long as a test of the original condition of the cable when laid, without being long enough to prove its durability while under water, and they would recommend that the contractors should be required to maintain the cable for six months. With this modification the price would presumably be varied in approximately the following manner:-

Delast and of maintaining for those many (this may much at 640,000	1,517,000
Deduct cost of maintenance for three years (this was put at £40,000 a year for the two ships and £30,000 a year for the cable used)	210,000
Add for maintenance for six months at the same rate Add for purchase of two repairing-ships	1,307,000 35,000 80,000
	£1,422,000

Or in round numbers, and leaving a margin of £78,000 for miscellaneous expenses payable out of capital, £1,500,000.

46. It seems probable that another firm would offer similar terms.
47. As regards the probable cost of a cable of the second of the above types, the information

laid before the Committee is to the following effect:-

48. The Telegraph Construction and Maintenance Company estimated that the price for such a cable from Vancouver to New Zealand via Honolulu would be £1,870,000, this sum including the cost of five stations, estimated at £37,000. This distance (without slack) would be 6,352 nautical miles, and the longest span (Vancouver to Honolulu) 2,325. The route recommended is (without slack) 7,186, and the long section is about 3,200. The price of this type therefore, on the basis of the above estimate, would considerably exceed £2,000,000.

49. The Indiarubber, Guttapercha, and Telegraph Works Company stated, in reply to a question from the Canadian Government, that their price for a fifteen-word-per-minute cable would be £1,672,000, and for eighteen words £1,880,000, but specifications for these cables have

- not been given.
  50. The representatives of the Eastern Extension Telegraph Company estimated the cost of the cable, with a core of 650 lb. of copper and 400 lb. of guttapercha between Vancouver and Fanning Island, allowing 15 per cent. or more for slack, and including the cost of erecting stations and supplying apparatus, at about £1,650,000. The Henley Telegraph Works Company tendered for a cable of this type, with completely equipped and furnished stations and cable-huts, for £1,492,000.
- 51. Mr. Preece also estimated that a cable, of a heavier core over the section to Fanning Island (800 lb. copper and 550 lb. guttapercha), would cost a little over £2,000,000. It seems therefore possible that a cable of the dimensions under consideration might be had for £1,800,000. It would not be prudent to put the whole capital required for such a cable at less.

## Working-expenses.

52. The annual working-expenses at the stations on the line may, the Committee consider, be

put at £17,000, having due regard to their position and the cost of living.

53. For the central management £5,000 is allowed, making a total for annual workingexpenses of £22,000.

## Maintenance and Repairs.

- 54. With regard to maintenance and repairs, it is, of course, impossible to forecast what interruptions would occur in any year and what expenditure would be incurred in restoring communication. It may, however, be remarked that repairs of a cable are the substitution of new material for old, so that in course of time the whole of the cable might be replaced; and this circumstance affords some guide as to the annual sum which should be set apart, on the principle of providing not merely for the cost of annual repairs in case of interruption, but for the entire replacement of the cable, so far as might be found necessary within some definite period. Thus the replacement of the cable would be completed in forty years by laying two hundred miles of cable a year; and, taking the cost of cable, in round figures, at £200 a mile, this process would, on that basis, be effected by devoting £40,000 a year to this purpose. It is not suggested that it would be necessary to replace every part of the cable in such a period, or that such a sum would be expended each year on repairs, but the fact that the sum named would not only meet current repairs, but would in forty years be equivalent to the replacement of the whole cable, indicates, in the opinion of the Committee, that it is as great a provision as need be made under this head. To it, however, should be added the fixed expenses of two repairing-vessels, which may be put at £30,000, making £70,000 in all.
- 55. It should be added that the evidence clearly shows that the great depth of the Pacific will be a favourable factor in determining the life of the cable, while it will be an unfavourable influence on the facility and cost of the necessary repairs.
- 56. The provision suggested would therefore, it is estimated, in the shape partly of new cable and partly of unexpended balances, perpetually maintain the value of the cable as an asset.

## Total Annual Charge.

57. To the expenses of working and maintaining the cable must be added the annual charge for interest, and provision for replacing the capital at the end of a certain period.

58. Having regard to the character of the work, the Committee think that a period of fifty years might reasonably be allowed for the latter purpose.