

worked by hydraulic power, and is used for hauling cement out of the mine. It will be seen from the plan that the stage is very cramped, and that part is taken up by an open space (*a*) unfenced, and 13 feet 9 inches in depth. I mention this, as avoiding it might distract the attention of the engine-man, whose duty it was to watch the set coming up, cut the water off by turning the handle (*b*), thus throw the engine out of gear, and turn the tub on the turntable towards the road to hoppers (*c*). This work must have required great alacrity and watchfulness. At the time of the accident, McCann was on the platform, where he had no right to be. By some means the two got caught between the rope and the drum, which made twenty-three revolutions before it was stopped by the manager. The evidence as to the drum being fenced was as follows:—

*Robert Morgan*, mine manager: His position (Irwin's) would have been about eight or nine feet from the drum. He need not have been near the rope; anywhere within eight or nine feet would have been his proper place. I do not think Irwin's duties were dangerous. No accident had ever occurred to my knowledge through any person being caught by the rope. After this accident, I was told that a man had once been caught by his coat; but the occurrence was before my time. The drum was not fenced—not "securely fenced," and I consider it was safer without a fence. There was only one way in which the drum could have been fenced—namely, by quartering boards—and by adopting this mode the men would have been cut to pieces in the event of this accident happening. If a fence had been there, the deceased might have put his hand out to save himself, but I would not like to say he would have escaped. He might have escaped.

Had the engine been differently placed, it would have been possible to fence the drum securely. There is as much room as I have seen elsewhere. I have done myself the same work that Irwin was doing. I consider it safe to work there with ordinary care.

*Thomas Redman*, blacksmith: I do not consider the drum a dangerous part of the machinery. I consider any man could work there, with ordinary care, as safely as he could in a blacksmith's shop. There was danger if he came in contact with the drum; a man putting his head in a coffee mill would likely have it taken off. I do not think it was necessary to fence the drum. As the machinery is now fixed, it would not be possible to fence the drum so as to prevent the possibility of accident. The machinery might have been so fixed at first as to give a larger space. Had there been two horizontal bars, the bodies might have been stopped from the drum; but if their clothes had been entangled, it might have been worse for them. It would all depend upon what hold the rope had on the clothes. I do not think Irwin was working in a dangerous position. I do not think the accident was due to any primary imperfection in placing the machinery.

*George Jonathan Binns*, Inspector of Mines: I examined the machinery of the North of Ireland claim on the 28th ultimo, and produce a sketch-plan of it. In my opinion the drum is an "exposed and dangerous" portion of machinery and should be fenced. There would be some difficulty in fencing it, on account of the machinery being in too confined a position, but I consider it possible to obviate that difficulty; and, had there been a fence, it is probable this accident would not have happened. It is quite possible the accident might have happened with the drum fenced. The chance of escape would have been very much greater.

Mr. Morgan would perhaps consider a pit-shaft safer without a fence, for fear some one might run against it and be hurt. "He might have escaped," was admitted, also that it would have been possible, had the engine been differently placed, to fence the drum securely. Mr. Redman did not consider the drum dangerous: machinery which he thought dangerous would be a curiosity. The ratiocination introducing a coffee-mill, I failed, and still fail, to understand. "But if their clothes had become entangled, it might have been worse for them." This I fail to comprehend: it could not have been worse for Irwin, taking the loss of life as the maximum ill. I had no witnesses, as it had not seemed worth while to summon any in order to prove a self-evident fact (the danger of the machinery). The verdict was "That Robert Irwin came to his death at the North of Ireland Company's claim, at the Blue Spur, on the 26th day of February, 1880, by becoming entangled with the hauling-gear, accidentally, casually, and by misfortune, and not owing to any negligence on the part of the owner of the mine, or defect in the machinery, or management thereof." from the last portion of which I beg to differ *in toto*.

#### *Death Rate in the South Island Districts for 1880.*

The number of men employed being 798, and the output 203,248 tons, the two fatal accidents already mentioned make a death rate for the ten districts, of 399 men employed, and 101,624 tons of coal raised, per life lost. This compares favourably with other mining countries, as for instance:— (1.) The average tonnage in Great Britain for a recent period of fifteen years is 107,574 tons per life lost, and the average for five years is 447 men. (2.) A late average in the anthracite mines of Pennsylvania is 103,340 tons, and 346 men. (3.) In Prussia (where the system of Government supervision is extraordinary, there being a perfect army of inspectors), the average for the five years ending 1878 is 382 men. (4.) In 1879 a remarkably high average was attained in Great Britain, viz., 490 men employed, and 149,400 tons, per death.\*

#### *Prosecutions.*

I had occasion to institute legal proceedings against the manager and contractor of the Wellington Company's Waimangaroa Coal Mine, in connection with the explosion of gas already mentioned. There were two informations against the manager: (1.) For not providing an adequate amount of ventilation (General Rule 1). (2.) For not working the mine with reasonable precautions for the safety of the persons employed. The first broke down on account of insufficient proof of liability; on the second, the defendant was fined £5 and costs—total £12 18s. The contractor, for entering the mine with a naked light, was fined £2, and costs 17s. The cases were heard at Westport, on September 10th, 1880, before Mr Revell, R.M., who delivered judgment on September 21st, as follows:—

*Binns v. Ferguson.*—In delivering judgment in the first of these informations, which charges the defendant with having neglected to provide sufficient ventilation in the mine, I have given the defendant the benefit of the doubt I have, respecting the appointment of underviewer in the mine; and as to how far the defendant is culpable for the actual explosion. The men were constantly working with naked lights; and the contractor, Young, was the only person working the mine. The contract specifies that Young should examine the mine daily which he did not do; and, giving the defendant the benefit of the doubt regarding his liability for Young's neglect, I dismiss the information. In the second information the case is different. It is a charge that the defendant did not see that reasonable provisions were employed for the safety of the persons employed in the mine. The weight of evidence goes to show that the mine was not ventilated as well as it might be. The Inspector said the air was good enough, as it showed no fire damp, but he thought there might be freer air, and approved of a chimney that was about to be erected on his last visit prior to the accident, but which chimney never was

\* The tonnage per life for 1880, in Great Britain, is 122,775.