engine is one of the most essential parts of the whole brake, and most likely to get out of order. It must be kept in good order. The pump is kept going continuously. When standing at a station it may be shut off to save steam. If an engine is standing attached to a train the pump should be kept going, but I should say it would be a reasonable thing to shut off the pump if the engine is standing disconnected—that is, if the engine is not going to be used for shunting. But even then it would probably be kept going. The pump maintains the pressure in the reservoir. We pump to a pressure of 95 lb. usually. The air is taken through pipes through the whole train, charging the auxiliary reservoirs on each vehicle. When the train is marshalled and the engine connected the auxiliary reservoirs would be charged up to 70 lb. throughout the whole train, and to enable that to be done the extreme end cock in guard's van must be closed. The hose-connections throughout the train—the couplings—must be complete and the cocks opened, and in that position the brakes can be either released or applied in a couple of seconds. The time depends on length of train. It can be applied either by engine-driver or by the guard, or if a hose is uncoupled without closing the cocks the brake would be applied. Assuming there is no air in any part of the tubes, but the main reservoir is charged, and a cock is closed behind the engine, and assuming that a cock still further behind is closed, the engine-driver would know the cock was closed by observing his dial, particularly as he charged his train. If he did not carefully observe his dial he would not know the whole train was charged. If he started pumping up knowing the subsidiary reservoirs were empty he would know a cock was closed. But he would not know unless he knew the condition of the rest of the train as to the reservoirs being full or empty. The cocks and connections at stations should be most carefully examined. It is also essential that a brake-test should be made. It is essential that the person watching the test should see that the blocks are on. He would only see them go on the wheels of the vehicle by which he is standing. He would satisfy himself by walking along the train that the blocks were applied to every wheel. It would be his duty to see to it. I know the General Instructions to Trainmen. Before the train proceeds the guard should see that the brakes are all properly released (page 4). It is essential that the couplings and cocks be examined. I agree with instructions on pages 5 and 9 as to inspection. It is essential. It is also essential that the instruction on bottom of page 5 be complied with. We use the Government rule-book, with special instructions of our own. I approve of Rule 231. We have the same rule. I agree that the engineman, if he intends stopping the train for any length of time on an incline, should inform the guard by whistling. He certainly should warn the guard before uncoupling his engine and leaving the train on an incline. I have seen plan of train [produced] with its weight and length. I should say the engine-driver was not justified in leaving that train on an incline of 1 in 36 without warning the guard. I should say, if the engine was leaving the train they should drop all the hand-brakes. They should take every possible precaution. Assuming the Westinghouse brake has been applied to the whole train, or that the engine-driver thinks so, and the engine is going away 60 or 70 yards, three wagon hand-brakes and one van screw brake would assist to hold the train for some time. Three wagon-brakes and one van-brake would not hold the train without the Westinghouse brake. I should say from calculations I have made that when the air had reduced by leakage to a pressure of 20 lb. on the cylinders the train would start to move. The train if weighing 226 tons should stand for fully half an hour on an incline of 1 in 36 under the Westinghouse brake alone applied to every vehicle on the train. Personally, I should not have disconnected the engine and left the train without first warning the guard or applying all the hand-brakes. I may say I have never run a train. It would only take a few minutes to apply all the hand-brakes. If in good order they would hold the train without the Westinghouse brake. Now and again a train gets stuck on an incline and you have to divide the train and take part of the train, leaving the remainder properly secured on the track. Supposing two trains were amalgamated at Putaruru, both trains having been broken to a certain extent, and supposing a terminal test had previously been made, I should have been satisfied, on the brake-test being applied, by seeing it come right through to the wheels of the van. Where couplings had been broken I should make an examination of those couplings before the brake-test. The guard would not necessarily report to the Stationmaster if the train was in good order. The Stationmaster would assume that the train was in good order if the guard had not reported adversely to him. I know of no brake better than the Westinghouse. It is on three-quarters of the railways of the world. The Westinghouse brake we have in New Zealand is one of the latest patterns. On my own line we have had two cases in which the cocks have been interfered with. One case was recent—within a month—and in that case the cock was interfered with by a passenger, presumably while the train was in motion. Our cocks are arranged differently to those on Government railways. In the other case a cock was closed while the train was going up a hill. It had been closed after examination. In another case we found a cock closed on a train; that was due to bad examination, and the brake leaked on and pulled the train up. We have no notice warning people not to interfere with cocks.

Baume: I know the weight and position of the train in question. Going up the incline, if the driver hears a false beat of his engine, it is his first duty to shut off and apply the brakes, examine his engine, and find out what the trouble is. If he cannot find the cause and thinks it necessary to uncouple, it is proper to do so. He tries to find out by every means in his power. Before he uncoupled I think he should have communicated with the guard. It was an error of judgment not to do so. I can understand the trouble with the engine would be strong in his mind. I can quite realise that the trouble with the engine would be the first thing in his mind at the moment. I should have expected the Westinghouse brake to have remained on half an hour. In the driver's mind the Westinghouse might be synonymous with safety. Of course, he must bear in mind that he is taking away the pump. We recognise the brake will leak off. If he had made a big application the brakes would set, but it would rather help the brake to leak away more quickly. When a big reduction is made—say, 35 lb. or 40 lb.—then there is that pressure in the train-pipe and a