By Mr. Myers: As to the effectiveness of the present braking appliances, that is a general question, practically asking me to go into the whole system of the tram brakes, which would be a long matter. Given a first-class driver, I would not wish a better equipment than the present—a man who can keep his head under all circumstances; but that is not a practical condition. As braking appliances in the hands of a good driver they are good. Without saying anything derogatory to the drivers generally, there are great differences in the quickness of a man's comprehension of circumstances under emergencies. It is common ground that the brakes do entail a good deal of hard work on the men. You want a brake that wants less thought, and the least consideration.

By Mr. Rosser: I had no experience on the Sydney cars with the hand-brake alone. I did not give a general reply to Mr. Myers's question as to the effectiveness of the brakes, as a general reply would involve a description of the whole question of brakage. The air brake is a quicker method of putting on a brake than the hand-brake.

By Mr. Wyllie: I would not suggest under any circumstances the dispensing with the hand-brake—certainly not. There are occasional circumstances with the air brake when a car might be brought home with no pressure in the reservoir. There are cases known of that, but very occasional.

By the Chairman: The majority of the cars in Sydney had the axle compressors and the air power brake, relying on the electrical reverser in special cases. It was both the reversal of the car and also short circuit of the motors. For an emergency you could work the motors against each other, but that, of course, is purely an emergency brake. The emergency brakes were not then in use. The cars could make the stops under the air brake alone, even on greasy days, with the sand gear, which is an important part of the mechanism. None of those cars were fitted with slipper brakes. The magnetic brake was not in use in Sydney when I was there. I have had no experience of that brake. As an electrical engineer I understand the construction. The action of any magnetic brake depends on the electrical current passing, and the motor being in continuous rotation somewhere, in order to get the magnetic effect; but when the motor stops the brake is not effective for the moment; but I certainly cannot understand the continuous skidding of the wheels as explained by you. I have had no experience of the working of any form of track brake, but, judging from my Sydney experience, I consider that an air-brake equipment would be perfectly satisfactory—as satisfactory as any form of brake in the market. As to the track brake, I think its promptness of action might be improved by pneumatic pressure, suggested by you; but when one is considering such sudden applications, you must rely on one brake only, as a man cannot do two things at once on an emergency. Regarding it as a brake which is put down on coming over the crest of the hill so as to steady a car, in that case a driver has several seconds in which to prepare. It is not a circumstance met with frequently on the line, but I do not see that there is any great advantage to be obtained in being able to clap the brake on suddenly, if you regard it as a coasting brake.

The Chairman.—It has been arranged that the Commissioners should now pay a visit to the stations, and view the track, &c., and we should like some official of the tramway service to accompany us.

Commission adjourned until Wednesday morning.

AUCKLAND, WEDNESDAY, 20TH APRIL, 1910.

Commission resumed at 10 a.m.

JAMES HAMPDEN BRENNAND duly sworn.

Examined by Mr. Myers: My name is James Hampden Brennand. I am superintendent of the rolling-stock of the Auckland Electric Tramways Company. I have been in their employ about two years and eight months. Prior to that I was general foreman at North Sydney for six years and a half, employed by the New South Wales Government. I had full charge there. My official designation there was "Electrical Inspector." Prior to that I was putting in power for the Leeds Tramway Company in the Old Country, and saw a good bit of the equipment there. At North Sydney I had about seventy cars under my charge, of various kinds and descriptions, which were altered from time to time as the service grew. I had a good opportunity of watching the working of the Sydney cars. The air-brake equipment is generally used in Sydney. They have tried the magnetic brake, also the Electric Dissel brake, but that was condemned very shortly afterwards. I think they tried the magnetic brake for about two years. None of the North Sydney cars had the magnetic brake at that time. The results of the working of the magnetic brake on the Sydney cars was brought under my notice as we had a conference each month, and the faults of each depot were brought down and discussed, and we thus got a good idea as to the best thing to be done. I have seen the magnetic brake fail. It was on King Street Hill, in Sydney. I understand it was the fault of the controller solenoids. The failures were not under my personal knowledge, but they were brought up in conference. The Neutral Bay car had the track brake as well as the air brake, very much the same as ours. It was the Spencer brake. There are very similar grades on the North Sydney line to ours here in Auckland. The air brakes on the North Sydney cars gave entire satisfaction. The reason for fitting the Neutral Bay cars with the track brake was because it was a dangerous line, 1 in 9 grade. It was considered a particularly dangerous line, with the water at the end of it. It is a series of hills and hollows, bad to come down, with short sharp hills. I consider it is more dangerous than the Parnell Rise, where you have a good landing-place at the bottom of the hill, and you do not have a water frontage; but Neutral Bay is rather shorter. The North Sydney cars were fitted with Christensen—that is, twelve coupled sections, or twenty-four cars; the others were fitted with axle brakes. They were