205. Now, as to the future use of explosives, what class of explosives would you consider necessary for safety?—If I am to speak unofficially and not as representing the Home Office at all, I should say there are several explosives which can be used with, at all events, comparative safety, for all safety in mines is comparative only—we shall never totally eliminate accidents. I think comparative safety would be assured with several explosives, even not on the permitted list, but, of course, blasting-powder is another matter.

206. It is not a permitted explosive?—No.

207. Do you think that monobel should be used in gassy mines?—It would be far safer than blasting-powder, but it has not passed the English test. It is possible to get a flame from it and to ignite gas or dust.

208. Is it not probable?—No, not probable, I think, under the working-conditions of a mine.

209. What percentage of gas do you consider to be dangerous in the return airway in a gassy mine?—I should think that anything over 1 or 1¼ per cent. would indicate that more ventilation was required.

210. In some mines in Great Britain is there not much more than that in the return air, where the mine is well ventilated?—I have seen more.

211. Can you tell the Commission what Dr. Haldane considered was a reasonable percentage?—Did not he put it at 2½ per cent.?

212. I know he said that above 2½ per cent. would be dangerous?—Yes, of course; but I think he has put some figure as a suggestion for the return airways—I forget the exact figure.

213. In connection with the watering of mines, what is the principal objection in some mines to general watering?—It is that it is liable to result in the roof cracking and coming down through the moisture being absorbed.

PROFESSOR DIXON, recalled.

214. *The Chairman.*] I understand, Professor Dixon, that you have an explanation you wish to make in reference to the reported interview referred to this morning?—Yes, sir, I had to admit this morning that I had not seen the report of the interview with me, to which counsel referred. I have now obtained a copy of it. I find it refers to an interview which a representative of the *New Zealand Herald* had with me when I was changing my clothes after returning from the pit on the 14th September. There is one mistake in the report which I should like to correct. It states "The Professor was then asked if it were likely that a fall from the roof would release gas in sufficient quantity, if it became ignited, to create a flame big enough to fire the coaldust. He said that he did not think so." I did not make that statement. The question as I understood it was: Is it likely that a fall of roof with some gas would strike sparks and so produce an ignition? and I said I thought that was not likely.

215. *Mr. Wilford.*] Then I can add to your evidence that not only is the report not your opinion, but the interview you now produce is not your opinion either?—I have already told the Commission that the report I made to the Minister is my opinion, and only requires to be modified. That paragraph in the report of the interview is not my opinion. There is also one other correction I wish to make. The interview goes on, "Referring to the mine the scientist said that, while he would not describe it as a dry and dusty mine. . . ." I have said before the Commission that it would not ordinarily be described as a dry and dusty mine, and that is what I said in the interview.

216. Instead of the words "I would not describe it as a dry and dusty mine"?—Yes.

217. May I ask you while you are in the box, Professor Dixon, to give me a little assistance on a couple of points in that connection. A blown-out shot is one of the things which could cause an explosion with dust or gas?—Yes.

218. I suppose, because a blown-out shot gives both concussion and flame?—Yes, a blown-out shot with such a thing as blasting-powder.

219. I understand that such explosives as monobel No. 1 would give no flame?—I am not sure that it gives no flame, but it does not ignite dust under the Home Office test.

220. Then should there not be precautions taken in regard to blown-out shots—for instance, watering round the area?—If there is dust about.

221. How would you put that water on so as to make it effective, as a counter-irritant?—I should put such water on with a spray. There is an instrument called an "atomizer" which blows the water into a very fine spray.

222. You think the area round where the blown-out shot occurs should be watered—preferably sprayed?—I think that should be done round all shots where the place is dusty; you cannot tell whether the shot is going to be blown out or not.

223. Round all shots?—Yes, if it is dusty.

224. Because any blown-out shot might cause an explosion?—Yes, if there is inflammable gas or dust.

225. If there is dust in this mine or gas, and there is a possibility of a blown-out shot, you would spray the area round where you are going to fire your shot?—Yes, if there is dust near the shot.

226. *Mr. Napier.*] Should not the spraying be done immediately before the shot is fired?—Yes.

227. You are aware that there were no shots fired on the morning of the disaster?—Yes, that is in evidence.

228. *Mr. Tunks.*] Is it only monobel with a numeral that is entirely safe?—I think it is only monobel with a numeral which has passed the Home Office test.

229. It does not follow that the other monobel, without the numeral, is necessarily dangerous?—No, I am speaking of comparative safety in all these answers.

230. *The Chairman.*] You say there is no such thing as absolute safety?—I believe there is no such thing as absolute safety.

231. *Mr. Wilford.*] But it is clear that only monobel with the numeral has passed the Home Office test—the other has not done so?—That is so, I believe.