

39. Apart from that, would there be any possibility of danger?—Yes, certainly; so far as human life is concerned, by touching the fallen wire.

40. *The Chairman.*] Do I understand from you that, although the cost of the double-trolley system would be considerably more to the Tramway Company, they would gain by saving 33 per cent. of motive power?—Quite. I consider the single-trolley system a most wasteful one.

41. Therefore, in the course of some years, this saving alone would fully compensate for the extra cost of the plant?—Yes, it is my opinion that in five or six years there will be no such thing as single-trolley tramways.

42. *Mr. Swan.*] Is it only in the first cost that the difference comes in, or is the cost of maintenance greater?—I do not think the cost of maintenance would be greater. It has been a matter of course to make use of the earth for the return, but it is a big waste, as part of the force generated is uselessly expended. No electrical engineer can deny that. The resistance absorbs so much of the energy which should be expended in the motor.

43. *Mr. Lake.*] Mr. Gain, in his evidence, admits that in London the telephone companies are adopting the metallic circuits?—Yes; some of them.

44. Is not your system an imperfect one? And sooner or later you will have to alter it?—We will break up the Exchange; but that will not change our system of earth-return.

45. *Mr. Earnshaw.*] Is it because of the weight involved that you cannot increase the number of wires on your poles? You can get steel poles?—They are no good. There is no rigidity in them. An iron pole is not so rigid as a wooden one. Trussed iron poles are only used in crossing rivers. They could not be used in streets. You could not erect iron poles to carry all these wires in a base of sixteen inches square. For iron poles you require a very large base. Crossing rivers is another thing altogether.

46. You admit that if your system was perfect you would not require the earth at all?—Our system is good enough. I do not say that it could not be more perfect—namely, by having twin wires; but where we use the earth it is good enough for our purpose.

47. You admit that you can have a system without the use of the earth; but, because you are covered by an Act of Parliament you claim absolute control of the earth?—Exactly. We say to the tram companies: "Your adopting that system will interfere with us, and render our system good for nothing unless we spend double or treble the amount of the original cost upon it." If the tramway people gain the day, and are able to use the earth-return for their tramways, it will cost the colony £70,000 or £80,000 for the laying of twin wires for every telephone connected with the principal exchanges.

48. *Mr. Lake.*] The primary rights of the streets are for locomotion purposes?—I have nothing to do with that. You have passed an Act, and I shelter myself under it. I am the guardian of your property. The Electric Lines Act does not give us any power save to take possession of the kerbing. Wherever we cross the street we have to keep 18ft. above it with the wires.

49. You have no right to the subsoil?—No. The subsoil belongs to the public. I may tell you this, that if we had not the Act we would have the same battles as they have had in England. There is no doubt that, if the Government had no Act, they would require to get an injunction from the Supreme Court to prevent the tram people from destroying their property.

50. The whole of the streets are vested in the Corporation by the Municipal Act of 1886?—I can set you at rest on that fact. A municipal corporation in England tried to stop a telephone company from going overhead with their wires, because they claimed the street from the ground to the heavens. They went to Court and were defeated.

51. *The Chairman.*] Mr. Baron told us that one of the great points in recent telephone prospectuses placed before the public was a guarantee of complete circuit. That was one of the great inducements to get subscribers to the telephone?—This notification was in a prospectus issued by a rival company in embryo, of which the late Duke of Marlborough was chairman, but it never came to anything. It is without doubt an advantage to have twin wires in the telephone system; but the other, if properly looked after is, within a very small percentage, quite as good.

52. Has not the Telephone Department received great complaints respecting faults in the present service?—Yes, at times, but more so in wet weather. It was not until after some time that the cause was found out. I make all my own cables here. I import the wire and make it up, and the total cost is 20 or 30 per cent. less than if I imported the cables manufactured. I use nothing but the best wire, and I import it all in single strands and spin it up here. In the manufacture here, although the supervision is very careful and close, sometimes a mistake will occur, and a wire be rendered good for nothing. But these are mistakes which will always happen.

53. The Committee have been told that a number of telephone subscribers would be willing to pay something more per annum if this complete metallic circuit was given them. Has the department received any information of it?—No. I know nothing about that. It is the first time that I have heard anything about it.

54. Do not merchants object to having what they say through the telephone heard by others?—There is very little cause for complaint on that score. We have long stretches—seven, eight, and ten miles—in connection with the exchange, and they work very satisfactorily.

55. Do you approve of the McClure system, where all the wires are joined up to one common return?—Yes; it is a good one so far as it goes. It becomes unmanageable, however, when you come to a system where there are a large number of wires. In Dunedin, take Princes Street: we run wires across that street in many directions. Every one of those return wires is connected with a water-pipe. Just picture our running a copper wire from every telephone across that street to pick up the other pole of the telephone (the return wire). If it were only eight or ten it would be nothing, but there are nearer a hundred. I do not take any antagonistic interest in this affair at all. I see certain damage coming to the public property, and it is my duty to warn the Government.