It shall also be the duty of the overseer to see that an adequate supply of timber is sent into all the working-places, and to see that such places are properly and securely timbered.

9. If on examination by the overseer or any other person specially appointed, any working-place shall be found insecure from a defect in the ventilation, or from insufficiency of timbering, he shall cause a danger-signal to be placed in the middle of the road, at the entrance of it, such danger-signal to consist of a board with the word “danger” printed thereon.

On-setter or Hooker-on.

10. The on-setter or hooker-on shall, subject to the directions of the manager or overseer, have the sole control of the pit-bottom, and the command of the signals up the pit, and on no account shall he allow any person to interfere with the rapping of the signal-hammer. He shall at all times when sending up waggons of coal, see that none of the coal projects beyond the side of the waggon, and shall pay the greatest attention to the signal-hammer when men are going to ride, in order that accidents may be avoided. The rapping shall be as follows:—

11. Number of raps—
- 1 for “go on.”
- 2 for “lower down.”
- 3 for “men coming up.”
- 4 for “empty cage.”
- 5 for “go slow—door open.”
- 6 for “small coal for engine.”

12. The on-setter shall on no account allow any person to ride in a cage with a waggon, and on no account shall any person be allowed to go across the pit-bottom while work is going on in the pit, and any violation of this Rule shall be reported to the manager immediately.

Banksman.

13. The banksman shall, subject to the direction of the manager or overseer, have the control of the pit-top, and the command of the signals down the pit, and have power to prevent strangers from descending without special instructions from the manager.

14. The banksman shall be responsible for the state of the pit-top, and shall see that the frames and the surface near the pit-mouth are kept free from coal, stones, or rubbish, and that they are cleaned at least three times a day. He shall also see that the ropes and slides are well greased, and on no account shall he allow any person to descend the shaft in a state of intoxication.

15. He shall not allow any miner or workman during work hours to descend the pit in the same cage along with his tools, but he shall send them down for him.

16. He shall examine the pit ropes and the cage-obains frequently through the course of the day, and shall report to the manager or overseer if they are found faulty, adopting at the earliest opportunity such means as will, to the best of his judgment, remedy the defects.

17. Wire-ropes shall be run through the banksman’s hands slowly, once every week, to detect broken wires.

Engine-driver.

18. The engine-driver shall have the sole control of the engine entrusted to his care.

19. He shall inspect daily the engine, boilers, drums, chains, cages, and all other machinery used for the purpose of raising men and coals from the mine; shall see that all winding-ropes be carefully attached to the drum by clamps; that boilers be blown off every twelve hours; that the pumps are working well, and that the water is regularly pumped.

20. The engine-driver shall attend constantly to his engine during the shift, and upon no account shall he permit any person to touch any of the machinery or enter the engine-house, except such persons as may be appointed so to do by those in authority over him. He shall run the ropes once up and down before men descending in the morning, in order to see that the ropes, &c., are all right.

21. The engine-driver shall at all times pay strict attention to the rapping of the signal-hammer, as specified above, and to the oiling of the engine and the pulley-wheels, and should he discover any derangements of the machinery he shall stop the engine at once and report the matter to the manager, overseer, or engineer.

22. When men are in the pit-workings the engine-driver shall not leave the handle of the engine on any account, and when men are going down he shall see that they are all right before the cage is started, and he shall see that the men are let down or drawn up with the greatest possible care.

Colliers and Workmen.

23. No collier or other person shall descend contrary to the direction of the banksman, nor ascend contrary to the direction of the hooker-on, nor shall any person or persons ascend or descend upon a loaded skip, or attempt to get out of the cage when in motion.

24. Every collier shall in all matters relating to the workings of the mines, or to the safety of the men, obey strictly the orders of the manager or the overseer, and no man or boy shall go into any part of the pit other than where he works without special authority from the manager or overseer.

25. Every collier shall, upon leaving his place of work, take care that no lighted candles or lamps or other fires (except such as is used for the purpose of ventilation) be left burning in any of the workings he may pass through or by, unless it be under the care of some person, nor shall he leave any gunpowder dangerously exposed.

26. Every collier shall securely sprag or uphold the coal whilst holing, and shall securely prop up the roof of the board or heading where he may be working, so that accidents may be avoided; and if he shall not be provided with a sufficient quantity of timber he shall cease working, and report the same to the manager or overseer.

27. Every workman employed in any pit shall inform the person in charge of the workings of the existence of any choke or fire damp; or of any insecurity of the roof, shaft, or any other part of the workings; or of any air-door being damaged or left open, immediately on its being observed by him.

28. No workman or other person shall injure any air-courses, brattice, or stopping, or leave open wholly or partly any door, or do any other act whereby the ventilation of the mine may be affected, or the lives of the men or the property of the owners may be endangered.

29. The seam of coal must be wrought strictly in accordance with the instructions of the manager or overseer. No collier shall on any account be allowed to take the tools of another.

30. Every person employed shall obey the orders of the manager or overseer, or other person specially appointed to give orders in all matters connected with the safety of the miners or the working of the colliery, and shall refrain from quarrelling, fighting, or using obscene language, or from doing anything that may cause a stoppage of the works.

31. There shall be no restriction as to the amount of any individual's daily or weekly earnings.

32. Any miner or other person employed in or about the colliery shall be liable to instant dismissal if he shall wilfully violate the foregoing Rules, or if it shall appear to the manager that the men or machinery are in any way endangered by his neglect or incapacity.

Firemen.

33. The firemen shall be in the pit four (4) hours before the workmen commence to draw coals, and shall examine carefully with the safety-lamp all places and sections where gas has previously been seen.

34. He shall suspend "danger crosses" in all places where gas is found to be dangerous and stopped, and on no account allow them to be removed until the place is considered safe, and started again.

35. All safety-lamps to be examined by the fireman before they are given out to the miners or anyone connected with the colliery requiring the use of a safety-lamp.

36. All safety-lamps shall be locked by the fireman before they leave the lamp-room, which will be in charge of the fireman.

37. Any lamp receiving any injury shall be at once delivered up to the fireman or overman, and the fact reported to the manager.

38. No smoking shall be permitted in any place where safety-lamps are used.

Furnace-men and Horse-drivers.

39. The furnace-men and horse-drivers shall be subject to the same Rules and Regulations as the other workmen, and when the pit is not at work shall obtain special instructions from the manager or overseer.

40. When day and night furnace-men are required, the one shall not leave the furnace until the other arrives, except to give information of the non-attendance of the other, in which case he shall return again with all speed to the furnace, and remain there until relieved by someone appointed by the manager or overseer for that purpose. When a day furnace-man only is employed the furnace shall be got into vigorous operation before the time for starting work in the pit, and he shall see that a clear brisk fire is kept up all day.

41. Gunpowder or other explosive or inflammable substance shall not be stored in the mine.

42. It shall not be taken into the mine except in a covered or closed case or canister, containing not more than four pounds.

43. A workman shall not have in use at one time, in any one place, more than one of such cases or canisters.

44. No steel or iron rammer shall be used, and a charge of powder which has missed fire shall not be unrammed.

N.B.—It is the particular desire of the owner of the colliery that the various officers shall at all times report to the proper authorities every individual case of neglect or wilful disobedience of the Rules and cautions abovementioned, in order that the safe and proper working of the colliery may be duly maintained.

By the 34th clause of the 39th Victoria No. 31, it is enacted every person who shall be guilty of any offence against this Act, or who shall wilfully violate or neglect to observe any provisions of this Act, or any general or special rule established hereby or hereunder for the violation or neglect of which no penalty is hereby expressly imposed, shall for every such offence be liable to a penalty not exceeding £10, recoverable summarily before two or more Justices of the Peace.

By the 33rd clause of the same Act it is enacted every person who pulls down, injures, or defaces any notice hung up or affixed as required by this Act, shall be liable to a penalty not exceeding 40s.

No. 27.

Exhibit "A"—Court of Investigation. Exhibit No. 10—Court of Inquiry.

No. 28.

W. T. Dick, Esq., M.P., to The Under Secretary for Mines and Agriculture.

Dear Sir,

Newcastle, 19 March, 1897.

Could you kindly supply me with half-a-dozen copies of the finding of the Court of the Stockton inquiry, if published.

Yours, &c.,

W. T. DICK.

Inform, Department regrets its inability to comply with his request; but the report has not been published, except so much of it as appeared in the daily papers.—H.B.S. (for U.S.), 19/3/97.

The

The Under Secretary for Mines and Agriculture to W. T. Dick, Esq., M.P.

Department of Mines and Agriculture, Sydney, 19 March, 1897.

Date of letter under reply :—19th March, 1897.

Subject:—Asking to be supplied with six copies of the finding of the Court on the Stockton inquiry.

Reply :—The Department regrets its inability to comply with your request. The report has not been published yet, except so much of it as appeared in the daily papers.

D. C. McLACHLAN,
Under Secretary
(Per A.F.)

PART V.

Decision to hold Court of Inquiry under section 10, Coal Mines Regulation Act, 1896. Proceedings of Court of Inquiry into conduct of Messrs. McAuliffe and McDonald, and Finding of Court; also Order of Minister for Mines cancelling Certificates.

No. 1.

The Secretary to The Attorney-General to The Under Secretary for Mines and Agriculture.

Re Stockton Inquiry.

Sir,

Attorney-General's Department, Sydney, 9 March, 1897.

I have the honor, by direction of the Attorney-General, to inform you that, after perusal and consideration of the papers in the above matter, he has decided that no criminal proceedings shall be taken.

I have, &c.,
H. POLLOCK,
Secretary.

Submitted.—D. McL., 9/3/97. Seen.—S. SMITH.

No. 2.

Minute by The Secretary for Mines and Agriculture *re* Stockton Colliery Accidents.

Subject :—Stockton Colliery Accidents.

Department of Mines, Sydney, 11 March, 1897.

I HAVE very carefully perused the full and very comprehensive report submitted by the Court of Investigation appointed to inquire into the causes and circumstances attending the fatal accidents which occurred in the Stockton Colliery in December last.

The finding of the Court is that both the manager and the under-manager are unfit, by reason of incompetence, to discharge the duties of their respective positions; and I, therefore, direct that an inquiry under clause 10 of the Coal Mines Regulation Act be held at Newcastle—the inquiry to be conducted by His Honor Judge Backhouse. The Crown Solicitor should be moved to have all documents prepared, so that the inquiry may be commenced without any avoidable delay.

S. SMITH.

No. 3.

The Under Secretary for Mines and Agriculture to The Crown Solicitor.

Sir,

Department of Mines and Agriculture, 11 March, 1897.

With reference to the inquiry recently held at Newcastle in connection with the Stockton Colliery accident, and to the report of the Court as to its causes and circumstances, I am directed to state that, as it appears that the manager and under-manager are unfit to discharge their duties by reason of incompetency and negligence, the Minister desires that an inquiry shall be held under section 10 of the Coal Mines Regulation Act.

Under subsection (II), section 10, the Minister is directed to furnish to the manager and under-manager a statement of the case on which the inquiry is instituted, and I should, therefore, be glad if you will have the proper statement of the case prepared.

The report of the Court of investigation is forwarded, together with a copy of the evidence. As it is intended to hold the inquiry at an early date, I should be glad if the matter can receive immediate attention.

It will also be necessary that some person be appointed by the Minister to undertake the management of the case, and I would ask that Mr. Wilshire, of your Department, be instructed to do so.

I have, &c.,
D. C. McLACHLAN,
Under Secretary.

No. 4.

No. 4.

The Crown Solicitor to The Under Secretary for Mines and Agriculture.

Sir,

Crown Solicitor's Office, Sydney, 11 March, 1897.

With reference to your letter of to-day's date, respecting the inquiry to be held as to the competency of the manager and under-manager of the Stockton Colliery, I have the honor to forward herewith statements of the cases on which the inquiry is instituted, and to state that, as the Act requires the Minister before the commencement of the inquiry, to furnish the statement of the case to the party affected, it would, perhaps, be advisable for the Minister to authenticate the same by his signature.

As requested by the Minister, Mr. Wilshire of this Department will undertake the management of the case, and should, according to the Act, be appointed by the Minister,

Kindly inform me as early as convenient where, and on which date, the inquiry is to be held.

I have, &c.,

GEO. COLQUHOUN,

Crown Solicitor.

Mr. Humble and I saw Mr. Wilshire on Saturday, and again this morning, when he approved of the statement as now amended being sent.—H.D.W., 15/3/97.

No. 5.

Memorandum by The Under Secretary for Mines and Agriculture to Inspector Lynch.

Department of Mines and Agriculture, Sydney, 16 March, 1897.

Will Inspector Lynch please cause the enclosed letters and statements to be served on Mr. Daniel McAuliffe, manager of the Stockton Colliery, and Mr. William McDonald, under-manager of the Stockton Colliery, at the earliest moment to-morrow?

Attached hereto are duplicates of the statements, having on their back a certificate of service, which should be filled in by the officer effecting service.

The duplicates should then be returned to this office.

D. C. McLACHLAN,

Under Secretary.

Notices served, certificates on originals filled in, and papers returned herewith.—W. C. LYNCH, Inspector of Police, Newcastle, 17/3/97.

[Enclosure.]

* Statements signed for McAuliffe and McDonald, and sent with duplicate copy to Inspector Lynch, Newcastle, for service, 16 March, 1897.

COPIES of Certificates of Service.

I, CONSTABLE ALBERT F. KNIGHT, of Stockton, do hereby certify that I have served, this 17th day of March, 1897, upon the within-named William McDonald, the statement herein, by delivering to him personally, at Stockton, a true copy thereof.

ALBERT F. KNIGHT,

1st-Class Constable.

I, CONSTABLE ALBERT F. KNIGHT, of Stockton, do hereby certify that I have served, this 17th day of March, 1897, upon the within-named Daniel McAuliffe, the statement herein, by delivering to him personally, at Stockton, a true copy thereof.

ALBERT F. KNIGHT,

1st-Class Constable.

No. 6.

The Under Secretary for Mines and Agriculture to His Honor Judge Backhouse.

Sir,

Department of Mines, Sydney, 17 March, 1897.

I am directed by the Secretary for Mines to inform you that he has, in the exercise of the power conferred on him by section 10 of the Coal Mines Regulation Act, 1896, directed you to hold an inquiry into the conduct of Daniel McAuliffe, as manager of the Stockton Colliery, in consequence of representation having been made to him by the "Court of Inquiry into the Stockton Colliery Accidents," that Mr. McAuliffe is unfit, by reason of incompetency and gross negligence, to discharge duties as such manager.

A copy of the statement of the case upon which the inquiry is instituted is enclosed herewith for your information.

The inquiry will be held at the Court-house at Newcastle, and will be begun at 2 p.m. on Monday, the 22nd inst. Mr. E. H. Wilshire, of the Crown Solicitor's Office, has been appointed to undertake the management of the case.

Annexed hereto will be found your formal appointment under the hand of Mr. Secretary Sydney Smith. †

Steps, I may add, are being taken to obtain the services of two shorthand writers, one of whom may act as Secretary to the Court.

I have, &c.,

D. C. McLACHLAN,

Under Secretary.

No. 7.

The Under Secretary for Mines and Agriculture to His Honor Judge Backhouse.

Sir,

Department of Mines, Sydney, 17 March, 1897.

I am directed by the Secretary for Mines to inform you that he has, in the exercise of the power conferred on him by section 10 of the Coal Mines Regulation Act, 1896, directed you to hold an inquiry into the conduct of William McDonald, as under-manager of the Stockton Colliery, in consequence of representation having been made to him by the "Court of Inquiry into the Stockton Colliery Accidents," that Mr. McDonald is unfit, by reason of incompetency and gross negligence, to discharge his duties as such under-manager.

A.

* Statements referred to, with proceedings of Court of Inquiry, pages 5, 6, 7, 8, 9.
† See Proceedings of Court, pages 2 and 3.

A copy of the statement of the case upon which the inquiry is instituted is enclosed herewith for your information.

The inquiry will be held at the Court-house, Newcastle, and will be begun at 2 p.m. on Monday, 22nd inst. Mr. E. H. Wilshire, of the Crown Solicitor's Office, has been appointed to undertake the management of the case.

Annexed hereto will be found your formal appointment under the hand of Mr. Secretary Sydney Smith.

Steps, I may add, are being taken to obtain the services of two shorthand writers, one of whom may act as Secretary to the Court.

I have, &c.,

D. C. McLACHLAN,
Under Secretary.

No. 8.

The Under Secretary for Mines and Agriculture to The Crown Solicitor.

Sir,

Department of Mines, Sydney, 17 March, 1897.

With reference to your letter of the 11th instant, respecting the inquiry to be held into the conduct of the manager of the Stockton Colliery, I am directed to enclose herewith Mr. E. H. Wilshire's authority* to undertake the management of the case, and to inform you that the inquiry will be held by His Honor Judge Backhouse at the Court-house at Newcastle, and will be begun on the 22nd instant, at 2 p.m.

A statement of the case (in duplicate) on which the inquiry is instituted was forwarded last night to the Inspector of Police, Newcastle, for service on Mr. McAuliffe; and on the receipt of the duplicate copy it will be forwarded for Mr. Wilshire's information.

I have, &c.,

D. C. McLACHLAN.

Sir,

Department of Mines and Agriculture, Sydney, 17 March, 1897.

With reference to your letter of the 11th instant, respecting the inquiry into the conduct of the under-manager of the Stockton Colliery, I am directed to enclose herewith Mr. E. H. Wilshire's authority to undertake the management of the case, and to inform you that the inquiry will be held by His Honor Judge Backhouse at the Court-house at Newcastle, and will be begun on the 22nd instant, at 2 p.m.

A statement of the case (in duplicate) on which the inquiry is instituted was forwarded last night to the Inspector of Police, Newcastle, for service on Mr. McDonald, and on receipt of the duplicate copy it will be forwarded for Mr. Wilshire's information.

I have, &c.,

D. C. McLACHLAN,
Under Secretary.

No. 9.

His Honor Judge Backhouse to The Under Secretary for Mines and Agriculture.

Sir,

Judge's Chambers, District Court, 18 March, 1897.

I have the honor to acknowledge the receipt of two letters from you, dated the 17th instant, respecting inquiries to be held by me under the provisions of the Coal Mines Regulation Act, 1896, and the following enclosures:—

1. Appointment to inquire into the conduct of Daniel McAuliffe.
2. Copy of statement of case supplied to him.
3. Appointment to inquire into the conduct of William McDonald.
4. Copy of statement of case supplied to him.

I have, &c.,

ALF. P. BACKHOUSE.

No. 10.

The Under Secretary for Mines and Agriculture to D. McAuliffe, Esq.

Sir,

Department of Mines, Sydney, 18 March, 1897.

With reference to the inquiry to be held into your conduct as manager of the Stockton Colliery, I am directed to enclose herewith for your use one dozen blank forms of summons.

I have, &c.,

D. C. McLACHLAN,
Under Secretary.

No. 11.

The Under Secretary for Mines and Agriculture to Wm. McDonald, Esq.

Sir,

Mines Department, Sydney, 18 March, 1897.

With reference to the inquiry to be held into your conduct as under-manager of the Stockton Colliery, I am directed to enclose herewith for your use one dozen blank forms of summons.

I have, &c.,

D. C. McLACHLAN,
Under Secretary.

No. 12.

No. 12.

The Under Secretary for Mines and Agriculture to The Crown Solicitor.

Sir, Department of Mines and Agriculture, 18 March, 1897.

I am directed by the Secretary for Mines to forward the attached papers for the information of Mr. E. H. Wilshire, who has been appointed to undertake the management of the cases at the inquiries into the conduct of the manager and under-manager of the Stockton Colliery.

I have, &c.,
D. C. McLACHLAN,
Under Secretary.

PAPERS attached.

Report of Court of Inquiry into Stockton Colliery accidents (and tracing). Copy of evidence taken and addresses made before the above Court. Copy of report of Inspectors Dixon and Humble. Copy of evidence taken at second inquest (in three parcels). Copy of exhibits (except plan). Copy of evidence taken at first inquest. Copy of statement served on D. McAuliffe, with certificate of service on back. Copy of statement served on Wm. McDonald, with copy of certificate of service on back.

No. 13.

The Crown Solicitor to The Under Secretary for Mines and Agriculture.

Sir, Crown Solicitor's Office, Sydney, 18 March, 1897.

With reference to the inquiry to be held into the conduct of the manager and under-manager of the Stockton Colliery, the following witnesses will be required to be in attendance, viz.:—Messrs. Martin, Coroner; William Dixon, Chief Inspector; William Humble, Inspector; Jonathan Dixon, Burt, Gould, and the two gentlemen who took the shorthand notes at the Court of Investigation.

The whole of the papers, including the plan of No. 3 district, should also be at the Court for the purpose of reference.

I have, &c.,
GEO. COLQUHOUN,
Crown Solicitor.

Mr. Wilshire asked for a summons for R. J. Jury.—H.W., 19/3/97.

No. 14.

The Under Secretary for Mines and Agriculture to Mr. E. H. Wilshire.

Sir, Department of Mines and Agriculture, Sydney, 19 March, 1897.

Adverting to my letter of yesterday's date, addressed to the Crown Solicitor, respecting the inquiries to be held into the conduct of the manager and under-manager of the Stockton Colliery, I am directed to enclose herewith additional papers in connection therewith, viz.:—A copy of the special rules of the Stockton Colliery; the appointment of the late Court of Investigation under section 23; a copy of the report of Dr. Haldane on the causes of death in colliery explosions; a report of Pamey's Colliery Manager's handbook (see pages 323-331), and also of Roscoe's Elementary Chemistry (see page 76).

The original depositions taken at the first and second inquests will be forwarded to Newcastle, as well as the original plan put in by Mr. Jonathan Dixon.

Summonses have been forwarded to the Inspector of Police for Service on G. C. Martin, John Dixon, William Humble, Jonathan Dixon, Burt, Gould, R. J. Jury.

Five forms signed by His Honor are enclosed for your use, and a further supply will be forwarded to-morrow.

The police authorities have been asked to provide facilities to enable you to effect the service of summonses.

I have, &c.,
D. C. McLACHLAN,
Under Secretary.

No. 15.

The Under Secretary for Mines and Agriculture to The Inspector-General of Police.

Sir, Department of Mines and Agriculture, Sydney, 19 March, 1897.

I am directed to inform you that an inquiry will be held at the Court-house (occasional court-room), Newcastle, on the 22nd instant, commencing at 2 p.m., by His Honor Judge Backhouse, into the conduct of Daniel McAuliffe and William McDonald, manager and under-manager respectively of the Stockton Colliery. I am therefore to request that one of your local officers may be instructed to act as crier to the Court, and that assistance may be accorded to Mr. E. H. Wilshire, who has undertaken the management of the cases, in effecting service of summonses.

I have, &c.,
D. C. McLACHLAN,
Under Secretary.

No. 16.

Memorandum by The Under Secretary for Mines to The Police Constable at Greta.

Department of Mines and Agriculture, 19 March, 1897.

Will you please cause the enclosed summonses to be served on Mr. Jonathan Dixon, manager of the Greta Colliery, as early as possible to-morrow, and notify Mr. E. H. Wilshire, "Great Northern Hotel," Newcastle, when you have done so.

D. C. McLACHLAN,
Under Secretary
(Per H. Dalrymple Wood).

No. 17

No. 17.

Memorandum by The Under Secretary for Mines and Agriculture to Inspector Lynch,
Newcastle.

Department of Mines and Agriculture, 19 March, 1897.
WILL you please cause the four enclosed summonses to be served on the persons to whom they are directed as early as possible to-morrow.

D. C. McLACHLAN,
Under Secretary
(Per H. Dalrymple Wood).

No. 18.

The Secretary, Court of Inquiry, to The Under Secretary for Mines and Agriculture.

Court of Inquiry into the conduct of the manager and under-manager of the Stockton Colliery.

Sir,

Newcastle, 22 March, 1897.

I beg to inform you that the Court of Inquiry into the conduct of Mr. McAuliffe, the manager, and Mr. McDonald, the under-manager, of the Stockton Colliery, was opened in the Court-house, Newcastle, at 2 p.m. to-day. His Honor Judge Backhouse presided. Mr. E. H. Wilshire, prosecuting officer, Crown Solicitor's Office, was present, and notified that he had been appointed to undertake the management of the cases. Mr. F. E. Rogers, Q.C., instructed by Mr. T. D. O'Sullivan, appeared for Messrs. McAuliffe and McDonald.

It was agreed by the parties:—

- (1.) That the two cases should be taken together.
- (2.) That Mr. Wilshire may, if he think proper, put in evidence already given by Mr. McAuliffe, as evidence against Mr. McDonald, and the evidence already given by Mr. McDonald as evidence against Mr. McAuliffe.

Mr. Wilshire then opened his cases, after which witnesses were called. At 5 p.m. the Court adjourned till 10 a.m. to-morrow (Tuesday). Mr. Rogers has undertaken to then hand in the certificates of the manager and under-manager.

I have, &c.,

E. C. WRIGHT,
Secretary.

For Minister's information.—D.McL., 23/3/97. Seen.—S. SMITH, 23/3/97.

No. 19.

The Secretary, Court of Inquiry, to The Under Secretary for Mines and Agriculture.

Court of Inquiry into the conduct of the manager and under-manager of the Stockton Colliery.

Sir,

Newcastle, 23 March, 1897.

I have the honor to inform you that, upon the Court resuming its sittings to-day, the certificates of Mr. McAuliffe, the manager, and Mr. McDonald, the under-manager, of the Stockton Colliery, were handed in.

Afterwards a considerable amount of documentary evidence was put in, and witnesses were called. At 5 p.m. the Court adjourned till to-morrow (Wednesday) morning.

I have, &c.,

E. C. WRIGHT,
Secretary.

No. 20.

The Secretary, Court of Inquiry, to The Under Secretary for Mines and Agriculture.

Court of Inquiry into the conduct of the manager and under-manager of the Stockton Colliery.

Sir,

Newcastle, 24 March, 1897.

I beg to inform you that the Court resumed its sittings to-day.

Mr. Wilshire called additional witnesses, and shortly before the mid-day adjournment closed his cases. Mr. Rogers, Q.C., thereupon opened the cases for the manager and under-manager of the Stockton Colliery.

At 4:50 p.m. the Court further adjourned till 10 a.m. to-morrow (Thursday).

I have, &c.,

E. C. WRIGHT,
Secretary.

No. 21.

Telegram from Mr. E. H. Wilshire to The Under Secretary for Mines.

Newcastle, 25 March, 1897.

Court of Inquiry concluded. Certificates of manager and under-manager cancelled.

For Minister's information.—D.McL., 25/3/97. Seen.—S. SMITH.

No. 22.

The Secretary, Court of Inquiry, to The Under Secretary for Mines and Agriculture.

Court of Inquiry into the conduct of the manager and under-manager of the Stockton Colliery,
Newcastle, 25 March, 1897.

Sir,

I beg to inform you that the sittings of this Court were resumed at 10 a.m. to-day. The taking of evidence was concluded at 11 a.m., at which hour Mr. Rogers, Q.C., proceeded to address the Court. Mr. E. H. Wilshire followed, after which His Honor Judge Backhouse summed up.

The Court, on the grounds of incompetency and gross negligence, cancelled the certificates of the manager and under-manager.

Upon rising, the Court adjourned till 2 p.m. on Saturday, the 3rd proximo. There is at present, however, no intention of the Court sitting on that day; but it may be found necessary to do so.

I have, &c.,

E. C. WRIGHT,
Secretary.

Seen.—D.C.McL., 26/3/97.

No. 23.

His Honor Judge Backhouse to The Secretary for Mines and Agriculture.

Court of Inquiry into the conduct of the manager and under-manager of the Stockton Colliery.
Court-house, Newcastle, 25 March, 1897.

Sir,

I have the honor to inform you that the Court of Inquiry concluded sittings to-day, and that I made an order cancelling the certificates of Daniel McAuliffe, the manager, and William McDonald, the under-manager, on the grounds of incompetency and gross negligence.

My report, in accordance with the provisions of the Act, will be forwarded to you in due course.

I have, &c.,

ALF. P. BACKHOUSE,
D.C.J.

Submitted for the information of the Minister.—H.B.S. (for U.S.), 29/3/97. See me *re* this.—
S. SMITH, 31/3/97. Done, 1/4/97. Resubmit with the report when it comes to hand.—D.C.McL.,
1/4/97.

No. 24.

The Crown Solicitor to The Under Secretary for Mines and Agriculture.

Crown Solicitor's Office, Sydney, 27 March, 1897.

Sir,

I have the honor to return herewith the papers relating to the Stockton Colliery accidents, except those put in as evidence at the Court of Inquiry, and to state that the inquiry commenced at 2 p.m. on Monday, the 22nd instant, and continued from day to day until Thursday, at 2:30 p.m., when His Honor Mr. District Court Judge Backhouse found the two principal charges fully proved, and ordered the certificates of Mr. Daniel McAuliffe (manager) and Mr. William McDonald (under-manager of the said colliery) to be cancelled, the Court was then adjourned until Saturday, the 3rd April next, at 2 p.m., in case any formal matter which might have escaped attention could be done.

By consent, the cases being practically identical, were heard together, which considerably shortened the proceedings.

Mr. Wilshire, who was appointed by the Minister to manage the case, conducted it on behalf of the Department, Mr. Rogers, Q.C., appearing for Messrs. McAuliffe and McDonald.

I have, &c.,

GEO. COLQUHOUN,
Crown Solicitor.

For the information of the Minister.—H.B.S. (for U.S.), 30/3/97. Seen.—S. SMITH, 31/3/97.

No. 25.

His Honor Judge Backhouse to The Secretary for Mines and Agriculture.

Judges' Chambers, District Court, Sydney, 5 April, 1897.

Sir,

I have the honor to forward, in accordance with the provisions of the Coal Mines Regulation Act of 1896, section 10, subsection 5, reports (in duplicate) on the inquiries which I have held into certain charges alleged against the manager and under-manager of the Stockton Colliery. The evidence which I had before me accompanies the report. In addition to these documents I forward the certificates issued, under the above-mentioned Act, to the manager and under-manager, together with the formal orders by which they are cancelled.

I have, &c.,

ALF. P. BACKHOUSE,
D.C.J.

For approval to record the cancellation of these certificates in accordance with section 12 of the Act.—D.McL., 6/4/97. Approved.—S. SMITH, 8/4/97. Cancellation duly recorded.—H.W., 9/4/97.

No. 26.

Report of Court of Inquiry into the conduct of Daniel McAuliffe.

Sydney, 5 April, 1897.

In the matter of the inquiry under the Coal Mines Regulation Act, 1896, into the conduct of Daniel McAuliffe, manager of the Stockton Colliery.

REPORT sent to the Honorable the Secretary for Mines, in accordance with the provisions of section 10, subsection 5 of the said Act.

The inquiry was commenced, in the Court-house, Newcastle, at 2 p.m. on Monday, the 22nd March, and was continued till Thursday, the 25th March, 1897. There was afterwards, one additional sitting, which was held in the District Court-house, King-street, Sydney, on Saturday, the 3rd April, 1897.

This

This case was, by consent, heard with that of William McDonald.

The management of the case, on behalf of the Honorable the Secretary for Mines, was conducted by Mr. E. H. Wilshire, of the Crown Solicitor's Office.

Mr. McAuliffe was represented by Mr. F. E. Rogers, Q.C.

It was not necessary for me to view the mine, as nothing that I could have seen there would have helped me in the slightest in coming to conclusions, the condition of things being altered since the time of the accidents, and the representatives of both parties agreeing that such a visit would be useless. It would, also, have unnecessarily protracted the inquiry.

Taking the charges in the statement of case in the order in which they were set out, the following were my decisions on each point, and the reasons for giving them:—

Charge No. 1.—That you, as manager of the Stockton Colliery, allowed the stopping marked D on the plan put in as evidence at the Court of Investigation lately held at Newcastle, respecting the late Stockton Colliery accidents, to be removed and did not replace the same or make any provision to prevent the noxious gases in No. 3 district from escaping into the workings of the mine.

The facts were not in dispute. Some years ago, when No. 3 district was worked out, the board ends along the main road (*see tracing, Exhibit No. 1*) were closed, but the rope-road was left open, and there was no stopping at D for some time. A movement then occurred in the roof of No. 3 district, causing the stoppings along the main road to be twisted about and broken. This allowed leakage, or sealing of air into No. 3 district from the main road wherever there was an unobstructed way from the rope-road to the furnace, which happened every time that No. 3 door was opened. To prevent the leakage so caused the stopping at D was put in, and it remained till June, 1896, when it was taken out, evidently to save time in clearing out No. 3 district, to enable persons who were to give evidence in certain cases which had been brought against the Stockton Colliery Company to inspect the falls from the roof. That it was not absolutely necessary that the stopping in which there was a manhole should be removed is shown by the fact that in the previous December the district had been cleared for a similar purpose without the permanent stopping being interfered with in any way. That this stopping, for the safe working of the mine, was indispensable, is practically proved by the course adopted in the management of the mine; and not replacing it seemed unquestionably to be a matter showing gross negligence, as its absence was a constant menace to some men in the mine. There was, right up to the time of the accidents, sealing of air from the main road into No. 3 district every time No. 3 door was opened, as it had to be a dozen times a day for the purpose of replenishing the furnace. The foul air from No. 3 district was drawn to where the furnace-men were. If the stopping at D had been replaced, it would have been impossible for Curran and Smith to have brought about their deaths, which unquestionably they did by leaving open No. 3 door.

Charge No. 2.—That you did not enforce, or cause to be enforced, the special rules of the colliery, and were lax in the discipline of the mine.

This charge did not appear to be made out. The evidence simply pointed to the man Gould having made complaint on one occasion to the under-manager, which was conveyed to the manager, about No. 3 door being left open. The under-manager made an inspection, and, finding everything correct, had some doubt of Gould's statements, and took no further steps. This, certainly, does not support the general charge.

Although there is no charge with reference to No. 3 door, I think there should have been two doors instead of one.

Charge No. 3.—That you did not cause to be constantly produced an adequate amount of ventilation in the mine to dilute and render harmless noxious gases to such an extent that the working places of the shafts, levels, stables, and workings of the mine and the travelling roads to and from those working-places were in a fit state for working and passing therein.

This charge was not proved. In fact there was no contention before me that any part of the mine was improperly ventilated, except No. 3 district, when the exploring and rescue parties went in.

No. 3 district is sufficiently dealt with in my remarks relating to Charge No. 5.

Charge No. 4.—That you did not supervise and accompany the exploration party on the 3rd December last under the unusual circumstances then existing.

It certainly appeared to me that, ordinarily, Mr. McAuliffe should have led the exploring party; but, having heard his explanation as to the state of prostration in which he was—caused by the deaths of the furnace-men shortly before—and having judged him by his subsequent conduct in going down to join the party—although he was too late—and the heroic manner in which he acted afterwards when rescuing and attempting to rescue some of the men, I had no doubt that he had no intention of shirking his duty, and that the reason which he gave for his absence was perfectly *bonâ fide*.

If this charge had stood alone I should not have considered it my duty to have dealt in any way with Mr. McAuliffe's certificate.

Charge No. 5.—That, after being notified by the Government Inspectors that "fire-stink" was in the No. 3 district and gas generating therein, you allowed the exploration party to go into the said district against the air-current, thereby permitting a dangerous instead of a safe and practicable mode of entry into same to be adopted.

No doubt, as it was contended to me, it is "very easy to be wise after the event"; but, in judging of Mr. McAuliffe in allowing the under-manager to take in the exploring party against the current of air, I had to consider what were the conditions under which he acted on the 3rd December, and whether his conduct was such as would have been reasonably expected from a competent manager; although, in the light of subsequent events, the course of action taken might have proved to have been wrong.

It was and fairly might be urged in Mr. McAuliffe's favour that on previous occasions men had gone in the same way without any disastrous results, and if the conditions on the 3rd December last had been the same as existed in December, 1895, and June, 1896, it might be that something could be said to justify the course adopted. On that I express no opinion; but the conditions were not the same. First of all, Gould had made a complaint of what happened to him on the night of Monday, the 30th November. [He, by mistake, speaks of the 1st December in his evidence.] I had little doubt, from the symptoms which

he

he described, that he was then suffering from the effects of carbon monoxide ("fire-stink.") This complaint alone should have aroused the management to recognise that there was a possible danger, till then unheard of, to the men at the furnace. The complaint was followed by the terrible deaths of Curran and Smith on the night of the 1st December. Dr. Hester gave the cause of death in their cases as poisoning by carbonic acid gas (black-damp); but it was quite possible, and extremely probable, bearing in mind what was discovered afterwards, that carbon monoxide ("fire-stink") played a part in contributing to their deaths. But, assuming in favour of Mr. McAuliffe that their deaths were entirely due to carbonic acid gas (black-damp), the consultation with Mr. Dixon and Mr. Humble, Inspectors of Collieries, and the presence of the benzine smell in the atmosphere (which was coming from the rope-road out of No. 3 district) should have shown any competent manager that, at all events, a party entering by the rope-road would probably meet the insidious and dangerous gas carbon monoxide ("fire-stink"), and should have made him determined not to enter by that way. Entering against the air current might, possibly, have been justified if it had been necessary to act at a moment's notice, and where the loss of every instant was a matter of importance, such as in the case of a rescue party. But there was no such necessity. The exploring party did not enter till between 9 p.m. and 10 p.m. on the 3rd December—at least thirty-six hours after the decision as to the course to be adopted had been come to. It was admitted, on the last sitting day of the Court, that the air could have been sent round the reverse way, namely, in at the trap door marked Z on the tracing, and out at 20 bord, to the main road, without any serious difficulty. Some objection was raised at the hearing, at first, that this might have shut off the pumping gear from inspection; but, as was at once pointed out by Mr. Humble, if the course suggested had been adopted, the pumps could have been approached from No. 3 shaft. The possibility of using No. 3 shaft should have occurred—it appeared to me—to any competent manager. But, if the air could not have been sent round the reverse way, some such system of bratticing as was adopted by the inspectors to enable the rescue parties to work should have been made use of. In any event, the men ought never to have been taken in by the road they were until it was made absolutely clear that there was no carbon monoxide ("fire-stink") coming from No. 3 district; and, if there had been the slightest doubt about this, the inspectors—it seemed to me—should have been consulted before any move was made.

I recognise that, in all probability, the danger to the men was increased by a sudden fall while the exploring party was in. But a fall might reasonably have been expected. I assume there was a fall, and, by reason of it, a considerable increase of danger to the men. But, if it had not taken place, I doubt whether all the exploring party would have come out. In favour of the affirmative view of this question, the opinion of Dr. Hester as to the condition of the air when the men went in was urged. But this depends on the time they were in; and, as to that, there is little more than guess—a guess, when consideration is given to what followed, worth nothing.

Charge No. 6.—That you were ignorant of the nature and quality of the gases met with in coal-mines, particularly the gas known as carbon monoxide or "fire-stink," and that you were unable to distinguish this gas from other and different gases.

I did not find this charge proved. Mr. McAuliffe seemed to have recognised on the 2nd December that the inspectors were right in the conclusions to which they had come. He is placed on the horns of this dilemma:—If he recognised carbon monoxide ("fire-stink"), he should not have allowed the men to go in: if he did not recognise it, he showed an ignorance which unfitted him to be a manager.

There was no attempt to show ignorance of other gases.

Charge No. 7.—That you were ignorant of the fact that a current of air passing over a gob-fire would cause a larger quantity of carbon monoxide gas and other noxious gases to generate.

This charge did not appear to me to be correctly stated. Up to a certain point, the current of air would have the effect described; but when the conditions of ordinary combustion by fire would be reached, less carbon monoxide ("fire-stink") would be given off.

I found, on the two matters, namely:—

Charge 1.—as to the stopping at D being removed and not being replaced, and

Charge 5.—as to allowing the exploring party to go in against the current of air,

that Mr. McAuliffe had been guilty of incompetency and gross negligence, and was unfit to discharge his duties as manager; and, as the consequence of such incompetency and gross negligence were so terrible, it appeared to be my duty to order his manager's certificate under the Coal Mines Regulation Act, 1896, to be cancelled, and I ordered accordingly. A formal order is attached to the papers.

It has not been necessary for me to set out any of the evidence *verbatim*, as, on most points, there was no conflict; and where there was a conflict as to facts, I took the view put forward by Mr. McAuliffe and his witnesses.

Before concluding—in fairness to Mr. McAuliffe—I wish to add that, with the exception of the two matters particularly referred to, he had, according to the evidence, shown himself competent, and, in some respects, more than competent. One piece of work in connection with shaft-sinking in difficult ground was spoken of by the Inspectors of Collieries as a great achievement. To his bravery I have already alluded.

Mr. Wright I have to thank for great and able assistance; and Mr. Roberts discharged his duty as deposition clerk in a highly satisfactory manner, bearing out my previous experience of him.

The Hon. Sydney Smith,
Secretary for Mines and Agriculture.

I have, &c.,
ALF. P. BACKHOUSE,
D.C.J.

No. 27.

Report of the Court of Inquiry into the Conduct of William McDonald.

Sydney, 5 April, 1897.

In the matter of the inquiry under the Coal Mines Regulation Act, 1896, into the conduct of William McDonald, under-manager of the Stockton Colliery.

Report sent to the Honorable the Secretary for Mines, in accordance with the provisions of section 10, subsection 5, of the said Act.

The

The inquiry was commenced, in the Court-house, Newcastle, at 2 p.m. on Monday, the 22nd March, and was continued till Thursday, the 25th March, 1897. There was, afterwards, one additional sitting, which was held in the District Court House, King-street, Sydney, on Saturday the 3rd April, 1897.

This case was, by consent, heard with that of Daniel McAuliffe.

The management of the case on behalf of the Honorable the Secretary for Mines was conducted by Mr. E. H. Wilshire, of the Crown Solicitor's Office.

Mr. McDonald was represented by Mr. F. E. Rogers, Q.C.

In this report I would repeat and incorporate all that I have said in my report in the case of Daniel McAuliffe, excepting only what I have stated in regard to charge No. 4 set out in the case against Mr. McAuliffe.

Dealing with the charges seriatim, I report as follows:—

Charge No. 1.—That you, as under-manager of the Stockton Colliery, allowed the stopping marked D on the plan, put in as evidence at the Court of Investigation lately held at Newcastle respecting the late Stockton Colliery accidents, to be removed, and did not replace the same, or make any provision to prevent the noxious gases in No. 3 district from escaping into the workings of the mine.

I found this charge proved.

Charge No. 2.—That you did not cause to be constantly produced an adequate amount of ventilation in the mine to dilute and render harmless noxious gases to such an extent that the working places of the shafts, levels, stables, and workings of the mine, and travelling roads to and from those working places, were in a fit state for working and passing therein.

I found this charge not proved.

Charge No. 3.—That you did not enforce, or cause to be enforced, the special rules of the colliery, and were lax in the discipline of the mine.

I found this charge not proved.

Charge No. 4.—That, after being notified by the Government Inspectors that "fire-stink" was in the No. 3 district, and gas generating therein, you led the exploration party into the said district against the air-current, thereby adopting a dangerous instead of a safe and practicable mode of entry into same.

I found this charge proved.

Charge No. 5.—That you were ignorant of the nature and quality of the gases met with in coal-mines, particularly the gas known as carbon monoxide, or "fire-stink," and that you were unable to distinguish this gas from other and different gases.

Although Mr. McDonald differed from the inspectors, and seemed to hold his own opinion as against theirs, still he had had experience of carbon monoxide, or "fire-stink," in Scotland; and I saw no reason to come to the conclusion that I might deal with his certificate on the ground of ignorance in the matter herein charged.

Charge No. 6.—That you were ignorant of the fact that a current of air passing over a gob-fire would cause larger quantities of carbon monoxide gas and other noxious gases to generate.

This charge I found not proved.

I found, on the two matters, namely:—

Charge 1.—As to the stopping at D being removed, and not being replaced; and

Charge 4.—As to leading the exploring party in against the current of air,

that Mr. McDonald had been guilty of incompetency and gross negligence, and was unfit to discharge his duties as under-manager; and, as the consequences of such incompetency and gross negligence were so terrible, it appeared to be my duty to order his under-manager's certificate under the Coal-mines Regulation Act, 1896, to be cancelled, and I ordered accordingly. A formal order is attached to the papers.

As in the case of Mr. McAuliffe, with the exception of the two matters referred to, Mr. McDonald was spoken of in the evidence as competent. His personal bravery was not questioned.

I have, &c.,

The Hon. Sydney Smith,
Secretary for Mines and Agriculture.

ALF. P. BACKHOUSE, D.C.J.

No. 28.

Order of Court cancelling Certificate of Daniel McAuliffe.

In the Court of Inquiry, Newcastle, New South Wales.

In the matter of the Inquiry under the Coal-mines Regulation Act, 1896, into the conduct of Daniel McAuliffe, manager of the Stockton Colliery.

WHEREAS representation having been made within the meaning of the 10th section of the Coal-mines Regulation Act, 1896, to the Secretary for Mines, that Daniel McAuliffe, manager of the Stockton Colliery, situate at Newcastle, in the said Colliery, holding a manager's certificate of service under the said Act, was, by reason of incompetency and gross negligence, unfit to discharge his duties as such manager as aforesaid, the Secretary for Mines directed an inquiry to be made into the conduct of the said Daniel McAuliffe as such manager, and did duly appoint me, Alfred Paxton Backhouse, one of the District Court Judges, to hold the said inquiry, and did direct the said inquiry to be held at the Court-house, at Newcastle on the 22nd day of March, and the said Secretary for Mines did before the commencement of the said inquiry furnish to the said Daniel McAuliffe, the said manager, a statement of the case on which the inquiry was instituted, and did appoint Ernest Henry Wilshire, a solicitor of the Supreme Court, to undertake the management of the case; and whereas the said inquiry was duly held by me as such Court as aforesaid, on the said 22nd, on the 23rd, 24th, and 25th days of March last past, and on the 3rd day of April

April instant at the place appointed; and whereas the said Daniel McAuliffe attended the said inquiry and was represented by counsel thereat, and the said Daniel McAuliffe tendered himself as a witness, and was sworn and examined as an ordinary witness in the case: Now I, the said Alfred Paxton Backhouse, after hearing the evidence in support of the case and the evidence on behalf of the said manager, and under and by virtue of the powers conferred on me under the said Act, do hereby order that the manager's certificate of service, held by the said Daniel McAuliffe under the said Act, be and the same is hereby cancelled on the ground that the said Daniel McAuliffe is unfit to discharge his duty by reason of incompetency and gross negligence.

Dated, at Newcastle, this 3rd day of April, A.D. 1897.

ALF. P. BACKHOUSE, D.C.J.

No. 29.

Order of Court cancelling Certificate of William McDonald.

In the Court of Inquiry, Newcastle, New South Wales.

In the matter of the Inquiry under the Coal-mines Regulation Act, 1896, into the conduct of William McDonald, under-manager of the Stockton Colliery.

WHEREAS representation having been made within the meaning of the 10th section of the Coal-mines Regulation Act, 1896, to the Secretary for Mines, that William McDonald, under-manager of the Stockton Colliery, situate at Newcastle, in the said Colony, holding an under-manager's certificate of service under the said Act, was, by reason of incompetency and gross negligence, unfit to discharge his duties as such under-manager as aforesaid, the Secretary for Mines directed an inquiry to be made into the conduct of the said William McDonald as such under-manager, and did duly appoint me, Alfred Paxton Backhouse, one of the District Court Judges, to hold the said inquiry, and did direct that the said inquiry be held at the Court-house at Newcastle, on the 22nd day of March, and the said Secretary for Mines did, before the commencement of the said inquiry furnish to the said William McDonald, the said under-manager, a statement of the case on which the inquiry was instituted, and did appoint Ernest Henry Wilshire, a solicitor of the Supreme Court, to undertake the management of the case; and whereas the said inquiry was duly held by me as such Court as aforesaid, on the said 22nd, on the 23rd, 24th, and 25th days of March last past, and on the 3rd day of April instant, at the place appointed, and whereas the said William McDonald attended the said inquiry and was represented by counsel thereat, and the said William McDonald tendered himself as a witness and was sworn and examined as an ordinary witness in the case: Now I, the said Alfred Paxton Backhouse, after hearing the evidence in support of the case and the evidence on behalf of the said under-manager, and under and by virtue of the powers conferred on me under the said Act, do hereby order that the under-manager's certificate of service held by the said William McDonald under the said Act be and the same is hereby cancelled, on the ground that the said William McDonald is unfit to discharge his duties by reason of incompetency and gross negligence.

Dated at Newcastle, this 3rd day of April, A.D. 1897.

ALF. P. BACKHOUSE, D.C.J.

No. 30.

Proceedings of Court of Inquiry and Evidence taken.

Proceedings of the Court, and Evidence taken at Newcastle, on the 22nd, 23rd, 24th, and 25th March, and at Sydney on the 3rd April, 1897.

His Honor Judge Backhouse constituted the Court.

MONDAY, 22nd MARCH, 1897.

[The Court sat in the Court-house, Church-street, Newcastle, at 2 p.m.]

Under His Honor's instructions, the Secretary to the Court, Mr. E. C. Wright, read the following warrants:—

Department of Mines, New South Wales.

Coal-mines Regulation Act, 1896, section 10.

I, SYDNEY SMITH, Secretary for Mines for the Colony of New South Wales, being of opinion that it is expedient that inquiry shall be made into the conduct of Daniel McAuliffe, the manager of the Stockton Colliery, who has been represented to me as being unfit to discharge his duties by reason of incompetency and gross negligence, do hereby, in virtue of the powers conferred on me by section 10 of the Coal-mines Regulation Act, 1896, direct such inquiry to be made, and I hereby direct Alfred Paxton Backhouse, Esquire, one of the District Judges, of the Metropolitan Suburban and Hunter District Court, to hold such inquiry, and I hereby appoint that the said inquiry shall be held at the Court-house at Newcastle, on Monday, the 22nd day of March instant, at 2 of the clock in the afternoon.

Dated this 16th day of March, 1897.

SYDNEY SMITH,
Secretary of Mines.

Department of Mines, New South Wales.

Coal-mines Regulation Act, 1896, section 10.

I, SYDNEY SMITH, Secretary for Mines for the Colony of New South Wales, being of opinion that it is expedient that inquiry shall be made into the conduct of William McDonald, the under-manager of the Stockton Colliery, who has been represented to me as being unfit to discharge his duties by reason of incompetency and gross negligence, do hereby, in virtue of the powers conferred on me by section 10 of the Coal-mines Regulation Act, 1896, direct such inquiry to be made, and I hereby direct Alfred Paxton Backhouse, Esquire, one of the District Judges of the Metropolitan Suburban and Hunter District Court, to hold such inquiry, and I hereby appoint that the said inquiry shall be held at the Court-house at Newcastle, on Monday, the 22nd day of March instant, at 2 of the clock in the afternoon.

Dated this 16th day of March, 1897.

SYDNEY SMITH,
Secretary for Mines.

The

The two cases were before the Court in the following terms :—

Inquiry under the Coal-mines Regulation Act, 1896, into the conduct of Daniel McAuliffe, manager of the Stockton Colliery.

Statement of the case on which the inquiry is instituted.

To Daniel McAuliffe, manager, Stockton Colliery.

TAKE notice that, representation having been made to the Minister for Mines that you, as manager of the above colliery, holding a certificate under the Coal-mines Regulation Act, 1896, are, by reason of incompetency and gross negligence, unfit to discharge your duties, the said Minister has directed an inquiry to be made into the conduct of you as such manager, and on the said inquiry the following acts, omissions, matters, and things will be relied upon to prove the charges against you :—

1. That you, as manager of the Stockton Colliery, allowed the stopping marked D on the plan, put in as evidence at the Court of Investigation lately held at Newcastle respecting the late Stockton Colliery accidents, to be removed, and did not replace the same, or make any provision to prevent the noxious gases in No. 3 district from escaping into the workings of the mine.
2. That you did not enforce, or cause to be enforced, the special rules of the colliery, and were lax in the discipline of the mine.
3. That you did not cause to be constantly produced an adequate amount of ventilation in the mine, to dilute and render harmless noxious gases, to such an extent that the working places of the shafts, levels, stables, and workings of the mine, and the travelling roads to and from those working places, were in a fit state for working and passing therein.
4. That you did not supervise and accompany the exploration party on the 3rd December last, under the unusual circumstances then existing.
5. That, after being notified by the Government Inspectors that "fire-stink" was in the No. 3 district, and gas generating therein, you allowed the exploration party to go into the said district against the air-current, thereby permitting a dangerous instead of a safe and practicable mode of entry into same to be adopted.
6. That you were ignorant of the nature and quality of the gases met with in coal-mines, particularly the gas known as carbon monoxide, or "fire-stink," and that you were unable to distinguish this gas from other and different gases.
7. That you were ignorant of the fact that a current of air passing over a gob-fire would cause a larger quantity of carbon monoxide gas and other noxious gases to generate.

16th March, 1897.

SYDNEY SMITH.

Inquiry under the Coal-mines Regulation Act, 1896, into the conduct of William McDonald, under-manager of the Stockton Colliery.

Statement of the case on which the inquiry is instituted.

To William McDonald, under-manager, Stockton Colliery.

TAKE notice that, representation having been made to the Minister for Mines that you, as under-manager of the above colliery, holding a certificate under the Coal-mines Regulation Act, 1896, are, by reason of incompetency and gross negligence, unfit to discharge your duties, the said Minister has directed an inquiry to be made into the conduct of you as such under-manager, and on the said inquiry the following acts, omissions, matters, and things will be relied upon to prove the charges against you :—

1. That you, as under-manager of the Stockton Colliery, allowed the stopping marked D on the plan, put in as evidence at the Court of Investigation lately held at Newcastle respecting the late Stockton Colliery accidents, to be removed, and did not replace the same, or make any provision to prevent the noxious gases in No. 3 district from escaping into the workings of the mine.
2. That you did not cause to be constantly produced an adequate amount of ventilation in the mine, to dilute and render harmless noxious gases, to such an extent that the working places of the shafts, levels, stables, and workings of the mine, and the travelling roads to and from those working places, were in a fit state for working and passing therein.
3. That you did not enforce, or cause to be enforced, the special rules of the colliery, and were lax in the discipline of the mine.
4. That, after being notified by the Government Inspectors that "fire-stink" was in the No. 3 district, and gas generating therein, you led the exploration party into the said district against the air-current, thereby adopting a dangerous instead of a safe and practicable mode of entry into same.
5. That you were ignorant of the nature and quality of the gases met with in coal mines, particularly the gas known as carbon monoxide, or "fire-stink," and that you were unable to distinguish this gas from other and different gases.
6. That you were ignorant of the fact that a current of air passing over a gob-fire would cause larger quantities of carbon monoxide gas and other noxious gases to generate.

16 March, 1897.

SYDNEY SMITH.

Constable A. F. Knight declared the Court open.

Mr. E. H. Wilshire, Prosecuting Officer, Crown Solicitor's Office, handed in the appended notices of appointment :—

Department of Mines, New South Wales.

Inquiry under the Coal-mines Regulation Act, 1896, into the conduct of Daniel McAuliffe, manager of the Stockton Colliery.

To Ernest Henry Wilshire, Esq.

I, SYDNEY SMITH, Secretary for Mines for the Colony of New South Wales, in pursuance of the powers vested in me under section 10 (sub-section III) of the Coal-mines Regulation Act, 1896, do here by appoint you to undertake the management of the case on which a certain inquiry is to be instituted into the conduct of Daniel McAuliffe, manager of the Stockton Colliery, in connection with certain fatal accidents which recently occurred in the said colliery.

Dated this 17th day of March, 1897.

SYDNEY SMITH, Secretary for Mines.

INQUIRY

INQUIRY under the Coal Mines Regulation Act, 1896, into the conduct of William McDonald, under-manager of the Stockton Colliery.

Department of Mines, Sydney.

To Ernest Henry Wilshire, Esq.

I, SYDNEY SMITH, Secretary for Mines for the Colony of New South Wales, in pursuance of the powers vested in me under section 10 (subsection 111) of the Coal-mines Regulation Act, 1896, do hereby appoint you to undertake the management of the case on which a certain inquiry is to be instituted into the conduct of William McDonald, under-manager of the Stockton Colliery, in connection with certain fatal accidents which recently occurred in the said colliery.

Dated this 17th day of March, 1897.

SYDNEY SMITH,
Secretary for Mines.

Mr. F. E. Rogers, Q.C.—who was instructed by Mr. T. D. O'Sullivan, solicitor—appeared on behalf of Daniel McAuliffe and William McDonald, both of whom were present in Court.

His Honor said that, to comply with the Act, the certificates held by McAuliffe and McDonald should be handed in.

Mr. Rogers undertook that they should be handed in on the following (Tuesday) morning.

The order as to witnesses leaving the Court was made.

It was agreed by the parties—

- (1.) That the two cases should be taken together.
- (2.) That Mr. Wilshire may (if he think proper) put in the evidence already given by Mr. McAuliffe as evidence against Mr. McDonald; and the evidence already given by Mr. McDonald as evidence against Mr. McAuliffe.

Mr. Wilshire opened his cases by putting in a tracing showing some of the workings of the Stockton Colliery. The tracing was marked "Exhibit No. 1." With the assistance of the tracing, Mr. Wilshire explained various matters and proceedings at the mine having relation to the accidents which occurred there in the early part of December, 1896.

Having concluded the explanation, Mr. Wilshire proceeded to call witnesses, the first of whom was John Gould.

This deponent, *John Gould*, on his oath, states:—I am a bricklayer, working in the Stockton pit; I remember the 1st December last; I was in the pit about 9.45 p.m. on that date; I went there to help the furnace-men to unload the skips; I noticed a very bad smell there; it was like benzine; I noticed that near the furnace; the No. 3 furnace-door was open at the time; it was kept open; I was there about three-quarters of an hour; the smell was coming through the No. 3 door; it came from the No. 3 old workings; I could tell that from the current of air; a man named Smith was with me at the time; he was the furnace-man; I said something to him when I noticed the smell; I know Mr. Burt, who was night overman then; I spoke to him about the smell that night; I was affected by the smell; I was overcome by it; I first felt weak in the legs, and my head quite giddy; I could not walk well, and fell outside No. 3 door; I had never been affected like that before in any colliery; I was there running the skips in very frequently prior to that occasion; the skips were left between doors No. 2 and No. 3; I cannot exactly remember whether No. 3 door was open or not on my previous visits; on the previous occasion I was there it was left open while we got the skips through; it was not closed after the skips were put through; I cannot say whether it was or not; I cannot remember at all whether before the 1st December the No. 3 door was left open or not; the door had been left open on several occasions prior to that after the skips had gone through; it would be left open for forty-five minutes or an hour on those occasions; I had my lights with me on the occasion on the 1st December last; my lights went out; we carried naked lights and could not keep them alight; there was not a very strong draught there; it was not the movement of the air that put them out, but some other cause, in my opinion.

By Mr. Rogers: I have never been in any other colliery besides the Stockton in New South Wales; I have been in one other in Queensland for about six months; I attribute the extinction of the lights to the gas; I know that carbon monoxide will burn, and does burn with a blue flame round the lamp; I did not shut No. 3 door; I know it was absolutely against the regulations of the mine to leave the door open; I left it open because I was under the supervision of Mr. Smith, since deceased; he knew it was open; he was alongside me all the time; there was no other cause for my feeling groggy about the knees on that occasion on the 3rd December last; I was affected in the manner described for three or four hours, but was very bad for about twenty minutes; I was taking the skips to feed the furnace; I met Burt that day and complained to him; he said to me, "Never leave that door open"; before that he had constantly warned me not to leave that door open while I was filling the skips.

By His Honor: I was not intoxicated on the night I noticed the smell, and was affected by it; on the night Smith died, McDonald charged me with being drunk; Burt, Smith, Curran were present at the time; that was on the night I had given the warning; McDonald was standing at the skips with Burt, and said to Smith "You've been drinking last night," Smith looked astonished; as I had been with Smith the previous night I took it that McDonald included me in his remark; Smith said nothing in reply to him, nor did I; on the same night McDonald said to Stratton the watchman, referring to Smith, "send that man home if he comes here again intoxicated."

By Mr. Wilshire: I was never prosecuted for leaving these doors open.

By Mr. Rogers: I know the smell of benzine; it smells like kerosene; that is the sort of smell I smelt that night.

Taken and sworn at Newcastle, this 22nd }
day of March, 1897, before,—

JOHN J. GOULD.

ALF. P. BACKHOUSE, D.C.J.

This deponent, *Henry Burt*, on his oath, states:—I am the night deputy overman at the Stockton Colliery; in the absence of the manager at night time I have full control of the colliery and the men working there; I visit the furnace, and go through the mine generally at night; I remember the witness Gould making a complaint to me on the night of the 1st December last; it was about 1 o'clock in the morning; I told McDonald about it the next morning about 6 o'clock; I told him Gould had complained

to

to me about feeling a bit sick and giddy while at the furnace; Gould told me that he left the door open while running in the coal, and after shutting the door he had felt all right; McDonald gave me no instructions when I told him this; I cannot remember whether he said anything at all then; when Gould made the complaint to me I went straight to the furnace; the air was pure and the door shut; I went a short distance down the rope-road; I did not go as far as the point "D" on the plan; I smelt no peculiar smell at that time there; only on one occasion have I found No. 3 door left open; it was about two months before the accident; I know the leaving of the doors open is an offence against the Act; nobody was prosecuted for it; I did not report the matter as there was only one skip in at the time; there was a greater current of fresh air coming out when the door was open; it came up the main shaft; I did not notice any current of air coming up the rope-road; No. 3 door naturally swings to itself; the current of air shuts it; it takes a heavy pull to open it; I knew where the stopping was at the point "D" in the plan; it was removed about twelve months ago, I think; I cannot say who knocked out the stopping; I knew it was knocked out for the purpose of ventilating No. 3 district; the removal of that stopping would allow any gas that might be in the workings to come up to No. 3 door on the rope road; that being removed, there was nothing to prevent the gas coming out; I first received notice of the deaths of Curran and Smith about 5:30 a.m. on the 2nd December last; Robert Jury told me about it; I went to the pit bottom and saw Mr. McDonald; we went straight to the furnace, and lit the fire; doors No. 2 and No. 3 were shut when we went in; I did not observe any smell then; after lighting the fire I went to the top; McDonald came with me; the bodies had been taken out of the mine then; no steps were taken to punish anyone for leaving the door open on the occasion that Gould complained to me, as far as I know; I have been working in Stockton mine about ten years; I know No. 3 district; it is about four years since any work has been done there, I think; that district was cleaned out on two occasions; I never knew any bad gas to be found in those workings on those occasions; so far as I know they were cleaned out on those occasions on account of the actions brought against the Company by Mr. Breckenridge; on the night of the 2nd instant I was in the mine; I was for two hours at the furnace that night, but did not go through the mine; I understood there was to be an exploring party that night, but received no intimation that I was to go with them; at half-past 9 I went down with McDonald, Jury, and others; I went to the furnace; McDonald said, "We are going in to explore No. 3 workings, to see what is to be found"; we were to go in in twos, about 10 yards apart; McDonald went to the furnace, came back, joined us, and we all went down the rope-road; the green line on the plan produced (marked "Exhibit No. 1") shows the way we went; the air was coming against us as we went down; I know how the district was then being ventilated; the air was coming in at No. 20 bord; McDonald was leading, and had got as far as No. 16 bord; we had not discovered anything up to that to show where the gas was coming from; it took us about forty-five minutes to get to that point; when we got to that point McDonald called on us to go back, and told Benjamin Bailey to take the lead, as he had chalked the route we had come; young Bailey then said, "Boys, I'm about done"; this was about No. 11 bord; he had hold of a prop; he felt faint, and asked for a bottle to have a drink; I then felt faint myself, and weak in the knees; I fell down, and rolled down a fall into the heading; I could not prevent myself rolling; up to that point I had felt all right, and had not noticed anything wrong with the air; I felt no effect in my head up to that; I got up and saw Jury ahead of me; he asked me could I see the chalk-line, and I said, "Yes," and that I would show him the way out; we went along, and when we were about half-way out, another of the party—John Ellis—passed us; William McAuliffe also got out; two of the men went to the surface, and I went to the furnace, where I found Mr. McAuliffe; I cannot recollect anything that happened till I got on top; our lights burnt brightly all the way in; they were bare lamps; when McDonald gave us the order to turn back I did not hear any fall, nor did I feel any concussion of air.

By Mr. Rogers: I did not see the bodies of Curran and Smith till they were in the office; I heard that Jury saw them first; No. 3 district was open for a good while before the stopping was put in after they had ceased to work that district; there was no stopping at the point "D" for twelve months after they had ceased to work that district; Gould told me he had left the door open while they were running the skips through; the door must be opened to run the skips through; it will close itself afterwards; Gould told me he had closed the door after the skips had gone through; I have been coal-mining over thirty years; I would caution a man for leaving the door open as Gould did, and then shutting it after the skips had gone through; I reprimanded Gould for doing what he did; I cannot remember whether I told McDonald I had reprimanded Gould or not; McDonald seemed to study a lot over what I had told him; the No. 3 district was inspected from time to time to see if any falls had taken place in it; I was in there myself about three or four weeks before the accident; I went in to where the green line on the plan joins the branch green line, and about as far as the branch green line goes; I believe we were taken in by McDonald on the occasion I have spoken of to see whether there were any "gob-fires"; I got as far as No. 14 bord; McDonald and Mr. Cockburn went first; they were more than 10 paces ahead of us when McDonald told us to turn back; he did not tell us why we were to turn back; Cockburn was with McDonald at the time he told us to turn back; we turned back at once; McAuliffe has been managing the mine for three or four years; McDonald had been under-manager for about three months before the accident; McAuliffe had been under-manager for a long time before he became manager; they were not working as miners in Stockton before they became under-managers; I worked with them in the Borehole mine before they went to Stockton; I consider Mr. McAuliffe understands his business; from my knowledge of McAuliffe, I consider him a good manager; I consider McDonald a good under-manager; on former occasions when inspections have been made of this mine, the inspectors themselves have gone down against the current; twice they went into these old workings; on one occasion I went with them, and they then went in the same way as we did on the night of the 2nd December last, and against the current; we were in the old No. 3 district about forty-five minutes on the night of the 3rd December; there was a very slight smell all the way in that night, but nothing to affect us; I did not take much notice of the smell going in; it was not such as to cause me any anxiety.

By Mr. Wilshire: It was a smell I had never noticed there before.

By Mr. Rogers: There was a good current of air as we went in—plenty air for us to breathe.

Taken and sworn at Newcastle, this 22nd)
day of March, 1897, before,—)

HENRY BURT.

ALF. P. BACKHOUSE, D.C.J.

By

By consent, the depositions of William McDonald, taken at the first and second inquests, and his evidence before the Court of Investigation, were put in by Mr. Wilshire. The depositions taken at the first inquest were marked "Exhibit No. 2," and were read.

Inquiry adjourned till 10 a.m. to-morrow.

Newcastle, 22nd March, 1897.

ALF. P. BACKHOUSE, D.C.J.

TUESDAY, 23 MARCH, 1897.

Daniel McAuliffe's manager's certificate, and William McDonald's under-manager's certificate, were handed into the Court.

Evidence of William McDonald at second inquest read in Court. (Marked "Exhibit No. 3.")

Evidence of William McDonald at Court of Investigation, also read. (Marked "Exhibit No. 4.")

It is admitted by Mr. Rogers that the representation contemplated by section 10 has been made to the Secretary for Mines.

Evidence given by Robert James Jury at first inquest read, put in evidence, and marked "Exhibit No. 5."

Evidence given by Robert James Jury at second inquest read, put in evidence, and marked "Exhibit No. 6."

Evidence given by Robert James Jury at the Court of Investigation read, put in evidence, and marked "Exhibit No. 7."

All these depositions are put in evidence with the consent of Mr. Rogers.

This deponent, *Robert James Jury*, on his oath, states:—*To Mr. Rogers*: With George Coulson, I was the first to find the bodies of Curran and Smith; one body was sitting up with his head leaning against the prop; there was an ordinary bare lamp with him; it was Curran's body that was leaning against the prop; there was nothing but gas to have put out his lamp; the lamps of both men were out; I have worked under McAuliffe for about two years and nine months; he has always appeared to me to be a careful capable man; I have been coal-mining for twenty-six years, and have passed an examination as under-manager; from my experience of coal-mining and managers of mines, I am of opinion that McAuliffe is a careful capable manager; McDonald was under-manager for about eight months; I have the same opinion of him in his capacity of under-manager; he has always seemed a careful capable man; it was the proper thing to do to try and find out what was the cause of this gas coming out of the workings, and where it was coming from; the air had been kept going for thirty-six hours to purify that No. 3 district; under those circumstances I would not consider it improper to go in against the air current; I considered what we had to fear was black-damp; I consider that was what caused the deaths of Curran and Smith; I remember tests being applied at the furnace on the Wednesday night; we frequently tested the air to see if the district was being cleared. It extinguished our lights till towards the morning when it began to get clearer; when the exploration party went in as far as the action of the air on the lamps could guide us the air was perfectly clear; we got as far as No. 16 bord with the exploring party; I do not know for what reason McDonald gave the order to return; I was looking for heating in the coal; there is no flame with a gob-fire; it is a process of fermentation; it is combustion at a low temperature; at the time McDonald gave the order to turn back no fire had been located nor anything else ascertained to show the cause of the foul gas we were looking for; I was 8 or 10 yards from McDonald when he gave the order to turn back; Cockburn was with him at the time; I do not know of my own knowledge why the order to return was given; up to the time that order was given all the members of the party seemed satisfied with the ventilation and with the quality of air; I was satisfied myself, and I heard none of the party express any dissatisfaction with the air; there was a slight smell, but nothing to take notice of; I remember the inspectors going into the mine; they went in to assist in the rescue, and also to try and ascertain the cause of the accident; I believe the inspectors did not go further than No. 10 bord, which would be about 100 yards short of the distance I had gone; the bratticing was carried to about the point marked "X" on the plan; the air current was very poor through the brattice; I cannot say there were 3,000 feet of air coming in; I have heard that when they reached the point marked "X" they were only getting 3,000 feet of air; that would be a very weak current indeed; I cannot say how many men there were in the party, not having properly recovered myself, but I should say there were from twenty to thirty men in the party; I consider that quantity of air was very small for the number in the party; the further they went the more leakage of air there would be; there is always a great waste of air in the use of brattices.

By Mr. Wilshire: I did not examine the current lamp; it was out; I cannot say whether it had gone out through the exhaustion of the tallow in it; these lamps will burn from an hour and a half to two hours; Curran would have gone into the mine about 9:30 the previous evening; the miner carries a supply of tallow with him; I think McAuliffe has a good practical knowledge of the gases met with in coal-mines; I mean by that that he could devise a good system of ventilation of a mine, and could deal with the ordinary gases to be dealt with in a mine; at the time of the accident I did not believe the gas carbon monoxide was the cause of it; since then I have altered my opinion, and am ready to admit now that it was the cause; assuming that there was a gob-fire in the workings, it would depend upon the state in which the fire was as to whether the passage of air over the fire would increase the combustion; if the fire were in an incipient stage the air would dilute the gas; that would be the immediate effect of the air upon the fire; eventually it might increase the combustion; the divisional bratticing was only carried about 60 or 70 yards; I have heard there were 10,000 feet of air at that point and 3,000 feet at the point "X" on the plan; stopping up the bords would have increased the current; the current was returning at the back of the brattice, and getting out by the rope-road.

By Mr. Rogers: I do not mean that the 3,000 feet of air would return at the back of the brattice, but that it was too small a quantity for the number of men in the party.

By His Honor: I meant that 3,000 feet would go on and find its way out somewhere, but not that it would go back behind the bratticing.

ROBT. JAS. JURY.

Taken and sworn at Newcastle, this 23rd }
day of March, 1897, before,— }

ALF. P. BACKHOUSE, D.C.J.

Evidence of William Humble at second inquest read, put in evidence by consent of Mr. Rogers, and marked "Exhibit No. 8."

Evidence of William Humble at Court of Investigation read, put in evidence by consent of Mr. Rogers, and marked "Exhibit, No. 9."

Special rules of the colliery put in evidence and admitted by Mr. Rogers. Marked "Exhibit, No. 10."

This deponent, *William Humble*, on his oath, states:—McDonald became under-manager at the beginning of September or August, 1896; if it were considered advisable to replace the stopping it would be part of his duty to see that it was replaced; that would also apply to the manager; if the stopping were left there, and the door closed, the atmosphere in the old workings would be a stagnant one; I have said it was necessary to have that stopping made; had that stopping been made just after the inspection had been made, in my opinion no accident could have taken place; I believe the necessity of opening and shutting the door several times every day was likely to produce the gob-fire by causing an intermittent current of fresh air; assuming that the management did not consider the replacement of the stopping was necessary, they ought to have properly ventilated the old district.

By Mr. Rogers: I think that if that door had not been left open for an hour or an hour and a half at a stretch it would have answered all the purposes of the stopping; I have known McAuliffe seven years; putting aside this affair I consider he has given the mine fair attention; he has put down shafts that have been of great benefit to the mine; but putting down the last shaft I consider he has done something that no man in Australia has ever done; he has shown great skill in the putting down of shafts; I consider that in this matter he has done nothing more than commit a very grievous error of judgment; I consider he ought never to have allowed the exploring party to have gone into the mine, or ought to have led it himself; I do not consider the exploring party was necessary; I do not believe that he for a moment thought of evading any responsibility by not going in himself with the party; I do not consider he shirked his duty in not going under the circumstances; he has done a great deal of timbering in connection with the mine, and it has been very well done; both the timbering in the shafts and where the roof is coming down has been very well done; the boring in the mine that is necessary under their lease has been fairly well done; I know that McAuliffe did not lay out the first workings of the mine; apart from this lamentable accident I think that everything he has done has been well done.

By His Honor: I have been in this district seven years; I was here when the old district in the Stockton was being worked; I was here when the stopping was put in; I do not remember when the stopping was put in; they ceased working there in 1891; I think the stopping was put in soon after the work ceased there.

By Mr. Wilshire: It was not necessary for me to go down the old rope-road every time I inspected the mine.

By His Honor: I did not shortly after they ceased the work in the old district inspect the mine to see if the stopping had been put in; shortly after the stopping ought to have been put there I saw it had been put there.

By Mr. Rogers: I have entered the mine on two occasions against the current; I did not know when I did so, that the mine had been cleared by ventilation; I knew that the mine was fairly clear when I went in; there was no fire-stink there then; there were stoppings put on the bord ends; I know that the roof was coming down and broke these stoppings; that would not allow the escape of noxious gases, the tendency of the air being to pass into the workings, and not the gas to come out; one could not assume that the air that would pass through those broken stoppings would be efficient ventilation for the workings; I know the stopping at point "D"; the sealings of the air over the broken bord ends would reach the furnace by another route than the rope-road; I know that quite recently they have made good the stoppings at the bord ends, or rather, if they have been made good it has been quite recently; some of them were not good in December last.

Taken and sworn at Newcastle, this 23rd }
day of March, 1897, before,— }

ALF. P. BACKHOUSE, D.C.J.

WILLIAM HUMBLE.

Evidence of Mr. Dixon, Senior Inspector of Collieries, taken before the Court of Investigation, read, admitted in evidence by Mr. Rogers, and marked "Exhibit No. 11."

Court adjourned till 10 a.m. to-morrow.

Court-house, Newcastle, 23rd March, 1897.

ALF. P. BACKHOUSE, D.C.J.

WEDNESDAY, 24 MARCH, 1897.

This deponent, *John Dixon*, on his oath, states:—I am Chief Inspector of Collieries; where carbon monoxide is the product of gob-fire it is accompanied by this benzine-smell; that smell is caused by the benzine which comes out of the naphtha; that smell is not produced by an explosion of fire-damp; carbon monoxide is a very variable gas; it mainly depends upon what factors have taken part in causing the explosion; I have read Dr. Haldane's report of the causes of death in colliery explosions.

By Mr. Rogers: Carbon monoxide is a gas that is not frequently met with in this district; there would not be much opportunity of a manager who had gained his experience in this district obtaining much experience of this gas; I have gained my experience of this gas in eight collieries, seven of them in this district; I have been inspector in this district fifteen years; I was here when the Stockton Mine was first started; I know that neither the present nor the previous manager had anything to do with the opening of the mine; I have known McAuliffe thirty-five years; I have known him as a coal-miner, and in the various positions he has occupied in connection with mines; I have never had occasion to regard him as other than a careful man; the shaft he has lately sunk I look upon as the best bit of mining engineering that has been done in the colonies, if not anywhere in the world; it was a feat in shaft-sinking; I remember the occasion when the water broke into the pit; I can speak very highly of what he did on that occasion; I do not know a mining engineer that could have made a better job on that occasion than McAuliffe did; he has had to contend with great difficulties in this mine; a large quantity of timbering has had to be done in the mine; the timbering has been very skilfully done; it

it is the best timbered coal-mine in the Colony, and I have seen them all; the pure carbon monoxide has no smell, but when it is the product of a gob-fire it has this peculiar benzine-smell; I say it was a decided error of judgment for them to go in against the air-current on the occasion of the accident; I did not hear a fall in the mine on the 4th December last, but I heard one there on the 7th December last; I heard it in 20 bord, not far from the main road; Mr. Humble was with me, and heard it also; a fall of sufficient size in the mine would have the effect of sending forward a quantity of deleterious gas, if such gas were present in the mine; I have heard McDonald say that he heard a fall in the mine on the occasion of the exploration; I think it was quite probable that a fall occurred as he said; I do not know McDonald very well, and have had nothing to do with his work in the mine; I know of him by repute as under-manager in the night-shift; I have no personal knowledge of him; I have heard nothing against him; if he were an incompetent man, I should most likely have heard of it; I believe he has done his work in a competent manner; I have seen the work he has done in the night-shift.

By Mr. Wilshire: I have heard pretty well all the evidence given in the different inquiries in connection with this accident; I have heard the witnesses say that when they went into the mine on the exploring visit they smelt a gas; I should say that that indicated the presence of carbon monoxide in the mine at that time.

By His Honor: Carbon monoxide is produced wherever there is incomplete combustion, either above or below ground, and is produced in an ordinary coal fire.

By Mr. Rogers: My theory at first was that there was a fire in the mine; McDonald seemed to doubt my opinion in the matter; I say they committed an error of judgment in going in against that air-current; they always regarded the gas as black-damp.

By His Honor: There is no benzine-smell in carbonic acid.

Taken and sworn at Newcastle, this 24th }
day of March, 1897, before,—

JOHN DIXON.

ALF. P. BACKHOUSE, D.C.J.

This deponent, *Jefferson William Hester*, on his oath, states:—I am a legally qualified medical practitioner, residing at Stockton; on the 3rd December last I received certain information, in consequence of which I went to the Stockton pit, arriving there a few minutes past 11 o'clock; when I arrived at the trap-door I found the two McDonalds being brought out; I saw some others who were unconscious and others who were dead; I attended to those who required my attention, and on the following day examined the bodies of eight men; I made a *post-mortem* examination of the body of one of them—Fitzpatrick. The cause of death in his case was undoubtedly poisoning by carbon monoxide; I thought at the time, and still think, that there was '3 per cent. of the gas in the mine at the time; I think that in such an atmosphere a man would become helpless, and shortly after unconscious, in from fifteen to twenty minutes; from 40 to 50 per cent. of this gas must be absorbed into the blood to produce helplessness; the earliest effects would be giddiness, palpitation, mental confusion, weakness in the legs—general weakness, but chiefly in the legs; a man would probably feel the earlier symptoms in such an atmosphere in about five minutes; I also made a *post-mortem* examination of the bodies of Curran and Smith, who were killed the day previous to this; it was on the afternoon of the 2nd December last that I examined the body of Curran; in my opinion his death was caused by carbonic acid.

By His Honor: There are very marked differences in the symptoms of death caused by carbonic acid and death caused by carbonic monoxide; if death resulted from a mixture of both the gas predominant in the cause of death would bring about the symptoms showing the cause of death.

By Mr. Wilshire: A death from a very large dose of carbonic acid would be a quiet one; carbon monoxide of '3 per cent. strength would cause a perfectly calm death in about thirty-five minutes—a painless death.

By His Honor: In poisoning by carbonic acid the most marked symptom would be the engorgement of the whole blood system with very dark, venous blood; in poisoning by carbon monoxide the blood is of a bright, scarlet colour; that bright, scarlet colour is not met with in any other form of death, but is typical of death by carbonic monoxide.

By Mr. Rogers: Judging from my *post-mortem* I have no doubt that Curran died from carbonic-acid poisoning, and Fitzpatrick from poisoning by carbon monoxide; I know the Stockton Mine, and have been down it several times; given a gob-fire, with a large current of air passing over it, the increase of the current of air would not necessarily produce a large product of carbon monoxide, but would increase the production of carbon dioxide, or black-damp; I am of opinion that the amount of carbon monoxide that was in the mine when the exploration party went in could not possibly have been the same as was present when the rescuing party went in; I should say from the results that the gas must have come down on the party suddenly; from the fact of the exploration party having been in the mine for forty-five minutes, without feeling any ill-effects, and then to feel suddenly ill, I should say that there had been a sudden liberation of gas, and of a greater strength than '3 per cent.; I think, from the fact of their being in the mine for forty-five minutes, and feeling no ill-effects; then, hearing a fall, they suddenly felt the ill-effects, there would have been no danger but for the fall; there would have been no danger but for some unexpected occurrence such as a fall; the gas given off by a gob-fire with a fairly strong current of air passing over would be carbonic acid; this gas would indicate its presence by putting out the lights long before it would be injurious to the men; I saw the effects of the carbon monoxide on the men as they were brought out of the mine through the trap-door; that is, I saw them before they were taken into pure air; I saw the rescue party go in and saw them come out; from what I saw then I should say the condition of the atmosphere of the mine must have been absolutely different from the time when the men stayed in it for forty-five minutes without feeling any ill-effects.

By Mr. Wilshire: Carbon monoxide is a product of a gob-fire; it is not one of the ordinary gases of the mine; it must have been produced from some outside cause; I cannot say that there was carbon monoxide in the mine when the men first went into it, but I think it improbable that there was more than '1 per cent. there when the exploring party went in, as the effect of the gas is a gradual one; before they felt the effects of it the blood must have been absorbing it; the exact effect of a very small quantity of carbon monoxide is a matter of discussion by the authorities; there is a great difference of opinion between them; Dr. Haldane says that death would ensue in an hour and seven and a half minutes in an atmosphere of '2 per cent. of carbon monoxide.

By Mr. Rogers: I know the benzine-smell; I do not think it can accompany carbonic acid; wherever you get that smell there must be some carbon monoxide, even though it be an infinitesimal quantity; from the manner in which the bodies of Curran and Smith were found lying, and the fact of their lights being out, there was no doubt in my mind that the miners would conclude their deaths were caused by black-damp; I had given my evidence as to the cause of their deaths on the morning of the 3rd December last, and the exploring party did not go in till the night of the 3rd December; if there is combustion of carbon with oxygen the product that is always formed is carbon dioxide under ordinary circumstances; carbon dioxide is the staple product, and will always be formed if it gets the oxygen.

By Mr. Wilshire: The cause of death in the cases of the seven men besides Fitzpatrick was carbon monoxide.

J. W. HESTER.

Taken and sworn at Newcastle, this 24th }
day of March, 1897, before,— }

ALF. P. BACKHOUSE, D.C.J.

The evidence given by Daniel McAuliffe at the second inquest and at the Court of Investigation read, admitted in evidence by Mr. Rogers, and marked "Exhibit No. 12" and "Exhibit No. 13" respectively.

Mr. Wilshire here closes his cases.

Newcastle, 24th March, 1897.

ALF. P. BACKHOUSE, D.C.J.

Mr. Rogers opened his cases by calling Mr. Richard Thomas as a witness.

This deponent, *Richard Thomas*, on his oath states:—I am manager of Messrs. Brown's colliery at Minmi; I have been manager of a mine for twenty-two years, and assistant manager for five years; I have been manager of a coal-mine in South Wales, and for ten or eleven years in this district. I was formerly manager of the Stockton Mine for three years; when I took charge of the mine the mine had been opened out; I have visited the mine on several occasions since my retirement from the management of it; I know that when the crush came on the No. 2 headings, the stoppings were crushed, and there was a leakage of air there; this was caused by the crushing of the roof on to the stoppings, which were crushed out; when a falling roof settles itself, it goes no further; it is impossible to say at what time a roof would settle itself; the roof had not completely settled in my time; I do not know that the stoppings have all been mended up; I know the "D" stopping in the mine; I do not know why it was put there; if the stoppings were crushed and imperfect, the intake air would take the shortest course to get out: the best way to get a full current would be to prevent all leakages along the road; while the crush was settling we would be patching from time to time. Any air that leaked through the bords would get into the road and through the place where the "D" stopping is if that stopping were not there; it was a wise thing to put in that stopping to prevent the leakage; I know the No. 3 district of the Stockton; it was worked out while I was there pretty well; it had been started when I went there, but work had not gone far; I know where No. 3 door is in the mine; if that were kept shut it would practically cause a stopping; during the time I was at the Stockton Mine I never met with carbon monoxide there; it is a very rare gas in any mine; a manager would have practically no experience of it; all he would know of it would be from his reading; I have no knowledge of any fatality from this gas; I went through No. 3 district in December, 1895, and in July, 1896; Mr. Humble was with me and a colliery official the first time, but no manager, I think; in July we had a number of managers with us; on each of these occasions we entered the mine by the trap-door (marked "Z" on the plan); we went against the current on each occasion; our object in going in on each occasion was to notice the state of the mine with regard to a claim for damages against it through a subsidence; falls were very frequent in No. 3 district; there was a very large fall at No. 11 bord extending about 50 yards; the country about No. 11 has been very subject to falls; on each occasion that I went in we had to crawl along on our hands and knees—almost to drag ourselves on our faces; from what I know of the country there, I should say it was quite likely that the exploration party on the 3rd December last heard a fall; the fact that up to that time the party had not felt any ill effects and then felt such effects would tend to show that some bad gas had been liberated by the fall; I have known McAuliffe between ten and eleven years, during which time he has been under my observation; he was the overman under me when I had charge of Stockton; I considered him a good, capable, careful, practical man; I have had good proofs of his courage also; if any danger was to be encountered he was the first to meet it; he has sunk the most difficult shaft that I know of anywhere; the timbering in the mine is also excellent.

By Mr. Wilshire: I have had some experience of gob-stink; I have detected the strange benzine-smell accompanying it on one occasion; on that occasion it affected the men; I have looked into the thing closely, and cannot find a genuine gob-fire in the Colony; in the Stockton Mine the gob-stink must have arisen from a fire caused by spontaneous combustion; I should look for other symptoms of the gas besides the peculiar smell before I made up my mind that it was carbon monoxide in the mine; smelling the peculiar smell, and seeing that it did not extinguish the lights, I should say it was carbon monoxide; as a practical miner I would not have put in the stopping at "D" as I am a great believer in not imprisoning gas in a mine; I should say the mine was safer with that stopping knocked out, and other means taken to take the gas out, and the mine kept safe by ventilation; I believe if that stopping had been in, the deaths of Curran and Smith would not have taken place; when I went into the mine there was no carbon monoxide in the mine; if there had been, I would not have gone in against the air-current.

By Mr. Rogers: If No. 3 door had been kept shut, Curran and Smith would not have met their deaths; There were other abandoned workings in the mine besides No. 3, and they were periodically visited in my time.

By Mr. Wilshire: In my opinion the stopping at "D" was put in to prevent leakages; the No. 3 door would have prevented the leakages, but not so effectually.

Taken and sworn at Newcastle, this 24th }
day of March, 1897, before,— }

RICHD. THOMAS.

ALF. P. BACKHOUSE, D.C.J.

This

This deponent, *John Ellis*, on his oath states:—I was trolly-weighman at the Stockton Mine; I remember the fact of the deaths of Smith and Curran; I was down the pit on the morning of their death; I was at the furnace; I picked up Smith's lamp; it was an oil lamp; there was plenty of oil in it; I was one of the exploring party; before they went down I was aware that it had been reported that the mine had been well cleared; I believe they had been clearing it for about thirty hours; I was about 50 yards behind McDonald and Cockburn going in, and I was third or fourth from the last; I did not hear any order to retreat given by McDonald or anyone else, but saw the men ahead of me turn to leave the mine; just before that I had felt a concussion of the air; I felt a rush of air towards us; up to that time no one had complained, and there had been plenty of air, good air; I did not hear anything when I felt the concussion; after we began to retreat I began to feel bad; I saw Cockburn was ill and assisted him; he had one arm round me, and he dragged himself as well as he could, and I dragged him that way for about 30 yards; I was fatigued from assisting him; up to the time the retreat began, I had no fear of anything; I have known McAuliffe about ten years; I always thought him a competent, cautious man, and very clever as a manager; I always thought McDonald a competent and good man; we were in the mine nearly an hour on the exploration trip.

By Mr. Wilshire: I did not know what fire-stink was; there was a slight benzine-smell on going in; it was new in that portion of the mine; I cannot remember the stopping at "D" being put up nor knocked down; for two years after the district had been worked out there was no stopping there at all; about a minute elapsed from the time I felt the concussion till young Bailey became bad; I do not remember any remark being made about the peculiar smell when we first went into it.

By Mr. Rogers: I was down when they began to ventilate; there was a smell then; when we went down after the thirty hours' ventilation there was a smell of the same kind, but not nearly so strong.

Taken and sworn at Newcastle, this 24th }
day of March, 1897, before,—

JOHN ELLIS.

ALF. P. BACKHOUSE, D.C.J.

This deponent, *Daniel McAuliffe*, on his oath, states:—I am the manager of the Stockton Mine; I had nothing to do with the laying out of the mine; I took it over from Mr. Jonathan Dixon, the former manager; No. 3 district was abandoned shortly after I took over the management—a few months after; no stopping was put at "D" for two years after; it was put up there because we found it impossible to maintain our air-current to the back of the mine, in consequence of the breakages of the stoppings on the main route by crushing; the stopping at "D" was put up while we repaired the breakages; the "D" stopping remained in about three years, and was taken out in December, 1895; when it was taken out, the other stoppings at the ends of the bords had been repaired and made right; we had to examine the No. 3 district on account of an action against the company, and we found black-damp in that country on our examination; the stopping at No. 20 bord was knocked out for the purpose of clearing the district of the black-damp; after we had finished the examination, we still left the stopping out; that was because the necessity for it ceased, the district being in the same state as before we had put it in; No. 3 door was put in to check the scaling going up the rope-road; No. 3 door if kept shut would have the effect of preventing any noxious gases from coming up from No. 3 district; I never prosecuted anyone for leaving No. 3 door open; I never knew it had been left open by anyone; all the officers of the mine as well as the Government inspectors make periodical inspections of all abandoned workings in the mine. McDonald and Burt had been in No. 3 three weeks or a month prior to the date of the accident; I had been in either in August or September last; on that occasion I noticed no bad gases; neither Burt nor McDonald reported the presence of any gases to me on their last visit; I remember the accident by which Smith and Curran lost their lives; as soon as I heard of it, I sent messengers direct to Mr. Humble, before 5 o'clock in the morning; the bodies had been found about half-past 4 in the morning; Mr. Humble came first, and we went down the mine; before the exploring party went in McDonald, Cockburn, Bailey, and I, discussed the best way of going in; we thought that we would arrive at the probable seat of trouble in two or three hours; I mean we would be able to go in in two or three hours, and find the seat of the trouble; we came to the conclusion that it would be dangerous to go in by 20 bord, on account of the broken ground as it might fall and crush us or block us in; we abandoned the idea of going in by No. 20 bord, and some one suggested going in by the trap-door; someone also suggested the opening of No. 2 door and No. 1 door, and thus allow the air to flow down that way; Cockburn mentioned the possibility of flowing the air down over the overcast, but we concluded that was impossible because the overcast had been blocked up by falls; we also found that No. 17 bord was not available on the same ground; we discussed three or four methods of going in and eventually decided to go in in the way McDonald did go; at the time the men went into the mine I knew Dr. Hester had given his evidence on the bodies of Smith and Curran, and I also knew that he had given the cause of their deaths as black-damp; I also knew that when the bodies were found, all their lamps were out; I was satisfied there had been a big percentage of black-damp in the air, but with a smell; then, before the exploring party went in, I satisfied myself from the reports made to me that the district was clear; I also went to the furnace and made further inquiry, and found it was still all clear; I know the point to which the exploring party reached; I did not refuse to turn the current of air on account of the difficulty there would have been in getting the horses out; knowing the distance I had to go, I could not have carried sufficient air with me to have turned the current; it would have been possible to have sent the air the other way, but it would have stopped our pumps, and also sent the air over the furnace-men if we had done so; that would have been fatal to the men at furnace, in the same way as it had been to Smith and Curran; I did what I believed to be the very best thing under the circumstances; the matter was discussed by us all, and discussed anxiously; there were from 30,000 to 40,000 feet of air at the trap-door when the inspectors went in; according to them, they lost about 27,000 feet in going about half the distance I did; I have had about thirty-five years' experience of mining; I had never experienced the same smell before that night as I noticed then; I have not been in any coal-mine in which there has been a gob-fire.

By Mr. Wilshire: The stopping at "D" relieved No. 3 door altogether; I cannot say who ordered the stopping to be knocked down; I believe McDonald knocked it down; I think he was wrong in stating he knocked it down in August, 1896. The district could have been cleared by opening the door of the stopping, but that would have taken a much longer time; I knew black-damp was in the district before the stopping was knocked down; it was quite possible for it to be there after the stopping had

had been knocked down; it could not have got to No. 3 door unless it were left open; I did not make any provision for ventilating the district after the stopping had been taken down; I did not know that noxious gas was being generated to any dangerous extent; the idea of going in by No. 20 bord was discussed by us seriously; I cannot remember McDonald reporting to me that No. 3 door had been left open; I heard that Gould had been sick; I deemed the opinion of the inspectors worth consideration, but I had never come across fire-stink; even after their expression of opinion I thought the cause of the trouble was black-damp; in our discussions about the best way to go in, we gave full weight to the opinion of the inspectors; I know that during the day Cockburn and McDonald travelled about 470 yards into the district and the same distance back without any inconvenience; the inspectors had none of the air coming down No. 3 shaft; I am quite satisfied that the inspectors had from 30,000 or 40,000 feet at the trap-door; the shortening of the air-course would increase the current about 100 per cent. at that particular place; I did not give the go-by to the fire-stink after hearing Dr. Hester's opinion as to the cause of the death of Curran and Smith; I reckoned with the fire-stink in all my discussions and in everything I did; I could not have forced the air up without its crossing the pump-line.

Taken and sworn at Newcastle, this 24th }
day of March, 1897, before,—

D. McAULIFFE.

ALF. P. BACKHOUSE, D.C.J.

This deponent, *William McDonald*, on his oath, states:—I have heard the explanation given by McAuliffe as to the stopping at "D"; that is correct; before the death of Smith and Curran I had been in No. 3 district; that was about three weeks before their death; I went in by myself; I noticed nothing wrong in the district then; I first saw Smith and Curran about a quarter-past 4 in the morning; they were dead then; they were at No. 1 door then, having been brought out; their deaths were reported to the inspector at once; I knew of the evidence given by Dr. Hester; I believed they died from black-damp; after their death I believed there was black-damp in No. 3 district; up to the time I heard the noise of what I took to be a fall there had been nothing to show the presence of a noxious gas in the workings; I had been into the district with Cockburn about noon on the 3rd instant; I went in about 500 yards, and felt no ill-effects then; we were in for about half an hour.

By Mr. Wilshire: I went to about the point "C" on the plan on the 3rd December at noon with Cockburn; I have not given that evidence before; I knocked down the stopping at "D"; I cannot fix the date when that was done; I am almost certain it was out the first time the No. 3 district was cleared out; Mr. Jonathan Dixon knocked part of it down; there was not a big enough area by opening the door in the stopping; Smith and Curran would have been all right if the door had been kept shut; the fact of the door having been left open was reported to me on the morning of the 1st December; notwithstanding the expression of opinion by Messrs. Dixon and Humble that there was fire-stink in the mine, I thought Smith and Curran had been killed by black-damp; I still think so; I have smelt gob-fire in Scotland; it had a more sulphury smell; I knew that gob-fire gave off a very dangerous gas known as fire-stink; I did not know that it was always accompanied by this peculiar benzine-smell; I have to admit that the exploring party were killed by fire-stink; heat will give off this gas without a fire; to my mind, a fire, to be a fire, must have red coals in it; there was a very faint benzine-smell when the exploring party went in; the warning of the inspectors troubled me a good deal; I gave it plenty weight; I considered there was a necessity to get into the district quickly; I was chiefly testing for black-damp on the night of the 3rd December last.

Taken and sworn at Newcastle, this 24th }
day of March, 1897, before,—

WILLIAM McDONALD.

ALF. P. BACKHOUSE, D.C.J.

Inquiry adjourned till 10 a.m., to-morrow.

Newcastle, 24th March, 1897.

ALF. P. BACKHOUSE, D.C.J.

THURSDAY, 25 MARCH, 1897.

This deponent, *Daniel McAuliffe*, recalled on his former oath, states:—In discussing the point of reversing the air-current and sending it along 20 bord, we thought it might interfere with the men attending the suction-pumps; that could have been avoided by sending the men down No. 3 shaft; I did not think of that at the time, but have since seen it could be done; I did what I considered best to try and discover the seat of the trouble; I was influenced by what I knew of the fire in the Seaham Colliery, which had burnt for months; I wanted to get at the fire and confine it to as small a space as possible; it never struck me that we could send the men down the No. 3 shaft; whatever had to be done had to be done quickly.

Taken and sworn at Newcastle, this 25th }
day of March, 1897, before,—

D. McAULIFFE.

ALF. P. BACKHOUSE, D.C.J.

This deponent, *Jefferson William Hester*, recalled on his former oath, states:—I consider there must have been considerably under .1 per cent. of carbon monoxide in the mine when the exploring party went in; in my opinion, with an atmosphere of .1 per cent. of carbon monoxide helplessness would result in half an hour; I have formed this opinion after consulting authorities yesterday; I know the point the exploring party reached and the time they were in the mine, I should say it was quite impossible for .1 per cent. of the monoxide to have been in the atmosphere; the party went about 1,200 yards altogether in the atmosphere, that is, going and coming; four of the men were in that atmosphere while they travelled that distance, about three-quarters of an hour; I know myself that some of the rescue party were overcome in from ten to twenty minutes; from the facts of the case there must have been a new state of things after the exploring party had gone into the mine; I am as certain as I can be that some sudden change must have taken place in the atmosphere; if there was 1 per cent. carbon monoxide in the atmosphere the men would have been knocked over in two or three minutes; a sudden liberation of such a gas would affect them quickly.

By

By Mr. Wilshire: I should say it was extremely probable that there was 1 per cent of the monoxide where young Bailey was taken bad, as days after 3 per cent. was found at a very distant part of the mine from there; I think it is extremely probable that the fall, if any took place, released a large quantity of the gas suddenly; I am perfectly certain that a body of gas which was not in action was suddenly set in action by a fall, or some other cause; I considered that fifteen minutes was quite long enough for any of the rescue party to be in; I doubt if any of them were in longer at a time.

By His Honor: I cannot say that it was impossible for carbon monoxide to have taken part in the death of Curran, but I saw no signs of its presence; the two gases—the monoxide and the di-oxide—do act together; in giving my opinion yesterday as to the carbon monoxide, I misread Haldane's report which was given to me in the witness-box.

Taken and sworn at Newcastle, this 25th }
day of March, 1897, before,— }
ALF. P. BACKHOUSE, D.C.J.

J. W. HESTER.

This deponent, *William McAuliffe*, on his oath, states:—I was employed in the Stockton Mine in December last; I remember the night the exploring party went down to find out the cause of the trouble; I was one of the party; I looked at the clock in the engine-house as I went down, and it was three minutes to the half-hour—half-past 9; we started into the district about ten minutes after that.

Taken and sworn at Newcastle, this 25th }
day of March, 1897, before,— }
ALF. P. BACKHOUSE, D.C.J.

W. McAULIFFE.

Mr. Rogers here closes his cases.

It is admitted that the stopping at "D" was removed in June, 1896, by Mr. Dixon, the late manager. Newcastle, 25th March, 1897.

ALF. P. BACKHOUSE, D.C.J.

EVIDENCE in Reply.

This deponent, *William Humble*, recalled, on his former oath, states:—I heard it stated yesterday that we were getting from 30,000 to 40,000 feet of air at the trap-door; I say, as I said before the Coroner's Court, that we had from 10,000 to 12,000 feet; the 3,000 feet we were getting at the end of the brattice was quite sufficient for us; I have been overcome three times by carbon monoxide, and have met it six times; on all those occasions the peculiar benzine-smell was present; I was in the gas for twenty minutes at Thornleigh before it affected me; my legs went from under me suddenly; we took our samples of the gas in a stagnant atmosphere—a place where we could never get the current to reach.

By Mr. Rogers: I got a good dose of the gas in England: still, I went into the same gas at Thornleigh; it was my duty to do so; we had to find out the cause of explosive gas; on each occasion my head was first affected, then my legs became weak; upwards of 1 per cent. of the monoxide would knock a man over suddenly.

Taken and sworn at Newcastle, this 25th }
day of March, 1897, before,— }
ALF. P. BACKHOUSE, D.C.J.

WILLIAM HUMBLE.

Mr. Rogers then addressed the Court, and was followed by Mr. Wilshire.

His Honor summed up, and concluded by saying that he considered it to be his duty to cancel the certificates on the grounds that Mr. McAuliffe and Mr. McDonald were unfit to discharge their duties, by reason of incompetency and gross negligence.

Formal orders were drawn up, and received his Honor's signature.

The Court was then formally adjourned till 2 p.m. on Saturday, the 3rd April.

His Honor had no intention of sitting again; but had some doubt as to the sufficiency of the formal orders which had been drawn up. Consequently—having no authorities at Newcastle to consult—His Honor decided to adjourn the Court till the day already named.

ALF. P. BACKHOUSE, D.C.J.

SATURDAY, 3 APRIL, 1897.

By consent, the Court sat in the District Court-house, King-street, Sydney, at noon.

Mr. Wilshire submitted amplified Orders of Court, showing the cancellation of Daniel McAuliffe's manager's certificate, and William McDonald's under-manager's certificate. These orders were presented to be substituted for those issued on Thursday, the 25th March.

The amplified orders were duly signed by His Honor Judge Backhouse.

The Court, at 12:10 p.m., adjourned *sine die*.

ALF. P. BACKHOUSE, D.C.J.

PART VII.

Minute by the Honorable Minister for Mines on Removal of Stopping in Rope-road, Stockton Colliery, and Reports by Colliery Inspectors; also, Minute by the Honorable Minister for Mines on Abandoned Districts in Coal-mines, and Report by Mr. Inspector Dixon.

No. 1.

Minute by The Minister for Mines and Agriculture.

Subject :—Stockton Colliery Accidents.

Department of Mines, Sydney, 11 March, 1897.

THE Court of Investigation, in their conclusions, state that it is unfortunate the removal of the stopping in the rope-road was not discovered by the inspectors before the accident happened; and although the Court absolves the inspectors from blame, stating that the failure to discover this danger does not imply any want of care on their part, I consider it is a matter which deserves some further inquiry at the hands of the Department, and the inspectors should be called upon for an explanation why they did not discover this stopping had been removed.

S. SMITH.

No. 2.

The Under Secretary for Mines and Agriculture to Mr. Inspector Dixon.

Sir,

Department of Mines, Sydney, 11 March, 1897.

I am directed by the Minister to inform you that the Court of Investigation appointed to inquire into the accidents at the Stockton Colliery, state, among other conclusions arrived at by them, as to the cause and circumstances surrounding the accidents which happened on the 2nd, 3rd, and 4th December last, that it is very unfortunate that the removal of the stopping in the rope-road was not discovered by the inspectors before the accident happened, as they would presumably have called attention to its absence as a defect to be remedied. I am, therefore, to ask that you will furnish him with a report as to why the removal of this stopping was not discovered when making the ordinary inspections of the mine prior to the date of the accident.

I have, &c.,

D. C. McLACHLAN,
Under Secretary.

No. 3.

Mr. Inspector Dixon to The Under Secretary for Mines and Agriculture.

REPORT on Stopping in Rope-road between No. 3 abandoned district, and furnace in the Stockton Colliery.

Sir,

Coal-fields Office, Newcastle, 15 March, 1897.

I have the honor to acknowledge receipt of your communication marked "M," under date 11th instant, in which my attention is drawn to a portion of the report furnished to the Minister by the Court of Investigation appointed to inquire into the accidents at the Stockton Colliery, said Court being of opinion "that it is very unfortunate that the removal of the stopping in the rope-road was not discovered by the inspectors before the accident happened, as they would presumably have called attention to its absence as a defect to be remedied."

2. In reporting on this matter, I may be allowed to state that my last visit to the Stockton Mine prior to the time of the accident, was on 5th December, 1895. It has been stated in evidence that the stopping alluded to on the rope-road was taken out during the latter part of August last, and from that time to the time of the accident two inspections of the Stockton Colliery were made by Mr. Inspector Humble—one in October and the other in November last.

3. On the 1st October, 1896, the new Coal Mines Regulation Act came into force, and by certain provisions therein contained, considerable changes were required in the matter of ventilating the face of each working place, making additional refuge holes on the travelling roads, and in sundry other details; therefore the two inspections referred to were wholly directed to these matters, in order that the workmen might, above all other things, get the benefit of having the current of air conveyed to the working face as soon as possible.

4. Under ordinary circumstances, the road-ways and air-ways near to and in the vicinity of an underground furnace undergo no material change from year's end to year's end, differing in this respect from the face workings which are continually changing as the workings advance; and as the inspector was totally unaware that the rope-road stopping had been taken out, and not replaced, he would naturally conclude that the furnace and its surroundings would be in the same state as when he last saw them, and as a consequence would devote his attention to the inner workings, where the most important work in the shape of alterations was being carried on.

5. The site of this displaced stopping is at the entrance to a totally abandoned district, and entirely separate from any ordinary road along which persons usually travel; and therefore the removal of the stopping could not have been discovered unless the inspector had gone into or come out of this abandoned district along this road to the furnace.

6. In conclusion, I beg to point out, that owing to the peculiar situation of the Stockton Colliery furnace, in what is known as the upper portion of the seam, and the fact that it can be approached in three different directions without travelling on the rope-road, an inspector might at any time, when in the mine, visit the furnace and its surroundings without passing down the rope-road in the direction of the No. 3 abandoned workings; and in my opinion, the thought might never occur to him to pass along said road, when he believed the said district to be totally isolated from furnace influence by a brick stopping.

I have, &c.,

JOHN DIXON,

Inspector of Collieries.

The Minister wishes also to have Mr. Humble's report on this matter.—D. McL., 17/3/97. Report herewith.—W.H., 20/3/97. The Under Secretary for Mines and Agriculture.

I submit that I fail to see why I should be brought into this matter. My last inspection of the Stockton Colliery, prior to the accident, was on the 7th and 8th January, 1895, and on the 23rd September, 1895, I inspected the third shaft and openings only. On 5th December, 1895, was in the No. 3 district to see some fallen ground, as I had to give evidence before a Court on the matter. The stopping on the rope-road was at the time intact, and I was not again at the Stockton Colliery until the accident happened to Curran and Smith, in December, 1896.—J. Dixon, 13/4/97. The Under Secretary for Mines and Agriculture.

No. 4.

Mr. Inspector Humble to The Under Secretary for Mines and Agriculture.

Report on Stopping in Rope-road between No. 3, abandoned district, and furnace in the Stockton Colliery.

Sir,

Coal-fields Office, Newcastle, 20 March, 1897.

In accordance with your minute on Mr. Dixon's report, under date 15th March, instant (No. 5,845), I have the honor to report as follows:—

As stated in that report, there were two inspections made of this colliery by me between August last, when this stopping is alleged to have been removed, and the time of the accidents, viz., in October and November. As the new Act had just come into operation, and as the working places and roadways leading thereto are extensive and widely scattered, many of them being under the Pacific Ocean, I devoted the whole of the time to seeing that the men got the benefit of having the current of air at the face, and that the refuge holes were made on both engine-planes and horse-roads to meet the requirements of the Act.

These duties required that each roadway should be travelled and the face of each working place visited, in order to ascertain if the Act had been complied with in the matter of ventilation. Many things peculiar to the working of a delta colliery, such as an abundance of timber in all bords, whether working or abandoned, in the respective working districts; the matter of bore-holes in the roof, and advance headings to ascertain the nature and thickness of the strata forming the roof; and the character of the coal,—were matters which required my undivided attention during these two inspections; and therefore I did not visit the furnace and its surroundings, situated as they are in the upper seam, quite distinct and separate from any working place or travelling road.

I was totally unaware, until after the accident to Curran and Smith, that this stopping had been remove.

I have, &c.,

WILLIAM HUMBLE,

Inspector of Collieries.

Submitted.—H.B.S., 22/3/97. The Under Secretary. Submitted.—D. McL., 24/3/97.

Since these reports were submitted the Court, presided over by Judge Backhouse, has sent in its report, in which it is stated the stopping in the rope-road was removed in June last, and not in August, as previously assumed. It would seem, therefore, that the introduction of the new Coal Mines Act could not have been engaging the inspectors' attention at that time, and a further report from them upon this matter seems desirable.—D. C. McLACHLAN, 9/4/97.

Approved.—S. SMITH, 9/4/97. Mr. Inspector Dixon, who will please inform Mr. Inspector Humble.—H.B.S., 10/4/97. B.C. For the information of Mr. Inspector Humble.—J. Dixon, 12/4/97. Seen; further report forwarded.—W.H., 13/4/97. Please see minute on my original report herewith.—J. Dixon, 13/4/97. The Under Secretary for Mines and Agriculture.

No. 5.

Mr. Inspector Humble to The Under Secretary for Mines and Agriculture.

Further Report on the removal of the Stopping in the Rope-road, Stockton Colliery.

Sir,

Coal-fields Office, Newcastle, 13 April, 1897.

In obedience to your minute of the 9th instant, stating the Court presided over by Judge Backhouse had "sent in its report, in which it is stated that the stopping in the rope-road was removed in June last, and not in August, as previously assumed," I have the honor to report further on the matter.

I was in Judge Backhouse's Court, sitting beside Mr. Wiltshire at the table, when a statement to this effect was made by Mr. McDonald, late under-manager of the Stockton Colliery, and I submit that it is, to say the least, vastly different to that made by the same person before the Coroner's Court on the 10th December last.

In the witness-box, before His Honor Judge Backhouse, he first said he thought it (the stopping) was removed in December, 1895. When asked if he was sure, he shifted his ground, and said, "Either June or July," and when further pressed he said "he was not sure—it was one of the two."

His Honor then interposed by saying to counsel for the defence, "Let it be June, as the further back it is the better for you," or words to that effect. Before the Coroner's Court, on the 10th December last (and when the consequences of his action in the disaster appeared to be much more distant than they were when he appeared before His Honor Judge Backhouse), McDonald, without hesitation and on oath, said, "There was a stopping in the rope-road; but it was removed three or four months ago. The cause of its removal was to clear out No. 3 workings."

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In believing this statement to be more reliable than his latter utterances (which were very vacillating), I rely upon the fact that certain colliery managers asked to support the Stockton Coal Company against a claim for damages by three property-owners in Stockton, were hurriedly taken into this No. 3 district in the last week of August last, so as to be ready to give evidence in the case heard before Mr. Justice Simpson on the 1st, 2nd, 3rd, and 4th of September last.

Unfortunately I cannot state positively when this stopping was removed; but of this I am sure, as stated in my report of the 20th ultimo, I did not know until after the accident to Curran and Smith that it had been removed.

As on several occasions previous to the removal of the stopping, the district had been temporarily ventilated and cleared of black-damp by opening the manhole door in the said stopping, and closing the same after the workings had been inspected, I never for one moment thought that this method which had acted so satisfactorily in the past would be rejected and abandoned in favour of the entire removal of the stopping.

I have, &c.,

WILLIAM HUMBLE,

Inspector of Collieries.

For the information of the Minister.—H.B.S., 14/4/97.

This reply of Inspector Humble's raises a further question as to why, when he made visits in June and August, he did not inspect the stopping, the removal of which is said to have largely contributed to the accident. With regard to the date of the removal of the stopping, Mr. Jonathan Dixon stated in his evidence before the Court that it was in June last. I should like this matter of the date cleared up if possible.—S. SMITH, 21/4/97.

Mr. Dixon.—D. McL., 23/4/97. For the information of Mr. Inspector Humble.—J. DIXON, 24/4/97.

The only reasons I can give for not inspecting this stopping in June and August are as follows:—

1. Its site is in a roadway far from the working places and ordinary travelling roads of the mine. No person worked or passed anywhere near it; and therefore it was not likely to be interfered with or damaged by irresponsible persons as they passed in or out of the mine.

2. It was well built of 9-inch brick-work; was of small area, and therefore strong; and, like hundreds of similar stoppings in this and other mines, really required no inspection, simply because under ordinary circumstances a brick stopping is in as good a condition at the end of fifteen or twenty years—aye, even more—as on the day it was built. I saw this stopping some time after it was built, and being of opinion that, if left alone, it would remain for years in the same state and condition, I was not anxious to travel into an isolated and abandoned part of the mine to see it every time I made an inspection. So much prominence and importance has been given to this stopping that it appears to overshadow another matter equally as important, but which seems to have fallen into the background, namely, that even with this stopping removed the accidents, or at least the accident to Curran and Smith, would not have happened if the No. 3 furnace door had not been carelessly and culpably left open.

With reference to the second part of the Minister's minute as to the date of removal of the stopping, "and that Mr. Jonathan Dixon stated in his evidence before the Court, that it was in June last," I beg to state that Mr. Jonathan Dixon did *not* give evidence before either of the Courts presided over by Judges Backhouse and Murray. The only evidence he has given on these accidents was before the Coroner's Court on the 10th December last, when putting in a plan of the colliery. It was purely formal, as the following full and complete copy will show:—Jonathan Dixon, being sworn, stated: "I am a colliery manager, and live at Greta; I know that this inquest is being held on the bodies of eight men found in Stockton Colliery; I produce a plan of the colliery. It is a correct plan of the No. 3 workings. I also produce an enlarged plan of the No. 3 district, showing where the exploring party went in, and the route taken by them, and the trap-door through which the rescuers passed; also the points where some of the bodies were found, and the coursing of the air temporarily along the No. 20 bord. I am at present in charge of the pit, acting manager; I do not know who was in charge of the pit last Thursday. The last sketch (enlarged plan) I put in as evidence is marked 'Exhibit A.'—JONATHAN DIXON."

Mr. Inspector Dixon.

WILLIAM HUMBLE,

Inspector of Collieries, 24/4/97.

I fully agree with the above minute written by Mr. Inspector Humble; and I know brick stoppings in some of the mines in this district which are as good to-day as they were when first built over twenty years ago.—J. DIXON, 26/4/97. The Under Secretary for Mines and Agriculture.

I regret that this matter has not been so satisfactorily cleared up as I could wish; and granting that there may be the uncertainty as to the date when the stopping in the rope-road was removed (although Judge Backhouse fixes it in his report in June), I cannot, I am sorry to say, quite bring myself to believe that the inspector made the diligent inspection of the workings which the duties of the position demanded. The fact that some of the employees had at times to pass in to this rope-road in connection with their duties, made it, it seems to me, a part of the working place, and therefore everything in and about that part of the mine should have been examined. If this had been done, it would have been discovered that this stopping was down, and the manager's attention would have been directed to it "as a defect to be remedied." The Court of Investigation having stated that the failure of the inspectors to discover this danger—*i.e.*, the removal of the stopping—did not imply any want of care on their part, I will not further prosecute the matter; but I wish it to be impressed upon all inspectors that they are to make careful examination of every part of any mine they are inspecting which is in, or is in any way connected with the working places where the men are employed, or any matter or thing which may in any way be a menace or a danger to the lives of the persons working in any mine.—S. SMITH, 3/5/97.

Inspector Dixon.—D. McL., B.C., 31/5/97. Seen.—J. DIXON, 5/6/97. W.H., 5/6/97. T.L.B., 5/6/97.

No. 6.

Minute by The Minister for Mines and Agriculture.

Abandoned Districts in Coal-mines.

25 March, 1897.

THERE is one of the conclusions arrived at by the Court of Inquiry into the Stockton Colliery accidents which requires the early and earnest attention of the Department, and I wish the matter thoroughly taken in hand and dealt with at the earliest possible moment. It is to the effect that the general course of working of this mine has been such as to tend unnecessarily to the happening of such disasters, by leaving abandoned districts in a dangerous condition; and, further, that the powers and duties of inspectors should be made the subject of special consideration. By section 19, subsection (III) of the Coal-mines Regulation Act, 1896, an inspector is empowered to examine and make inquiry respecting the ventilation of the mine, and this no doubt gives him full authority to inspect any place which is likely to be the cause of danger to the men working in any part of the mine. It was held in *Brough (appellant) v. Homfray* (L.R., 3 Q.B., 771), in England, that it was not sufficient compliance with the rule to cause ventilation to pass along the working-place and travelling roads, but that so much of the mine must be kept so ventilated as to render the working-places and travelling roads safe. This was a case under the Mines Act of 1860, section 10, G.R. 1, which corresponded to G.R. 1 (Ventilation), section 49, of the English Act of 1887. If the General Rule were not complied with as to any part of the mine, such as is referred to in the above case, then, under section 48 of the Coal Mines Regulation Act of 1896, the owners, &c., would each be guilty of an offence. [For penalties see 59 (II) and 60]. If in any respect, which is likely to be the cause of danger to the men working in any part of the mine, an inspector finds any mine or any part thereof—this, presumably, includes old workings—or any matter, thing, or practice in or connected with such mine or within the control, management, or direction thereof to be dangerous or defective, so as to threaten or tend to the bodily injury of any person, he has power under section 20 (I) to require it to be remedied. Mr. Attorney-General Barton, advising on the same section contained in the old Act, said that the danger must be imminent, and, as was said in an English case by Lord Esher, M.R., “he (the inspector) is not told to say what he thinks to be the remedy, nor to require that remedy to be carried out. It is for the mine-owner to remedy the matter, and if he does not he must take the consequences.”

The inspector, under section 19 (III), has power to examine into and make inquiry respecting the sufficiency of the Special Rules for the time being in force in the mine. Section 49 (I) provides that there shall be established in every mine such (Special) Rules for the conduct and guidance of the persons acting in the management of such mines or employed in or about the mine as under the particular state and circumstances of such mine may appear best calculated to prevent dangerous accidents and to provide for the safety, convenience, &c., of the persons employed. By section 52 (II) the Minister is empowered to propose any new special rules or any amendments of the special rules already established.

In the Metropolitan Colliery Special Rules, the following provisions have been inserted with regard to old workings:—

The under-manager.—“He shall cause competent persons to inspect once a week all old workings, wherever accessible without undue risk; and such competent persons shall report as to their condition regarding the presence of noxious or inflammable gas, condition of ventilation, and security of roof and sides, and such report shall be entered in a book to be kept at the mine for that purpose. Such inspection shall be made by not less than two (2) such competent persons (deputies).

“He shall before the commencement of each shift, make the inspection and report required by General Rule 4 (I), and shall also inspect all old working-places temporarily or permanently abandoned on the intake side of the last working-place in his district; such inspection shall be made within three (3) hours before the commencement of each shift. Including this inspection he shall make at least two (2) such inspections during the course of each working shift.”

It seems to me these are excellent rules, and provide reasonable safeguards against dangers arising from the insidious issue of gases, or noxious air, from abandoned workings, and every possible step should be taken with a view to guard as much as possible against danger to persons employed in the mine arising from these causes. Unless good reasons can be shown to the contrary, I see no reason why somewhat similar provision should not be inserted in the Special Rules of every colliery where any part of the mine is unworked and abandoned.

Although the inspectors now clearly understand that where any danger is likely to arise from the old workings, it is their duty to bring it under the notice of the management, I desire the attention of the Chief Inspector to be drawn to the extract from the Court's report, and wish him to report at once as to what other steps should, in his opinion, be taken in the existing state of the law to guard against danger arising from abandoned workings, and what proposal he has to make for the inspection of old workings by the inspecting staff.

This is a matter of vital importance to all concerned in the working of our collieries, and I trust the Chief Inspector will be alive to the duty which devolves upon him in providing such means as shall ensure (as far as human agency can) to those working in our mines, immunity from death or accident from old workings.

SYDNEY SMITH.

Mr. Dixon.—H.B.S., B.C., 26/3/97. Urgent. Report herewith.—J. Dixon, 31/3/97. The Under Secretary for Mines and Agriculture.

No. 7.

Mr. Inspector Dixon to The Under Secretary for Mines and Agriculture.

Sir,

Coal-fields Office, Newcastle, 31 March, 1897.

Referring to paper No. 6,795, under date 25th March instant, *re* abandoned workings in coal-mines, I have the honor to submit the following report for the information of the Hon. Minister for Mines and Agriculture.

1. I have carefully read the extract from the Court's report, and also noted the extract from Section 19, subsection (III) of the Coal Mines Regulation Act, 1896, as to the powers of inspectors. I am fully aware that an inspector has power to inspect any place which is likely to be the cause of danger

to the men working in any part of the mine; and I submit that this has been done in past inspections. For whenever it has become known to me that any part of a mine has been likely to cause danger, I have made it my business to visit and inspect that particular mine, both by day and by night, until satisfied that the danger had been removed.

2. In opening out a colliery, and after the shaft pillars are formed, it is the custom to commence one or more narrow bords, which are termed the winning places of the mine. From such bords, headings are turned away, and from the headings wide bords are driven. In course of time, the whole area of that particular district is worked out, and consequently abandoned. The winning places in the meantime, are being advanced, and other districts formed. When the first districts from the shafts are abandoned, it is found necessary to build stoppings in all the openings which have been formed from the main roads, in order to comply with the provisions of the Coal Mines Regulation Act, as, for instance, General Rule 1, section 47 of the present Act provides that "the intake air shall travel free from all stagnant water, stables, and old workings"; hence the necessity for building stoppings. Such old workings are not necessarily hermetically sealed, but left with an open end or "breathing hole" into the main return air-way. As a rule, the return air is not coursed into, and through the abandoned heading and bords. This being so, in some cases an extinctive gas is generated in the old workings; but after having attained a certain volume, it gradually exudes through the "breathing hole" into the return air-way, where it is diluted and rendered harmless by coming into contact with the return air, before reaching the bottom of the upcast shaft. This method of old workings obtains when the pillar-coal is not extracted; and thus, it may be, that scores of acres of old abandoned workings are left standing on the pillar-coal. When, however, the pillar-coal is extracted, such coal is attacked at a convenient distance behind the bords working in the solid coal; and after the pillars have been taken out the immediate roof subsides and fills up all open spaces. This is called a "goaf" or "waste."

3. In the matter of the Metropolitan Colliery, for which the manager has formulated certain Special Rules in order to deal with old workings, I may be allowed to say that while I agree with the spirit of said rules, I feel it my duty to draw attention to the fact that there is but little analogy between this colliery and scores of other collieries now being worked in this Colony. The Metropolitan Colliery is a comparatively young mine, and, owing to the fact of pillar extraction, there cannot be said to be any very extensive area of old workings standing on the pillar-coal. But for the most part, the so-called old workings will be "goaf" or "waste" where the roof has fallen. The inspection of the "goaf" edge can be readily accomplished, and in a mine giving off fire-damp (such as the Metropolitan Colliery is alleged to do) the inspection of the "goaf" edge is considered to be imperative, the world over. On the other hand, there are mines in the Colony, much older than the Metropolitan, where pillar-coal cannot be extracted—for instance, Wallsend and Bullock Island, and Hetton and Stockton Collieries. Owing to this fact, no "goaf" or "waste" can be made, and as the old districts are abandoned, stoppings are built as above described.

4. I have endeavoured to make plain the two systems of old workings, viz., bords and headings sealed off from main roads, and "goaf" or "waste" formed by pillar-coal extraction. As I have already stated, a "goaf" edge can be examined without much trouble; but it becomes a serious question as to how old workings (bords and pillars) can be entered and inspected with safety. In old workings where the pillar-coal is intact, the timber which may be left in decays, and as a consequence a certain portion of the rock or shale roof falls away; and it often happens that some of the roof in old bords, which does not come with the first fall, is left in such a fractured condition as to render it liable to fall at any moment. Besides, if there is an accumulation of extinctive gas in any such old workings, they would not be in a fit state for anyone to work or pass therein until such gas were cleared away. In order to do this, a stopping would have to be taken out, and fresh air coursed through the old headings and bords. This could only be done on a day when the mine would be idle, as to divert the main current of air to clear old workings would be lessening the volume of air in the face workings. The action of the fresh cool air on the already fractured roof, would, in all probability, cause some of the roof to fall, and this alone would be a source of danger to any person or persons making the inspection. But a still greater danger than this might be brought about by introducing a large quantity of oxygen into old workings which would be to some extent heated by long standing, and being shut off from a cool atmosphere. This sudden flushing with fresh air might have the effect of inducing a "gob-fire" by a supply of oxygen, which the "gob" was not able to get while the extinctive gas abounded.

5. In conclusion, I may be allowed to state that I have entered rather fully into a description of old abandoned workings with one sole object in view, viz., to show what, in my opinion, might be a source of danger, if it were insisted on that certain classes of abandoned workings have to be inspected. I may further state that I have no objection to the new Special Rules being submitted to the colliery managers in the Colony. Neither have I any objection to do my share of inspecting the old workings, whatever the risk might be to myself. I dare go where any other man dare to go; and in scores of instances I have risked both life and limb in the execution of my duty as a Colliery Inspector, with a view to the safety of the persons employed in the mine. I have ever been fully alive to the duties devolving upon me as an Inspector, and I would not hesitate for one moment to enter a mine at any hour, day or night, if by so doing, I could prevent an accident; for, without fear of contradiction, I can honestly say that I have the interests of the coal-miners of the Colony at heart as much as any person can have; for if I were to try, I could not forget the fact that I have been one of them. I have, &c.,

JOHN DIXON,
Inspector of Collieries.