

That is one reason, and another is this: There might have been so much CO_2 generated as to prevent the subsequent flame injuring his body. CO_2 is a product of combustion.

1096. Would that be the case with the man who ignites the gas?—Yes, it is possible that he was in such a high proportion of gas that the flame might pass on its way, and much of the gas round about him might have been in explosive owing to absence of oxygen.

1097. The actual flame was produced by his lamp?—And that flame round about his body might have been limited in extent owing to the necessary proportions not being there on account of the surplus of CO_2 subsequently, or CH_4 at the time of ignition, the conditions might thus have not been favourable to complete combustion: this would result in his body being somewhat protected. At Kaitangata Colliery they always confine blackdamp within stoppings, and although there is CH_4 on the roof there is no explosion owing to the quantity of blackdamp present.

1098. But there was an explosion here?—The magnitude of it round about Martin's body nobody can tell. The state of destruction to a man's body is no indication of the origin of the explosion.

1099. Redmayne says, I understand, that you may have no evidence of force for 40 or 50 yards from the origin of the explosion. The force does assume great proportions, but he does not state the area of the burning?—He says, "Little damage is done near the point of origin of the explosive flame, and for, say, 50 to 80 yards therefrom. Then great damage is evidenced. And after the cessation of the advancing explosion there is evidence of a 'backlash' or rebounding force."

1100. That is force, not flame?—No.

1101. So that that has not to be taken as governing the area of the flame?—No.

1102. And you have not shown us anything which limits the action of the flame?—It is a problem which nobody can account for, and which of those conditions existed I am not able to say.

1103. Have you examined that bord for any distance?—I have been up it four or five times.

1104. Did you find any evidence of burning in that bord?—There is nothing to burn—it is all coal and stone.

1105. Would not the coaldust show any sign of flame?—There was a film of soot, which was the result of the flame. Martin's coat was smoked and discoloured with soot, I think.

1106. Is it not the fact that you got a small injury near the part of origin, an indication that the amount of gas was small?—Not a bit.

1107. Do you suggest that the whole of this 68,000 ft. was exploded?—Yes. I say it was consumed or exploded by the original explosion and the backlash.

1108. Would not the force be terrific?—And it was.

1109. How did we get anything of Martin's body?—It was at the point of origin. It was thrown on the ground, and we know that a prostrate figure would not suffer as would a vertical obstruction to the force and backlash. Nevertheless, it had given him a tremendous smash and stoved in his head. Redmayne says that the force is small at the point of origin.

1110. That is because the quantity of gas was small?—Not at all, Redmayne says nothing about that.

1111. Would not the amount of gas which is present at the initial point make some difference in the amount of damage?—It must, to a certain extent.

1112. If we find that the man's body at the point of ignition is not burned?—But he was burned: his stomach was charred. The man was no doubt in a flame, but that flame did not last long; he would have been burned more seriously if it had lasted longer.

1113. You say that the amount of gas which is present, whether large or small, would have no appreciable difference in regard to the effect of the flame at the point of origin?—Within reasonable limits it would not. Taking the quantity of gas at, say, from 20,000 to 60,000 cubic feet. I do not think there would be any difference in the condition of the corpse at the point of origin.

1114. If you found it tremendously charred?—I would say that there was sufficient oxygen there to keep the flame going for a long time.

1115. If there had been less gas and more oxygen, you might have had a bigger flame at that point?—I do not know what the proportion would have been.

1116. But you have given us a certain quantity of gaseous mixture; I ask you does not the fact that the body was not charred throw any light upon the quantity of gas present?—Not a bit.

1117. And if you found the body charred?—No.

1118. And the fact that there is no evidence of burning in the bord?—I saw a film of soot on the sides of the pillars. Where we found his coat I tried to mark the word "coat" on the coal, but the chalk would not write upon it owing to soot.

1119. If that was evidence of burning, would not there have been evidence of burning on that coat?—I could not say there was any evidence of burning as it was so dirty when dug up.

1120. What do we gather about the lack of ventilation and as to the length of time the gas was there? Do you suggest that those bords have been continually dangerous for any period before the explosion?—There was a period during which they were dangerous—before Martin was there.

1121. How long before the explosion?—I am unable to say. The gas did not come in there instantaneously.

1122. Why do you say it was not instantaneously?—Gas never does come instantaneously.

1123. That was only 6,800 ft. of gas. Is that a large outburst? Was it not quite possible for 6,800 cubic feet of gas to be given off at that point within, say, about an hour?—Yes, it is possible for mines to give off gas at that rate.

1124. You will not say it is impossible in this mine?—It is difficult to say what is impossible.

1125. It is impossible in this mine?—From my knowledge of the mine I think it is impossible.

1126. Is there anywhere else in the world a mine like this? It is unique. Is not the size of the seam unique?—Yes, but there are thick seams in other parts of the world.