

C. W.
Howell, Esq.

24 April
1866.

with a private dock-owner at Hong Kong to alter the depth of his dock so as to take in the largest class man of war?—I was not aware of that arrangement.

1559. Mr. Childers.] Do you know how many feet over the sill you have at Hong Kong?—I do not think we have ever had any difficulty with regard to the depth of water; we docked the "Columbian" there; she has rather a large draught of water; I suppose her dock draught would be about 18 or 19 feet.

1560. Are you not aware that the Government arranged to increase the depth of Mr. Lamont's docks to 24 feet?—I am not aware of that; with regard to a question which was put to me by the honourable Member for Birkenhead the other day, as to the navigation of ships in the Indian seas, perhaps the Committee will permit me to say that I have brought with me a return showing the consequences of the transfer of vessels employed in the Mediterranean service to the Indian seas. I take the case of the "Mooltan," and I find that we got an increase in the consumption of coal of 1 cwt. 8 lbs. per mile, and a decrease of 1-8th of a knot per hour in speed. In the case of the "Ellora" we had an increase of 3 qrs. 25 lbs. (nearly 1 cwt.) in the consumption of coal per mile, and a decrease of half a knot in speed.

1561. Mr. Laird.] Can you state what the total consumption was for the mile?—In this case of the "Mooltan" I think it was 3 cwt., and it was increased to 4 cwt.

1562. Mr. Childers.] Are you aware that the Government transport service is only proposed to be between Suez and Bombay?—I was not aware of it until reading it in the Parliamentary papers last evening.

1563. Have you any doubt that the docking accommodation at Suez and Bombay would be practically enough for that service?—I think that the present docking accommodation might be found insufficient, because a vessel under heavy repair, will sometimes occupy the dock a very long time. It is an inconvenience which we are frequently subject to. We recently repaired and refitted the "Simla," a very large vessel at Bombay, and she necessarily occupied the dock a very long time to the exclusion of other vessels, which we should have been very glad to have put in for the mere purpose of cleaning.

1564. Considering the nature of the steamers that the India Office propose to employ between Suez and Bombay in the transport service, do you conceive that the docking accommodation is insufficient for them?—The present docking accommodation would probably be found inadequate to all the requirements that would arise in connection with a large fleet.

1565. I mean as to the Government dock accommodation?—I do not think I can answer that question.

1566. Mr. Laird.] Have the Government a dock of their own at Bombay which can hold those large transports?—There is a Government dock at Bombay, but I cannot speak to the capacity of it. I could procure the information; I have it at the office. I am told that the Government dock at Bombay could not take in the contemplated vessels.

1567. Some questions have been asked you about the docks at Suez, in which I understood the honourable Member to say, that the French

Company were to pay the same amount for the transit across the Isthmus as you were to pay, but that the money was to go towards paying for those docks; are you aware of that?—I was not aware of the manner in which the money received by the Pasha from the French Company is expended. We know how he spends the money which he gets from us; he has been buying steamers lately, providing a fleet of steamers for himself; and it all goes in that way.

1568. Do you suppose that the honourable Member is correct in his supposition that those docks when completed will belong to the Egyptian Government?—I am not aware that they have any hold upon them.

1569. If the Egyptian Government are paying for them by instalments to the French company, the object no doubt is in the end to get possession of those docks?—I am quite unaware of the nature of the arrangement.

1570. Should there be such an arrangement, and the dock became the property of the Egyptian Government, then it may be opened to your steamers, and to the Government steamers?—Yes, we look forward to having access to those docks, whether they belong to the Messageries Imperiales Company or to the French or Egyptian Governments; if a dock is not occupied, we generally find the means of getting permission to use it.

1571. Mr. Ayrton.] How much do you pay as the contract rate from Suez to Alexandria?—The charge is 4*l.* 10*s.* for a first-class passenger, including three cwt. of luggage. It has been much reduced within a few years; we used to pay at one time 12*l.*

1572. Do you know enough of the climate and circumstances of India, to be able to say how far the difficulties which you have hitherto experienced in an influx of passengers at one time, and a diminution at another, would be overcome by through communication by means of the railways in India?—No, I do not; we have endeavoured at different times to distribute the passenger traffic more evenly over the year; we tried it once, but without success, by reducing our rates of passage money at those seasons when passengers were most averse to travelling. We made a very considerable abatement in the passage money in what is called the hot season, but we could not succeed in distributing the passengers over the year.

1573. Are you aware of the difficulties that arise, to a considerable extent, in travelling to the ports from the interior of India, at some seasons of the year?—I have had no practical experience of that. With respect to the sea passage, I may mention one case: two years ago, the heat of the Red Sea was such, that notwithstanding we had the mails on board, the commander of the vessel was obliged to turn the ship round and to put her back over her course in order to produce a current of air through the ship, and to enable them, in fact, to breathe. That was an extreme case.

1574. Have you no means of creating artificial ventilation in your vessels to the east?—Yes, they are all fitted with punkahs, and we have been attempting to introduce some means of ventilation by air pumps worked from the engines, but it must always be borne in mind that with a temperature of the atmosphere of perhaps 100 degrees, the air, when set in motion, may appear to be cooler, but it does not produce much effect; then

C. W.
Howell, Esq.

24 April
1866.

then the temperature of the sea is very frequently over 90 degrees.

1575. But where the temperature of the external air is so very great the ordinary natural ventilation ceases, does it not, on board ship?—It does, in a great measure; and it frequently happens that at the hottest season of the year the wind is blowing up or down the Red Sea at about the rate the vessel is going, so that she is travelling through a perfectly stagnant atmosphere.

1576. Would you like to say that you have got a well-ventilated ship at all in your service between Suez and Calcutta, and Bombay, or, rather, a well-ventilated ship, suited to the climate?—We think that we have done everything to produce that result that can possibly be done, and I think we may claim to have done it as far as is practicable. I have no doubt that we should all feel it very inconvenient to be in a vessel at such a time. We know that the passengers lie about the ship; they leave their cabins and their berths, and have their mattresses brought on deck; but they do that as a matter of choice.

1577. Mr. Marsh.] You state that the consumption of coal in the Red Sea increases, and that the speed decreases; is not that partly owing to the heat of the water, which prevents the steam condensing?—That is one cause; and in addition to that, the coal that is burnt on the other side of Suez has, in all cases, suffered great deterioration, it becomes very dusty and friable, and the flues of the boilers are choked; then again we have a difficulty in procuring labour; in fact, it is all native labour in the engine-room; the work of firing the furnaces is all done by natives, and we have to employ about four men instead of one, and do not get the work so well done.

1578. The heat in the stoke-room is sometimes 150 degrees, is it not?—There are cases of such heat as that.

1579. That is almost too much, is it not, for any European?—It has the same effect as a Turkish bath; they perspire and drink a great deal; it is, of course, too much for some people. We have a considerable percentage of engineers, and of our staff generally, on the sick list, and a consequent increase of expenditure.

1580. Mr. Laird.] Have you ever been on board the Cunard vessels?—I have not; I have not been much of a traveller myself.

1581. You give a much greater space, I think, than there is in any vessel running across the Atlantic, for the passengers in the cabins?—I think that our cabins are more roomy, as a rule, than those on board the vessels that run across the Atlantic. The individual passenger has more space.

1582. Therefore you cannot carry so many passengers as they can in those Cunard vessels?—On one or two occasions we have had vessels in our service fitted on the Atlantic model, and we have found that they are totally unsuitable for our route; a flush deck, with cabins on each side, so as to get a good current of air through the ship, is what we require; the deck-house plan is altogether unsuitable for our purposes.

1583. When you have bought other vessels have you generally had to take down the cabins and to alter them?—We have had to refit them entirely according to our own plans; but we have not done that until we have found them to be unsuitable for our purposes.

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1584. Admiral Seymour.] With regard to coals at Suez, is there any chance, in your opinion, of the coals being cheaper owing to the French being able to make their canal?—If the canal became available for the transport of coals, it would perhaps have some effect, but we are looking forward to some reduction in the cost of coals at Suez when conveyed by rail. In the return which I put in the other day, the actual cost of our last transport of coal across the Desert was 28s. Our chairman has been in Egypt within these six weeks, and one of the things which he hopes he has arranged with the Egyptian Government is some reduction in the cost of the transit of coals; but there is only a single line of rails, and the traffic of that line is so great that we cannot expect any great reduction at present.

1585. With regard to this canal, I believe there is water running through it now, is there not?—I believe they carried six or eight tons of coal through by the canal; they came to us to ask us to buy those coals as a favour, for the sake of being able to say, probably, that they had supplied us with some coals.

1586. Whenever they get their canal the coals could not cost 28s. in the transport; they must be cheaper then, I apprehend?—Yes, certainly.

1587. Chairman.] You stated the other day that you would put in a statement of the weight and measurement of the mails sent from Southampton for the years 1864 and 1865; have you that statement with you?—I have a complete statement of the number of packages dispatched by each vessel from Southampton for the years 1864 and 1865, distinguishing the India, China, Bombay, and Australian mails. This, of course, only indicates, in a certain degree, the quantity of mails that we carry; some are dropped upon the voyage, and, of course, others are taken in. But I think I may say that our vessel for Australia leaves Point de Galle with about the same number of boxes, and the same bulk of mails on board, as shown in the return from Southampton.

1588. What is the greatest weight of any mail in that statement?—I see that on the 4th of November last year there were shipped on board the "Tanjore" at Southampton 106 tons measurement, and 49 tons weight of mails for India, China, and Australia. I think that there may be even a larger amount than that.

1589. Have you any other returns that you wish to put in?—I have brought up one return (*delivering in the same*) to show that the Company has not been standing still, as I heard a witness state the other day. This is a list of the ships we have built and purchased from 1859 to the present date: 28 ships have been built and purchased since 1859; the total tonnage of those ships amounting to 48,986 tons, and the horsepower 10,190.

1590. We may assume that all the ships were of the best construction and containing the latest improvements up to the time of their being built?—Yes; in some of them especially we made an effort to produce something in the way of reducing the consumption of fuel, which should perhaps exceed anything that has been hitherto done, but we have been to a certain extent disappointed; we hope, however, to overcome the difficulty in time.

1591. Have you any statement of the mileage rates of passage money that you charge?—Yes; I have brought a statement in which our rates of passage money are put in comparison with those

of

C. W.
Howell, Esq

24 April
1866.

of the Cunard line. There is a great deal of misapprehension existing upon that point; I take our rates in every case to and from Southampton, and their through rate from Liverpool to New York. Our rate from Southampton to Alexandria is 30 *l.*, the distance being very nearly the same as between Liverpool and New York; and we include in our victualling, wines and spirits *ad libitum* to the first-class passengers. Our rate to Alexandria comes out at 2½ *d.* per mile; our rate from Southampton to Bombay is 3½ *d.* per mile; the rate from Southampton to Calcutta is 3 *d.*; the rate from Southampton to Hong Kong is 3 *d.*, but from Southampton to Sydney it is only 2½ *d.*; I take the chief cabin fare by the British North American Royal Mail steamships from Liverpool to New York, and I find that 25 guineas is their rate for the same class of accommodation as I have taken in our case; they provide first-class victualling, but they exclude wines and spirits; and their rate comes out 2 *d.* and a fraction per mile.

1592. Have you any statement of the French rates of passage-money outwards?—That will be found to be identical with ours to and from every place with which the two companies are in communication. I will put in a return which will show that (*delivering in the same*).

1593. Have you a summary of the postal convention of the Messageries Impériales?—I have the convention here in the original, but I have also a summary of the leading points of their contract, which contains a great deal of matter of interest. There are some points which might have a very material bearing upon the question of combining their service with ours.

1594. Will you just mention those points to the Committee?—I may mention that their contract is for 24 years, with three years to start it. Then to indemnify the Company for the expense of sending the ships to the India and China seas, a sum of 75,000 *l.* was allowed them. That is a permanent expense with us. We are always sending new vessels out, and sometimes we have to bring others home for repairs; it is an expense of from 5,000 *l.* to 10,000 *l.* always to send one out or bring one home.

1595. Mr. Childers.] That 75,000 *l.* to the Messageries Impériales is a bonus at starting?—Yes, it is a bonus at starting. Then the State advances them, in capital, 12,000,000 francs, or 450,000 *l.* This debt will not be productive of interest. It is to be reimbursed by the Company in 12 annuities of 42,000 *l.* Then this is an important clause, that at the expiration of the 12th year of the working of the service of India and China, and under condition to give notice to the Company of one year in advance, the State will have the right to cancel the concessions made to the Company. Should the State not make use of this power, the contract is to be carried out for the full period of 24 years, but in case of the contract being cancelled the State shall, on the demand of the Company, take over all the “naval material” (by which I understand their ships,) employed in the Indo-Chinese service. It shall, also, re-purchase the stores of coals and plant of all descriptions collected to the eastward of Suez, for the use of the workshops and navigation of the Company, in fact all establishments on shore specially created for this service. The value of these to be settled by a professional valuation. Then this is most important. The State binds itself not to subsidise any private

service from any part of France, or from Suez, in connection with ports already comprised in the convention with the Company. Our Government give nothing of that nature, of course. In case of war, the State takes the risk of capture and other damaging results, unless it shall have released the Company from the performance of its services. So that, in case of war, the Government have only to say to the Company, we release you from the performance of your service. If the State should not so release the Company, it shall be in its power to carry on the service in whole or in part, at its own risk and peril. If the service is suspended, the State has the power to take immediate possession of the vessels remaining without employment, with all their stores and equipment. So that they have only to signify to the Company that there is a state of war, and that they carry on their business at their own risk, and immediately take possession of all their ships and material.

1596. Chairman.] What is the subsidy?—The subsidy is on a sort of sliding scale; for the first three years they are to have 300,000 *l.*; for the next three years, 280,000 *l.*; for the next three years, 260,000 *l.*; for the next three years, 240,000 *l.*; for the next six years, 220,000 *l.*; and for the last six years, 200,000 *l.*; the average amount per mile is 25 *s.* for the first period, and 20 *s.* for the second period.

1597. Mr. Weguelin.] Have you examined their reports to their shareholders?—I have the last two.

1598. Do they report that they have made a profit by the India lines?—If my memory serves me, in their first report, after they had been at work for 12 months upon the line, they expressed a great deal of disappointment, and they explained to the shareholders that the India-Chinese line had not of itself produced sufficient to pay a dividend, and that consequently they had gone to their Atlantic line to make up a dividend upon the India-Chinese service. I think I am correct in saying that.

1599. Mr. Ayrton.] With reference to the rates of passage-money charged by the French Company, are you aware whether they make any distinction between first-class berths forward and first-class berths aft?—The French vessels are fitted in some degree differently to ours; but in the return, we have taken that class of accommodation of ours and theirs which exactly correspond to each other; at least, as nearly as possible.

1600. Is not it the fact that on the other side of Suez it is more agreeable to be forward than aft, especially in a screw vessel, and that, practically, by their making a lower rate for their berths forward, they do charge very much less than you do for a certain part of their accommodation to first-class passengers?—We find that experienced passengers in our vessels are generally willing to go forward. An experienced passenger generally selects a forward berth if he is going at the hot season.

1601. Do you make no difference in your rates?—No, we do not.

1602. Do not the French charge considerably less for many of their berths forward; and, therefore, do they not, in effect, charge very much less than you do for a great portion of their first-class passengers?—I think that the berths to which you refer are upon the lower deck. I am not quite able to answer that question; but they have

have subdivisions of the passage money which we do not make, and some of those subdivisions apply to a class between what we should call the first class and the second class.

1603. Are they not merely the allocation of berths, and are not the berths that they give at the lower rate just as good as the berths that you give at the higher?—No, I think not. We have what we call reserved accommodation, for which we charge a higher rate, and so do they also. I think that that is, perhaps, the point that you have in your mind, we have omitted from the comparison what we call reserved accommodation and what they call reserved accommodation, and have brought our rates for ordinary passengers into comparison with their rates for ordinary passengers. I have their handbook here, which I have procured since the last meeting of the Committee; it does not indicate that distinction to which you refer (*handing the same to the Honourable Member*).

1604. Sir Henry Rawlinson.] Do you know what number of ships they have on their line?—I think they have seven or eight ships; their communication is only once a month, and their obligation under the convention, I think, is to send out eight vessels.

1605. What is the aggregate tonnage of those seven or eight vessels?—They are larger vessels than ours. I think they are vessels of nearly 3,000 tons burthen. I see the company engages to have afloat, three years after the date of the concession, 12 steamers; four of those steamers from 400 to 500 horse-power, and eight of 228 horse-power. Those 12 steamers must be, or must have been, built in France; the average speed per hour to be nine and a-half knots and nine knots respectively, and of this number of

vessels, four on this side, and eight on the Indian side.

1606. Mr. Moffatt.] What is the date of that convention?—It is dated the 3d of July 1861. I have it here at length, in the original, if it is desired to have it appended to the Report (*delivering in the same*). I would ask permission to correct a little mistake which I made in referring to our commissariat the other day. I think I stated that we consumed 1,300,000 bottles of wine. I should have said wine, spirits, and beer.

1607. Mr. Ayrton.] Have you ever tried the experiment of separating the consumption of those things from the general passage money?—We have not tried it, but we feel quite assured, from the experience of a number of years, that it would not suit on board our vessels; it would not meet the taste of the majority of our passengers. It is a matter that we are asked to do sometimes by a passenger who abstains from wine and spirits; but we are quite persuaded that it would not answer in the case of Indian passengers generally.

1608. Do you not think that it would prevent a great deal of waste, and economise very much the expense of the journey?—It would involve the necessity of what you might call a bar on board the vessels; in fact, for myself, I am perfectly persuaded that it would not be found to answer. It has been looked to, and very seriously considered on many occasions.

1609. Mr. Laird.] Are you aware that in the Cunard service they have excluded wine and spirits, and allow people to pay for what they get?—They do; but I think the class of passengers is different; our voyage is longer, and there would be very great inconvenience in an Indian voyage in doing as they do.

RICHARD ATWOOD GLASS, Esq., called in; and Examined.

1610. Chairman.] I BELIEVE you are the Managing Director of the Telegraph Construction and Maintenance Company?—I am.

1611. You have had a great deal of experience, have you not, in the construction and laying down of telegraphs, both land wires and submarine cables?—Yes, considerable experience.

1612. Will you state some of the lines with which you have been so connected?—I may mention some of the principal lines, commencing as far back as the year 1853; the original line between Dover and Calais, the Hague lines, the line from Newfoundland to Nova Scotia, and many other lines in different parts of the world. The last important line is the Malta and Alexandria line, the cable for which was originally designed for a line from Falmouth to Gibraltar.

1613. You are well acquainted generally, are you not, with the lines of telegraphic communication between this country and India?—Yes, necessarily so.

1614. Do you know anything, practically, of those lines?—Yes. I may say, that when the Malta and Alexandria line was completed, my late firm, Glass, Elliot & Company, entered into an arrangement with the Government to take a lease of the Malta and Alexandria line on certain conditions, and to work it in the best possible way. The result of that was that I went out to Malta and opened the line, if I may so call it, taking with me European clerks, and establishing a communication, as perfect as we could, between Malta and Alexandria.

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1615. Have you a lease of that line from the Crown?—We had a lease of five years from Her Majesty's Government. R. A. Glass, Esq.

1616. Has that lease been extended since?—Yes, that lease has been extended since.

1617. What are the conditions of the present lease?—One of the conditions of the present lease is a per centage, to be paid by the company which I represent, being at the rate, I think, of 3 per cent. upon the whole outlay in connection with the line.

1618. How much does that amount to per annum?—I think about 15,000 £. a year. But I may say, at this stage, that the figures representing the cost of that line are very considerably higher than they should be, inasmuch as they contain the cost of the line, originally intended to be sent out, to be laid between Rangoon and Singapore. I may say, that a similar line could be constructed now at very nearly half the cost.

1619. Then 500,000 £. is assumed to be the whole sum that the Government are out of pocket, in one way and another, in connection with the line which now lies between Malta and Alexandria?—Yes, the cost is 480,000 £., I think, including every expense.

1620. You pay the Government now 15,000 £. a year as a return upon the capital expended upon that line?—Yes. There are other conditions; we have to maintain it.

1621. Mr. Childers.] Is that lease completed?—It is in course of completion. There is a good deal of detail necessary before we can complete it;

C. W. Howell, Esq.

24 April 1866.

R. A. Glass,
Esq.

24 April
1866.

it; there are some conditions in connection with that lease which involve the expenditure of a sum of 98,000 *l.* or 100,000 *l.*, within a term of 10 years. I should explain that that outlay became necessary in consequence of the cable that was laid there never having been designed for that spot; it was designed for deep water, and has been laid in shallow water, and the result is that it is constantly requiring repair in the shallow water, and it is being replaced with heavy cable suited for shallow water, at a great additional cost; under the terms of our lease we have sent out a cable of the value of 50,000 *l.* or 60,000 *l.*, which is used from time to time, as the light cable becomes inoperative.

1622. *Chairman.*] Do you charge the cost of those repairs?—No.

1623. The Government, you say, get 15,000 *l.*?—Yes, nett. The lease is for 42 years, with the option, on the part of our company, to limit it to 10 years.

1624. You are now, by means of that wire, bringing to Europe the telegraphic communications which pass between Europe and Egypt?—Up to the present period we have done so; I may, perhaps, now give a little history of the working of it, because I think it will bear upon the point. When the line was first handed to us by the Government, now five years ago nearly, it was presumed that it would be comparatively valueless; in fact, we were considered great speculators in taking a lease from the Government of such a line, although it was upon a sliding scale at that time; whatever we received the Government got a portion of. It was then supposed by telegraph companies, who knew something about it, that it would be a very losing concern, and so it would, had the business continued as we found it, inasmuch as, in those days, a message from London to Malta frequently occupied a week in transmission. I have known a message, when I was out there, 14 days on the way, and on its arrival in Malta it was perfectly unintelligible. Therefore, my attention was first directed to clear the road, as it were, up to Malta from England. That resulted in the Italian Government, during the time that Baron Riccascoli was in power, giving to our firm, Glass, Elliot & Company, a concession under which we had the power, and exercised it, of placing our own clerks in the Italian offices, receiving our messages from England and forwarding them by our own clerks to Malta, and so on to Alexandria. The result of that was, that the speed increased very materially; it was previously, from a week or 10 days; before I left Alexandria, the working of the whole of the day caused only a delay of five hours upon the whole of the traffic, and the traffic afterwards increased from 200 *l.* a week to nearly 3,000 *l.* In other words, the merchants of Alexandria, when they found that they could get an answer within 48 hours, used the telegraph two and three times a day, many of them.

1625. Forty-eight hours between what points?—Between London, Liverpool, and Alexandria. After Baron Riccascoli left office there was great jealousy on the part of his successor to English clerks being in the Italian offices, and the result of that was that they said they must turn them out unless we paid the whole of their salaries. I felt it so important to keep them there that I agreed to do that at once. But that did not last long; they said they must get rid of them alto-

gether; that their own clerks were now in a position to execute the work properly, and that they did not require the interference from English clerks, and that they must get rid of them. We were obliged to withdraw them, and, as we naturally expected, the business fell back again; not only were there very serious delays, but such mistakes as rendered the messages perfectly unintelligible. At the time when our own clerks were there we found no delays, and the messages were received without mistakes. You might read them, as I have been in the habit of doing, some 40 or 50 together, and you would see at once that there was no error.

1626. *Chairman.*] Am I correct in believing that the errors you refer to arose entirely from circumstances connected with the Italian administration, as distinct from the French administration?—I am not prepared to say that to the fullest extent, but I may say a very large majority occurred in Italy.

1627. A message sent from London goes, in the first instance, to Paris, does it not, and from Paris to Turin?—Not always. If the express wires, as they may be called, are free, that would be the course. The usual course is that London speaks direct with Paris; Paris with Turin; Turin with Naples; Naples with Malta; Malta with Benghazi; and, by translation, Tripoli and Benghazi with Alexandria. That would be what we should call express working; but it does not necessarily follow that that is always carried out.

1628. Speaking for the most part, you have no reason to charge the French administration with sending messages on in an imperfect manner?—No; certainly not to any great extent.

1629. Your difficulties were entirely in Italy?—I attribute, I should think, three-fifths, or I might say four-fifths, to causes which I will explain; and, first, I may say, that all the employees are under the Government.

1630. The Italian system extends from Turin, by way of Naples, to Sicily?—Yes.

1631. Does it go beyond Cape Passaro?—No; the Mediterranean Extension Company there come in with 60 miles of line between that point and Malta; and they take up the traffic for that 60 miles, and we take it from Malta.

1632. Is that a separate and independent company, under a guarantee from the Government?—That is the only company under a guarantee from this Government, and they have that 60 miles between the Malta and Alexandria line and the Italian line.

1633. In whose hands is the administration of that part of the line?—It is in the hands of a company called the Mediterranean Extension Telegraph Company.

1634. Do messages pass into their hands at the termination of the Italian system at Cape Passaro?—Yes, and also at Malta. There is that administration between the Malta and Alexandrian administration and the Italian.

1635. Have you any knowledge of the financial position of that company with respect to the guarantee?—Since the Malta and Alexandrian line has been opened, I believe the traffic has enabled them to pay a dividend without having recourse to the Government. The increase of traffic has been such that their guarantee, which is a conditional one, has not come into operation. Their original capital, I may say, was lost, inasmuch as the lines to which that guarantee was given

given became inoperative, and were lost. Now they have two lines, one from Sicily to Malta, some 60 miles probably; and the other from Otranto to Corfu, some 60 odd miles; both which lines are in working order, and I believe that those two lines are their only property at present.

1636. In the event of your desiring to do so for the purpose of obtaining one uniform management throughout, so far as the English part of this communication is concerned, should you have any difficulty in acquiring the control over that line by means of a lease or otherwise?—I am not prepared to say. I may say that certain negotiations were opened between the two companies; but they feel, I think, that, having the Government guarantee, they are not dependent on the traffic for dividend.

1637. Have you any hope of being able to get restored to you that power of control in the Italian peninsula?—I may say that we are rather beyond hope, for through the instrumentality of Mr. Elliott, our Minister at the Italian Court, and Sir James Hudson, and some other influential people, we have lately obtained from the Italian Government a concession for a through line from the French frontier to Sicily; the through line to be our own; the line to be used only for our own business, and to be worked by our own clerks; and also a further concession for a line from Sicily to Benghazi, also to be worked by our own clerks, in which case we should avoid Malta. But there is also a feeling on the part of the Italian Government, that if they should be asked by parties interested to grant them a concession to Malta, they would do so if it were necessary. But I do not know that that could be rendered necessary, because we have a duplicate line *viâ* Benghazi to Malta, so that if we worked from Italy to Benghazi we might work back to Malta; for although the distance is great, in a telegraphic point of view, it is merely nominal.

1638. With whom does the power of granting the privilege of approaching Malta from Sicily rest?—The power of approaching Malta from Sicily would rest with the English Government. The English Government, of course, have a right at Malta to prevent anyone using the cable there without their consent. The Mediterranean Extension Company, at the time when they made the arrangement with the Government for the 6 per cent. guarantee, I believe gave up, as far as the English Government were concerned, any exclusive privilege that they might have.

1639. Have you recently pressed the English Government to make a line from Malta to Benghazi?—Not from Malta to Benghazi, but from Sicily to Malta. If it were deemed expedient that there should be a duplicate line between Sicily and Malta the English Government must give their consent to any party except the Mediterranean Extension Company landing a cable there.

1640. I understand you to say, that looking to the fact of the French service being good of its kind, to the fact that you have made arrangements with the Italian Government for having a wire of your own and operators of your own in the dominions of the King of Italy, and to the fact that there is now a communication from Sicily by way of Malta and Benghazi to Alexandria, we may assume that for all practical purposes there is a prospect of a good and continuous communi-

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cation by telegraph with Egypt?—No doubt, subject of course to certain objections. I may state that although the telegraphic system in France, as regards the administration of it, is very good, yet we must not shut our eyes to the fact that there is a species of espionage there which is astonishing to English people.

1641. What is the state of the telegraphic service at the present moment in Egypt generally?—At present in Egypt our company have a lease of the short line from Alexandria to Suez, and before the line was open to India *viâ* Constantinople, we received a great many messages from India to Suez.

1642. That is the fragmentary residue of the telegraph to India Company's property?—That is the last portion that is left, and the only available portion. Our company pay them a rental of 2,500 *l.* a year, which just pays 5 per cent. on their capital, and we have the use of the line.

1643. A communication has been opened, has it not, between Alexandria and Diarbekir in Armenia?—Yes, *viâ* El Arish.

1644. Is that in operation now?—It is in operation, and I have received communications from Egypt very unsatisfactory in this way: that inasmuch as the continental Governments regulate their own tariff, and have reduced their tariffs for through messages very materially, the cost of a message *viâ* Constantinople and Syria to Alexandria, is less than it would be *viâ* Malta to Alexandria. Then they have a rule on the Continent, that every message must be sent through the cheapest route, without reference to speed or distance. The consequence is that merchants have been complaining that their messages have been four and five days on the road, and that some have not been received at all since the opening of this line *viâ* Constantinople.

1645. Is that line the property of the Turkish Government?—A portion of it, up to El Arish, the Egyptian Government take; from El Arish to Diarbekir it is Turkish.

1646. Does it go through Aleppo?—I do not know the exact route; it is a coasting line that I am speaking of now. I am speaking of the telegraph between Alexandria and Europe, not between India and Europe. There is a coasting line round Turkey, which is an alternative route to Alexandria from Europe.

1647. If that line were in good order, and the business were well conducted, it would afford, would it not, by means of passing a message from Diarbekir to Alexandria, a very good alternative against risk of accident in European Turkey or in Germany?—Yes, an excellent alternative. It takes four or five days now to send a message from London to Alexandria *viâ* Constantinople. I have a message here, received from Egypt, from Alexandria, on the 3d, singularly enough sent by our manager in Egypt, as showing how they are working now. This was a message, sent from England to Egypt on the night of the 2d of April, to Nubar Pacha, the Egyptian foreign minister. On the morning of the 3d, at 9.18, he wished to know who had signed that message. Our manager in Egypt telegraphed to London at 9.18 a.m. on the 3d of April: "Alexandria to London.—Repeat sender's name in No. 142, 2d April, addressed to Nubar Pacha." And the reply was received at Alexandria at 1.55 p.m. on the same day from London. That telegram left Alexandria at 9.18 a.m., and the information was obtained, and it arrived in Alexandria on the same day,

L 2

R. A. Glass,
Esq.24 April
1866.

R. A. Glase, at 1.55. At Alexandria the merchants are complaining that it takes four days. We could send a message in four hours, but, inasmuch as the Constantinople route is cheaper, the foreign administrations send by it as a matter of course, and the sender here cannot control it.

24 April
1866.

1648. Mr. *Moffatt*.] Can you state the difference of cost?—I have not seen the tariff, but I think their price is 30 s., and ours is 2l. 10 s.

1649. Mr. *Childers*.] Do you mean that the majority of messages between London and Alexandria go by Constantinople now?—They do now. Our receipts have fallen off one-half nearly since that route was opened. I had a message from a very important house complaining of this, and wishing to remedy it; they asked if they could send their message *viâ* Malta and Alexandria, but I am told that the foreign administrations would not even take notice of that.

1650. *Chairman*.] The practical remedy would be that you must reduce your charges?—Yes.

1651. In which case the public would get the benefit of the competition?—Yes.

1652. Mr. *Childers*.] Do you mean that if a telegram is sent from London *viâ* Paris to Alexandria, that message would be directed through Constantinople?—Yes; at present it would, unless marked and paid for the other way, according to the continental rules when a message arrives in Paris it immediately comes under the control of the Confederation, if I may so call it. They have certain rules laid down, and they go by the cheapest route without regard to speed.

1653. But I thought there were two Confederations, one of France, paid in Italy, and the other of Austria, Germany, and Holland?—Yes; the Austro-Germanic Union we have nothing to do with at present, or their line. We propose, and it is now under consideration, to have a line *viâ* Ragusa to Benghazi, by which means we should use the Austro-Germanic Union. At present, we are obliged to work with Paris.

1654. Are you speaking now of the France, Spain, and Italy Confederation?—Yes.

1655. How does that message go to Constantinople?—There are one or two routes, but I believe the majority of the messages go through Italy *viâ* Otranto and Valona across European Turkey, round to Constantinople, and so to Alexandria.

1656. Is the rate from London to Constantinople the same that way as by the Austro-Germanic Union?—I believe it is. I believe they have assimilated those rates very much; there may be a little difference.

1657. *Chairman*.] Have you sounded the bottom of the Mediterranean, between Ragusa and Benghazi, so as to know what you would have to meet with there?—We have made certain soundings, but the soundings for the submarine line, as originally conducted, and those taken now, are very different things; the soundings are incomplete. We have what may be called good deep sea soundings, but I do not think, from recollection, that there is more than 300 miles of what we should call very deep sea line.

1658. You have a very good bottom, have you not, as far as experience goes, between Malta and the coast of Tripoli?—Between Malta and Tripoli that cable has never given us the slightest anxiety, it is laid in deep water on a good bottom. It has been down six years and has never cost us sixpence.

1659. Your difficulty is in the neighbourhood

of Benghazi?—Yes, in the shallow water, generally, where the bottom is not properly surveyed. The system hitherto has been very much, to run a line by the map, without ascertaining what the bottom is, which is just like taking a railway over hills and mountains without surveying the line properly. We have found from experience that where the cable has worn out has always been in shallow water; it is more easily repaired, but it is an expensive operation. But that is the reason why the line, from Malta to Alexandria, was laid in shallow water, that it would not be lost, but could be repaired.

1660. Have you any account of the number of messages that you have carried over your line?—I can furnish the Committee with it, but I have not an account of the number with me.

1661. Have you any objection to state what your receipts have been?—No, they are published annually. Our receipts, including lost time, I think, are something like 50,000 l. a-year in round numbers, allowing for the time that the cable has been out of repair; that sum has absolutely been received.

1662. Out of that you pay 15,000 l. to the Government?—Yes.

1663. And the rest consists of working expenses and repairs, and your profit?—Yes.

1664. Is there any line of telegraph up the valley of the Nile?—Yes.

1665. How far does it go?—It is very nearly opposite Souakin; if the line is not already erected, it will very shortly be completed to Souakin, the materials are in Egypt for the purpose.

1666. Which is, I believe, in latitude 19°?—Yes.

1667. And, consequently, 13° to the southward of Suez?—Yes.

1668. Do you propose to use the land line for the purposes of communication with India?—Yes.

1669. In preference to carrying the line down the bed of the Red Sea from Suez to Souakin?—Yes, my reason for that would be this: the Viceroy of Egypt has in his employ, as his engineers and principal assistants, some Englishmen, and the line there, by the side of the Nile, is protected by the Viceroy, and wherever that is the case there is no fear of its becoming injured. If we had a wire of our own similar to that accorded to us by the concession in Italy, we should have the uninterrupted use of it without any interference from the Viceroy or his people, by making an arrangement with him to pay him a royalty of so much for every message. That would bring us to Souakin.

1670. That would carry your English management and English responsibility from the Italian frontier to Souakin and the Red Sea?—Clearly.

1671. Have you had an opportunity of seeing the evidence that was given by Mr. Latimer Clark, the other day, on the subject of continuing that line?—Yes.

1672. Do you agree with what he stated?—I agree with him very materially, but I think that I should go a little further than he does with regard to surveys. From our experience I think he hardly had time sufficient to survey the coast of the Red Sea and Arabia as it ought to be done.

1673. Commencing from Souakin southward?—Yes.

1674. Do you think that the bottom of the sea

sea there would require further investigation before you would proceed to lay down your line?—I think so. It is just at that point that the Government is proceeding with the work; but before we actually lay down the cable, I think that a much closer survey should be made, more particularly near the shores; I am speaking now with regard to the Alexandria and Benghazi cable, and all that line of sea coast; the promontories there are very rocky, but we find that within a few fathoms of that we get sand, and if the cable had been laid in sand, instead of on rock, we should not have been put to the expense of many thousands in repairing. You must have for these purposes as careful a survey for a submarine cable as you would for a railway, or more so if anything. We now know the cause of failure, and we must remedy it.

1675. With regard to taking a line down the Red Sea from Souakin to Aden, and so on by the route of the southern coast of Arabia to the entrance of the Persian Gulf and to India, do you see any difficulties of a formidable nature to encounter in that?—No, we have had occasion to go into that very fully, inasmuch as it was contemplated raising money to carry out that line. At that time Indian merchants were very much annoyed at the system of communication by the Persian Gulf, and they were anxious to have a line from Kurrachee to Bombay, and from Kurrachee to Aden. For that purpose we went very closely into it, and we arrived at the conclusion that we not only saw our way clear to lay the line, but upon certain terms we should be prepared to maintain it upon the same principle as we are doing the Malta and Alexandria line. That would of course involve closer surveys, but from the information that we obtained from persons who attended to the survey, Mr. Latimer Clark, Sir Charles Bright, and others, and our own engineers, we could see quite clearly that it could be done and maintained at a price.

1676. Does your scheme provide for the necessary funds?—Our scheme does not provide for any funds. We think this; that such a line must of itself be remunerative, and if gone into properly by people who understand the management, &c., it must be a remunerative investment.

1677. Have you any facts upon which you can test the amount of telegraphic business passing between the East and London?—I could obtain those facts. We have them in the office so far as our own line is concerned, and we could get them with the assistance of the Submarine Company to England, but that is no criterion, I think, with regard to the ultimate traffic. My experience of Alexandria was this: when I first went there, the messages were four days upon the route; a deputation of merchants had a meeting, and I met them, and they told me that if we could insure them a message in 48 hours, they would use the line to an extent that would astonish me. Before I left there, we got it to five hours, and I must say that the result did astonish me. We afterwards received as much as 3,000 *l.* in one week, as against 200 *l.*; when the line was first opened between Alexandria, London, and Liverpool; that is to say, one week it was 2,800 *l.*, and another week, 2,700 *l.*, but one week it was 3,000 *l.*; now the receipts have dropped again to 700 *l.*, because they cannot rely upon the speed *via* Constantinople.

1678. Do you recollect what season that was?—I do not recollect; I know that there were two

causes; the American war and the cotton had a great influence upon the number of messages; a rise of one half-penny or a penny a pound in cotton was some 300 *l.* or 400 *l.* a week in our pocket.

1679. The sum you mentioned of 3,000 *l.* was the amount actually received in that place for the conveyance of messages from Alexandria to Malta?—Yes, to and from Malta.

1680. Where did they go to after Malta?—To Liverpool and all over the world.

1681. Have you any account of the receipts of the Indo-European line?—No; I have not had access to them; we know nothing of that line except that our company manufactured the core and the insulating material of the cable.

1682. Is your company still engaged in considering the extension of this line to India?—We are considering it certainly; having got this concession from the Italian Government, we feel that the time has arrived when we must have an express wire, if I may so call it, for the purposes of telegraphic communication with Alexandria. I may say that the whole of the merchants of Alexandria, without an exception, some short time ago, sent a petition to our company asking them to lay down a duplicate or an alternate line, inasmuch as the whole trade of the place was almost at a standstill by reason of the shallow water line that I have been speaking of being out of order, and upon that we have taken action so far that we have been consulting certain parties with a view of getting them to take up the whole scheme.

1683. Has any proposition, that you are aware of, ever been made to the French Government for the purpose of giving any company here the power of transmitting messages through France?—I am not aware of it, but I should think such a thing would fail as a matter of course; I have had a great deal of business with the French Government, and have at the present time, and I know that they will not allow of anything that interferes with them; that is to say, they will give no one power in France but themselves.

1684. They take copies, do they not, of all messages?—I may speak with some certainty upon that. I was surprised at being shown, in the Director General's office in Paris, messages of our own between Alexandria and England to Her Majesty's Government from their agents; it was made no secret of. Of course it was an extraordinary thing to show me a message from the Government agents in Alexandria to the Government at home; but that is their practice. I may state, that in anything connected with the telegraph and other matters, in which they think they have an interest, the Director General has copies of all messages before him as they arrive, and I believe they do not go forward until he gives his assent.

1685. Was your company in any way a party to the proposals that were made for taking over the service of the telegraph on the railway lines in India?—Our company have been consulted upon it, and we have had it under discussion. One of our directors went out to India with a view of making himself master of the extent of it, and we expect that unless the whole thing is under one management you will never get a satisfactory result.

1686. You mean that it would be a great advantage to the public if, by constructing a line to Bombay by the Egyptian and Arabian route, you

R. A. Giddes,
Esq.

24 April
1866.

R. A. Glass,
Esq.

24 April
1866.

you were able by the same agency to send a message over the telegraphic and railway lines in India to any point with which those lines communicate?—Yes. I may illustrate that by this simple fact of the message of Nubar Pasha's, and the effect of getting an answer to a mistake in the same day is of immense importance in telegraphy. A man receives a telegram to send out 1,000 hogsheads of sugar, when it only means 100, and he does not know what to do; but if he can get his reply on the same day as to whether that is correct, and have it repeated, it becomes of great value.

1687. There would be great facility in identifying the responsible party, if anything were done amiss?—Exactly so.

1688. Have you had occasion to make any representations to any foreign government, with regard to the time required for making inquiries and giving answers to complaints?—Constantly.

1689. What is the time that they occupy?—Some two or three years ago it became a very serious case. There was a great complaint on the part of the public, and it was supposed that it attached to the English companies, that is to say, the companies at the other end. We knew that it was not so; and I wrote a letter to the Director General, at that time in Italy, drawing his attention to the delay which occurred in answering those questions; and I received a long letter from him, in which he said he thought that if the thing was settled in 18 months it was a reasonable time. He divided it into six months to consider it, six months to hand it to the different officers to report upon it, and six months to decide upon the answer and pay over the money. Their idea was 18 months.

1690. Have you given your attention at all to the present line of communication between London and India, by way of the Continent and Constantinople?—I have given it a good deal of consideration.

1691. Are you aware that there have been great complaints on the part of merchants, and other persons using that line, of delays and irregularities, and the incorrect rendering of messages?—Yes.

1692. To what do you attribute that?—I attribute it to a variety of causes, according to the different countries through which the messages travel. In Italy I trace it very much to this cause, that there is no good system of management there; they delay every message, no matter how important, if they have any messages of their own, particularly of an important character, to send. For example; I had occasion at Malta to see a message from the Governor General of India to Sir Charles Wood; that message was sent from Alexandria immediately on the arrival of the steamer, and was in Malta within five minutes; but it took the Malta office the whole day to get that message off to the first Italian station, and they did that at three different times; it was a very important message, and although it was a State message, and consequently had precedence of everything else, yet they said that they had their own State messages to transmit, and they were actually a whole day in taking this message from Malta.

1693. Was that under the administration of the Mediterranean Company?—Yes; but it was no fault of theirs. It arose in the office of the Italian administration. The Mediterranean clerk

at Malta would ask the Italian clerk at Naples or Sicily to receive the despatch. The clerk would say, "I am ready," and he would get off, perhaps, one-third of the message; then the clerk would stop him by saying, "I have a State message of my own," which, perhaps, was really some clerk asking another clerk at another station some unimportant question; and I have been told that that is very much the case, and the result was that this important Government message took a whole day to get through at three different times of transmission.

1694. Practically, through messages, though they may be of the utmost consequence, are subordinate entirely to local messages?—Yes, and the whole of the India messages of that day were delayed, and the whole of the mercantile messages were delayed until after this Government message went.

1695. Do you think that that objection exists with regard to the service through Germany and Turkey?—I may say, with reference to Turkey; that my experience of the Turks, and I have seen a great deal of their working, is, that in their case it is more idleness, I think, than anything else, and the same with the Egyptians; you never get them to attend; a clerk there will watch the instrument, and smoke his cigarette, and say, "Let them call;" it is just inattention.

1696. Is it true that they allow messages to accumulate on the file till there is work enough for them?—Yes, very often. To show the Committee to what extent it is carried in Egypt, the Viceroy, although he has the whole thing in his own hands and his own clerks, prefers paying our administration some 200 l. or 300 l. a year for his own private messages rather than send them by his own line; he cannot depend upon the clerks upon his line.

1697. Do you know anything of the internal administration of the telegraph at Constantinople?—I do not.

1698. You cannot speak to the working of the service between Constantinople and Bagdad?—I know nothing of it. From what I have seen of it, if it is worked by the Turks, that will account for the delay that has occurred.

1699. You think that a Turk is constitutionally unfitted for the work?—There is a lack of energy about him, and he is constitutionally unfitted for the work, as I know by experience.

1700. He is indifferent to what is going on in the external world?—Yes, quite so. I may say that there are great delays with those clerks, in consequence of their not understanding the language. You may think it almost absurd, but on one occasion, in Malta, there was a 400-word message, which occupied a considerable time in the transmission. The clerk who was receiving it was a Maltese, who ought certainly to have understood something of the English language. After a message is sent, it is usual for the clerk receiving it to send back how many words the message consists of; that is to say, after he has received a message, the first thing he does is to count it, and see that the number of words is right. Then the clerk at the other end sends back, "There are 399 words." Then the clerk says, "No; you are wrong; there are 400." That caused the other clerk to run them all through, and the result was that the Maltese clerk could only make 399 words, and the Alexandria clerk made 400. The next operation is to send the first letter of every word from one clerk

clerk to the other. They sent all that, but still the Maltese clerk could only make 399 words of it. At last, after going over it again and again, the Maltese clerk sent a message to ask if "John Brown" was one word; he had taken it as one word; and that alone occupied the line for over two hours, all other messages being delayed. I merely instance that as showing, where you are dependent on one line only, the necessity of having clerks who are not only accustomed to the instrument, but to the language to some extent.

1701. Have you made any propositions to the Turkish Government, with the view of acquiring control over the line between Alexandria and Diarbekir?—We some time ago, when Colonel Stewart was alive, sent a commissioner to Constantinople, with the view of getting a concession to lay a line from Alexandria to Diarbekir; but we found that, although we had Colonel Stewart's and the Government influence—for Sir Henry Bulwer assisted us—yet the Turks would not make any terms with us. We merely asked to be allowed to lay the line, but they would not listen to it.

1702. Mr. Childers.] With regard to the last question but one, is there not some mechanical process by which you can ensure correct repetition?—We send by the Morse instrument; that is a system of printing by dots and dashes, which is used almost universally on the continent. There is another system of printing by, I think, Mr. Hughes's instrument, by which they send the Roman letters; that is an American machine, and it is very pretty; but, unfortunately, whenever I have seen it in practice it has sent nothing but X's, Y's, and Z's; but I am told that it does answer very well upon particular routes.

1703. As yet you do not know any absolute means of ensuring correct repetition by a mechanical process?—I know no means of mechanically repeating to the eye; that is to say, there is printing by the Morse code, and if your clerk is a good printer he has a register of it for all time.

1704. But there is no actual means by which the instrument which sends on the message can simultaneously repeat the message?—No, not by the instrument; it is by the hand of the clerk.

1705. There is no discovery by which mechanical power could be applied so as to repeat a message?—I know of none; I know of no mechanical power of repetition at the time it is sent. After the clerk has received it he sends it back by signal; but I know of no mechanical arrangement for that purpose.

1706. You propose, in order to get over the difficulty between Malta and Sicily, to establish a duplicate line to Benghazi; would that line connect itself with the Austro-Germanic system, or with the Western Alliance?—I believe it is under what is called the Paris treaty now; it used to be under the Brussels treaty. It would not connect itself with the Austro-Germanic system unless there were a line laid from Ragusa across; anything connected with Italy at present is under the Paris treaty.

1707. You cannot connect between Benghazi and Cattaro, or Ragusa?—No; I do not know whether the Italians would allow us to land at Otranto, or somewhere there; if they would we could bring a line from Ragusa to Otranto.

1708. You could not go from Ragusa direct to Benghazi, could you?—Yes, we could do so;

there is no difficulty in laying such a line, and it is part of the scheme.

1709. By which you would be independent of France?—Yes.

1710. And of French espionage?—Yes. There are three routes: one *via* Ragusa, another *via* Paris and Italy, and another the original route, which ultimately we must come to, no doubt, from Falmouth to Gibraltar and from Gibraltar to Malta; but at present the most inexpensive route would be *via* this direct line, through Italy or *via* Ragusa.

1711. So that if you went from Benghazi to Ragusa you not only would get over the difficulty of the Malta and Sicily guaranteed line which stands in your way, but you would go through Holland instead of going through France?—No doubt of it.

1712. With regard to the Malta and Sicily line, you endeavoured to persuade the Government, did you not, to allow you to compete for that line?—No; we said to the Mediterranean Extension Company, "You must amalgamate with us; we must all go together;" but they declined to amalgamate, and said they were quite satisfied as they were. We said, "If you will not amalgamate with us your 60 miles of line will so interfere with our scheme that virtually it destroys it," because the Committee can understand that if you have an administration occupying only 60 miles of line, and you have to communicate through that administration with the administration beyond, you get into hot water, and you never can get satisfaction. It is all guaranteed, and this intermediate administration serves its own views, and it has been productive of a great deal of ill feeling between the Italians and ourselves.

1713. Failing that negotiation, you endeavoured, did you not, to get the English Government to consent to your landing at Malta?—We had not got so far as that.

1714. Did you not apply to the Colonial Office for leave?—No, we had not got so far as that. As far as we were concerned, we were coming to the Government to ask them to reduce our rental in consideration of our laying a duplicate line.

1715. Did not you do so by a round-about way, through the Italian Government; did you not ask them to make such a proposal?—No; previously to coming to the English Government, we said to the Italian Government, "Will you give us leave to land a cable from Malta?" and their answer was, "With pleasure, provided we can." Then there was a communication, I believe, through the Foreign Office, with Mr. Elliott, with reference to the right of the Italian administration to give a second company leave to land. The Italian Government had before them the Minute of the Treasury whereby they asked the Mediterranean Extension Company to give up their monopoly; they had that minute before them, and they considered that that virtually exonerated them; that is to say, that if the English Government made it a condition with the Mediterranean Extension Company that they should give up their monopoly, in consideration of their guaranteeing them 6 per cent., the Italian Government read that as relieving them from the clause in their concession whereby they gave them the exclusive right, and they said, "That right has been abandoned in the arrangement which you have made with the Treasury."

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R. A. Glass,
Esq.

24 April
1866.

R. A. Glass,
Esq.
24 April
1866.

1716. But you did not at all press upon the English Government, did you, the renunciation of that monopoly?—No, we have not pressed that. We felt that, if we had asked the English Government to have done anything to assist the Malta and Alexandria line, they would, as a matter of course, have assisted us to improve the communication; that was our only object.

1717. So that you are quite open to a satisfactory arrangement *viâ* Malta, if it could be brought about?—Yes; and we always have been. We went to the Mediterranean Extension Company, and we said, "This thing is likely to come about; we have no wish whatever to go past you in your interest, but you should consider this matter, because your 60 miles just spoils the whole thing."

1718. Is their cable a good one?—Yes; I made it for them, and laid it some five years ago; and it has never been out of order a day.

1719. Is the line through the Island of Sardinia an open line?—No; that line has been taken out of our hands very much, and I do not know what condition it is in.

1720. Is there anything going on about the line between Malta and Corfu at present?—I am not aware. There is a line between Otranto and Corfu, but I am not aware of any direct line between Malta and Corfu; I have never heard of it.

1721. You do not know of any negotiations about carrying a line up that side?—I am not aware of it. It may be that if we can carry out that grand scheme that we have in view, we may wish to get, as it were, as many alternate routes as we can consistently with keeping the capital within moderate bounds.

1722. What are your facilities at Benghazi?—The facility at Benghazi is that it is an intermediate station, and instead of having the circuit that we should otherwise have of some thousand miles in one unbroken line, by reason of the station at Benghazi, we divide it into exactly one-half; it is a transmitting station.

1723. That station is on the shore, about a mile from the sea, is it not?—Yes.

1724. Is there a British Consul there?—Yes; there is a British Consul there.

1725. Is it a place where you feel that you will be likely to be protected?—The best answer I can give to that is, that all our employes at the port of Benghazi are little king sthere, and they get on uncommonly well.

1726. Is Benghazi in the Government of Tripoli or Tunis?—In Tripoli; we have never had the slightest difficulty at Benghazi, though I believe our clerks and consuls are about the only Europeans there.

1727. Do you know anything about the state of the old cable on the southern side of Arabia?—I do not; I have nothing to do with that.

1728. But the cable was laid, was it not, pretty nearly where you proposed to lay it?—I do not know at all; I have read reports with reference to that cable, and I have also had a good deal of hearsay evidence, but I think you will get better information, probably, from the gentleman who was out with it, Mr. Forde, who is here. I know nothing of it.

1729. So far as the failure of that cable goes, it does not alarm you with respect to the success of your own?—No; during my experience of the last 15 years I have known of no instance to cause the slightest alarm with regard to the

present form of submarine cables, provided they are laid properly; they were laid then imperfectly. We must bear in mind that a submarine cable to be perfect has only really been ascertained within a few years by the instruments which have been introduced.

1730. So that you do not hesitate at all in proposing to lay a cable down the lower part of the Red Sea?—I do not at all, for this reason—that we know that we have in 600 fathoms there an unmistakable good bottom, from surveys actually made, and that the coral reefs are higher nearer the shore. The line from Souakin to Aden, I imagine, will be found to be in every respect as good as between Malta and Tripoli. I believe it to be all sand in that depth, which is as good a depth as you could lay a cable in, because it could be recovered easily in 600 fathoms, and where it is likely to be looked after it will remain perfect.

1731. You stated in your evidence, did you not, that you look forward to a time when there will be a cable to Gibraltar, and from Gibraltar to Malta?—Clearly.

1732. In fact, that it is the only line that will render us entirely independent of the European Governments?—Yes. I believe in a very short time, as the telegraph becomes more developed, it will become an absolute necessity that English merchants and the Government should have uninterrupted control of all messages from England to India.

1733. And in that case we should have the whole control, except through Egypt?—Clearly; and the control through Egypt you would have in this way, that the Viceroy would enter into a subvention at once, I have no doubt, from information which I have received from Egypt very recently, to give us the exclusive right of using an independent wire without any interference on his part whatever with that wire. He would undertake to maintain it on our paying him a royalty, he would not have any control over the traffic, as they have at present, through France and Italy. He would merely receive his annual payment, but the whole of the operations will be in the hands of this company, or whoever may be the medium.

1734. Is there any such plan approaching maturity at present?—I think I may say there is. I have had a great deal of correspondence and communication with some very influential parties, who are deeply interested in studying this question; and though it is not quite ripe yet, I know that they think favourably of it; and as far as our company are concerned, we are prepared to co-operate with them, subject to the sanction of the Government. It would be a plan, of course, of a very comprehensive nature, and would require the sanction of Government before it was carried out.

1735. Sir Charles Bright.] I think there is some misapprehension in your answer to one of Mr. Childers' questions. It is the fact, is it not, that you can repeat by the repeating apparatus, so as to retransmit signals by machinery?—Yes.

1736. But, I believe, it is found in practice to be productive of much delay and error where there are many such instruments introduced into one circuit?—Clearly. I understood the Honourable Member to refer to the repetition of the message. The same hand that sends a message from London to Liverpool will not get it repeated from Liverpool mechanically.

1737. During

1737. During the time of your administration, whilst the line was under one control and worked by English clerks through Italy, and from Malta to Alexandria, you got up to a very considerable speed of working?—Very.

1738. What is the greatest instance of speed that you can mention?—The greatest instance, I suppose, would be that the death of Lord Elgin was telegraphed from Cairo and received in London in less than an hour.

1739. You have described the route of the line that you are about to establish in combination with other interests by way of the Red Sea. Can you give us any information as to the cause of the failure of the Red Sea line?—My information may be considered as second hand. I have seen portions of the line which showed that the cable must have been laid over very rough places. Again, there were minute faults which must have been in the cable at the time it was laid, and there were many other reasons why it failed. It was laid considerably too taut, according to the data. I had no means of judging, except from data which I have seen myself on the spot.

1740. You have no doubt that if your schemes can be carried out you can construct an efficient telegraph from the Franco-Italian frontier by way of Egypt and the Red Sea and the Arabian Sea to Bombay?—I have not the least doubt about it.

1741. In what time do you think a message could be passed from London to Calcutta at the average speed, supposing the working of the line was entirely under one control, and with all the apparatus and the staff of the line of the most perfect character?—I do not see that you should have a delay on the average of more than 8 to 12 hours upon the whole work of the day; that would be the average delay of the whole; many messages would arrive in an hour, and others might be longer; it very much depends upon the traffic on the line.

1742. Mr. Moffatt.] How long has the arrangement been in operation by which you have a separate wire through the Italian States?—The convention, I think, is dated about six weeks back.

1743. For what time have you the exclusive use of the wire?—For 40 years.

1744. For working that wire do you employ your own clerks?—Yes.

1745. There is no interference whatever on the part of the Italian Government?—No.

1746. Have you applied to France to see whether you could make a similar arrangement with the French Government?—We have not done that.

1747. Do not you think it advisable that you should do so?—I think it is advisable; but the French Government are difficult to approach except through the English Government. I should fail in getting it as an individual.

1748. Have you tried whether you could get it through the intervention of the British Government?—Not at present.

1749. If that could be done, it would make the line very perfect, would it not?—Most perfect.

1750. According as you have stated, it would want but one line of separate wire in the exclusive use of your company through France to make that line perfect to India?—Quite perfect.

0.43.

1751. Always assuming that the Viceroy of Egypt is willing to give you a convention similar to that which the Italian kingdom has given to you?—Yes, clearly.

1752. And you have very little doubt that the Viceroy of Egypt is willing?—I think I may say, from influential persons from whom I have received communications, and from the general feeling in Egypt, that he would be disposed to do it for a nominal subsidy.

1753. Is not there a loop line connecting the Egyptian lines on the Turkish side?—If you call it a loop line, there is a line from El Arish round the coast to Beyrout, and so on, and I think that it is in communication with Diabekir, Aleppo, Damascus, and those other places; and that line is in the hands of the Viceroy and his agents.

1754. And, consequently, all the arrangements that you might be able to make with the Viceroy with regard to the first line, might also be made applicable to the second line?—No; for this reason: the Viceroy is under terms with the Sultan to work the El Arish line. We had a concession to make the line to El Arish, and we should have done so had we not been denied the privilege of connecting with the Turkish lines, and a line to El Arish in the hands of a private company, unless you had the Turkish lines to join up to them, would be valueless.

1755. Have you made application to the Turkish Government for the privilege of a single wire?—Yes.

1756. What has been the result of that application?—The result of the application was, that they refused it. We offered to lay down, at our own risk and cost, a line from Alexandria or from El Arish to Constantinople, or to Beyrout, or to any of those places; and that application were supported by the English Government. Sir Henry Bulwer assisted our Board in the matter, and Colonel Stewart also.

1757. Was the offer accompanied by the douceur of a Royalty, such as you propose to give to the Viceroy of Egypt?—Yes; we offered them a toll, and they refused it. Colonel Stewart was interested very much in the matter, and he told me that he was quite sure that they would not entertain any such proposal, and that they would have it all in their own hands, therefore we reluctantly gave it up.

1758. What is the average time that a message takes now as between Alexandria and London?—Our manager there says that they are in very good time now, and come pretty correctly; the average time is from seven to eight hours.

1759. As between London and Alexandria it does not need that there should be anything like so long a space of time?—No; nor would there be if we had a direct line between Alexandria and London; provided that the traffic was moderate there is no reason why you should not get your messages as quickly as between Liverpool and London, the wire all being in one hand. Perhaps I may explain one reason why the messages arrive irregularly. Sometimes a message of to-day will arrive before a message of yesterday, although the message of yesterday went in due course; and it is very much accounted for in this way, particularly in Italy: if an outward message arrives at Turin, and the line to Naples is blocked, the clerk at Turin has instructions to get the next station he can to receive the message; the consequence is that the message goes round by the boot, as you may call it, of Italy, either

R. A. Glass,
Esq.

24 April
1866.

R. A. Glass,
Esq.
—
24 April
1866.

either going by the wire on one side of the coast, or by the other, whichever wire happens to be free, and although that may be the longest way round, the message gets transmitted first; so that the message of to-day might arrive at Malta before the message of yesterday, which may be lying in the Naples or Turin office, waiting to get off by some line which is blocked.

1760. That would be assuming a block at some intermediate station?—It is a block at the particular office at which the message arrives. If Naples is blocked with all its wires at Messina, it would be sent to some other place. The clerks' instructions are to get the messages off to any one who will receive them, as long as they are on the route; to take them off their own file and pass them on to the next.

1761. The Committee have received considerable information with regard to the delays and inaccuracies which occur in the transmission through Turkey; is it your impression that that arises from idleness and carelessness on the part of the Turkish manipulators, or from some other cause?—From the experience that I have had of Turkey, and from what I have seen of the working of Turks and Egyptians; as I stated before, their inaptness generally for business, I think, is in a great measure the cause. As regards the

other portion, I think there is a general feeling that in the East, people have a notion of making money when they can.

1762. *Chairman.*] You were speaking just now of some negotiation between your Company and the Mediterranean Extension Company; was that negotiation in writing, or was it verbal?—The negotiation, to some extent, was in writing, and to some extent verbal. It was proposed by my Board that a committee should sit, and that the Mediterranean Extension Company should depute one of their directors to attend that committee with a view of seeing if some arrangement could not be come to. Captain Hamilton, authorised by their Board, attended the committee, and we, after consultation with him and going into the merits of the question, arrived, at all events, I think to his satisfaction, at a mode in which their capital should be represented in the new scheme; but upon further consideration, after he returned to his Board, we received a communication that they did not approve of it, that they thought the scheme too grand or doubtful, and that they would prefer remaining as they were.

1763. Did you receive that communication in writing?—Yes; I had it in writing from Captain Hamilton.

HENRY CHARLES FORDE, Esq., called in; and Examined.

H. C. Forde,
Esq.
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1764. *Chairman.*] You are a Civil Engineer?—Yes.

1765. Employed principally in telegraphing?—I have been employed for several years in connection with submarine telegraphs, and principally with the lines between Europe and the East.

1766. Which lines have you been employed on?—On the first occasion, I was interested in the submarine lines between Constantinople and Egypt. I was interested in them as being partner with Mr. Lionel Gisborne who was the principal promoter of that system of lines. I was present at the laying of one section of that line, or rather, part of the section between Candia and Alexandria, that was in November 1858, and I was present at the time that the cable failed in the laying. From the town of Canea which is on the west side of the Island of Candia, we payed out 220 miles of cable when the insulation became very imperfect, there was a very great loss of insulation from some cause or other which we never exactly discovered and we thought it prudent to cut the cable; that was laid by Messrs Newall & Company. I was there not in the official capacity of Engineer to the company, but as being particularly interested in it, and also interested in the continuation of the lines to India. This cable was simply a gutta percha covered wire covered with hemp.

1767. Were you employed by the Government in connection with the Malta and Alexandria line?—Yes; Mr. Lionel Gisborne and I were the engineers for that line.

1768. Did you lay the line for them?—Yes, I did.

1769. Have you any evidence of a general character to give to the Committee with respect to that line?—The system adopted with regard to that line was this:—It was arranged that we should lay a shallow water line, principally for the reason that the Red Sea line got out of order, and being

very much in deep water, it was difficult and costly to repair, and finally was abandoned on account of the number of repairs. Therefore, we adopted the shallow water system on the Malta Alexandria line, but we also adopted a very different class of cable—a much heavier class—although that cable was not exactly suited to the locality. I might mention that the cable was originally designed to be laid between Falmouth and Gibraltar, and the contract was actually let by us on the part of the Government for that line.

1770. Have you had anything to do with that line since you laid it?—Not since it was fairly handed over to the Government, or to the contractors who work the line, Messrs. Glass and Elliott.

1771. Did you make yourself acquainted with the soundings and with the bottom upon which your cable is laid?—We did as far as it was possible in the time. The Government first of all decided to lay the cable between Falmouth and Gibraltar; it was afterwards transferred to Rangoon and Singapore, and they finally decided on laying that cable between Malta and Alexandria. It was then about the 1st of January 1861, and we were to lay it in the summer. The Government at our request sent out orders to have soundings taken; although the charts were apparently well made, and the soundings were pretty favourable, yet when Captain Mansell was ordered to take fresh soundings, he found that the soundings were very different indeed from what they were on the published charts, so much so, that after waiting some six weeks, I applied to the hydrographer to the Admiralty, the late Admiral Washington, and he said that he had received some soundings, but that they were so much at variance with the public charts that he had sent Captain Spratt to sound there instead of Captain Mansell; the result was, that Captain Spratt confirmed Captain Mansell's soundings.

1772. Did

1772. Did you select the line yourselves, or did you take the line prescribed to you?—We selected the line ourselves, with the advice and in consultation with the authorities at the Board of Trade and at the Admiralty.

1773. Upon the best information which you had before you at the time?—Yes.

1774. To what do you ascribe the breaks which we occasionally hear of as taking place in that line?—The breaks, as far as I know, take place altogether on the line between Bengazi and Alexandria, to the eastward of Bengazi; and that line is the shallowest line of the whole three sections; it has an average depth, as well as I remember, of about 47 fathoms, and when I have made inquiries of Messrs. Glasse and others who are intimately acquainted with it, I find that the breaks have always been in very shallow water, from 20 to 30 fathoms; in fact, the difficulty of laying that cable was so great, that we had to have three men-of-war to assist us.

1775. In what did the difficulty consist?—We wanted to get that cable laid in depths of between 50 fathoms and 100 fathoms; not less than 50 and not more than 100, and Captain Spratt and Captain Mansell were some three or four months sounding that section and resurveying it, as far as they could, but they found the inequalities of the bottom so great and so different to what we had anticipated that there was great difficulty in finding a uniform bottom for the cable.

1776. You took the best bottom you could find upon the information that you had before you?—Yes.

1777. Are you aware of any fresh information having been acquired since then which would enable a better line to be laid?—Captain Spratt has since completed his soundings; he had not time to complete them then; he has sounded a great deal more since, I understand, and I have no doubt that, by carefully selecting the bottom, a very good bottom might be found in rather deeper water.

1778. Have you any practical acquaintance with the Red Sea?—I was associated with Mr. Gisborne, as engineer to the Red Sea and India Telegraph Company, and I was present at the laying of the line between Aden and Kurrachee.

1779. Have you anything specially in connection with the laying of that line to bring to the notice of the Committee?—I attribute the failure of that line very much to the excessive tight paying out of the cable; on that occasion I was on board the ship as the representative of the company, more to report what took place and to select the route; but the contractors, Messrs. Newall and Company, had the whole responsibility on their shoulders of delivering the cable over to the company, and they took their own method of paying out, and would not be controlled in any way by the engineer of the company.

1780. Was it pointed out to them, at the time, that they were paying it out too tight?—Yes, it was by me.

1781. What is the general character of that coast for telegraphic purposes?—The coast between Aden and India is very favourable if we can believe the charts as they are published, but it appears, and from what I have seen and known of the locality, I should say it is a very favourable route, and the best route that could be adopted for a submarine line you can select

almost any depth of water you like, from 800 to 100 fathoms, but, of course, a shallow water line would be rather the longest; it is a bottom free from all inequalities.

1782. When you say, if you can depend upon the charts, you do not throw any doubt upon the excellency of the charts, do you?—The charts were made for a different purpose—for navigation; but they never contemplated laying cables when those charts were made, and the consequence was, that if they got soundings over 50 or 100 fathoms they were apparently not so particular in placing them correctly on the charts; where the water is deep the charts show a number of what we call negative soundings—soundings showing no bottom.

1783. Are you aware that the whole of those seas have been most accurately surveyed by experienced officers of the Indian Navy from time to time?—I am. Admiral Smythe was considered a very good surveying officer, but it was his charts between Alexandria and Benghazi that were so defective in soundings. For instance, I may mention that at the headland above Benghazi (Rao sem), the water was shown to deepen gradually, for 11 miles, to 70 fathoms; whereas, over 400 fathoms were found at about one mile from the coast.

1784. In the laying out of that line, between Kurrachee and Aden, did you commence at Kurrachee or at Aden?—We commenced at Kurrachee.

1785. Where did you first come in with the Arabian Coast?—We laid a coast line from Kurrachee up by Gwadwr, nearly due west for 350 miles, and crossed nearly opposite to Muscat. It is very deep water across the gulf at this place. For the last 170 miles into Muscat the water varies in depth from 500 to over 2,000 fathoms; we found that depth of water very quickly.

1786. Where did you land?—At the town of Muscat. Then we left the town of Muscat, just at the same place, and came on to the Kooria Moorla Islands, passing round Cape Kas el Had.

1787. Then did you come to Macullah?—No; we did not put in to Macullah. I was rather in favour of putting in to Macullah on account of the long section from Kooria Moorla to Aden, but the contractor objected to it.

1788. In what average depth of water did you lay the line along the Arabian coast?—It was partly deep water and partly shallow. In some places the line is in 400 or 500 fathoms, but, as a general rule, the cable is probably in an average depth of under 100 fathoms along the south coast of Arabia.

1789. You attribute the failure of that line, you say, almost entirely to the line having been laid too taut?—I think, in the first instance, the design of the cable was too light; the pattern, I may say, was taken from the cables which had been laid in the Mediterranean between Malta and Cagliari, and Malta and Corfu, and that had worked up to that time, for a year, perfectly well, and did not fail until after this line had been commenced.

1790. In what year was the Red Sea cable laid?—In 1859 and 1860.

1791. It was manufactured probably years before?—The manufacture was commenced in October 1858.

1792. During the eight or nine years which have elapsed between that period and the present time, has the progress in the construction of

H. C. Forde,
Esq.

24 April
1866.

H. C. Forde,
Esq.
24 April
1866.

cables, and the experience in the power of cables required in particular places, been sufficient to assure you that there is every reasonable probability that a cable may be made quite sufficient for the purpose of that telegraph?—I am quite of that opinion. I have a specimen here of the Red Sea cable, about a foot long, and I have a specimen also of the Persian Gulf cable (*producing the same*). One great defect in the Red Sea cable was, that the iron wires were small and corroded rapidly, and there was no outer protection which prevented them from corroding.

1793. With regard to the line within the Red Sea itself, have you any acquaintance with that?—No; I was not present, but Mr. Gisborne was present at the laying of that line, and I have seen his report.

1794. To what did he attribute the failure?—To very much the same cause that I have attributed it to, and which I have mentioned here, to the lightness and the tight paying out.

1795. Were there no causes connected with the condition of the bottom of the Red Sea which, in his judgment, led to that disappointment?—There are very great inequalities in the Red Sea, especially along the coast, which aggravated, to a great extent, the evil of tight paying out.

1796. When that line was brought to the surface, was not it, in some instances, in a very decomposed condition?—It was in some places; I have never seen any brought to the surface in the Red Sea, and I can only speak of what I have heard and having frequently talked upon the subject. There was a great deal of animal matter sticking to it, which became very soon putrid on deck.

1797. How long had it been down?—It had been down about nine months.

1798. Did it indicate any volcanic agency?—I should think not.

1799. Which do you consider, with the experience you have had, to be the best line for telegraphic communication between this country and India?—I should certainly say the best line, if it could be carried out at present, would be the line which Mr. Gisborne originally proposed, from Falmouth to Gibraltar, from Gibraltar to Malta, and from Malta to Alexandria and through Egypt, by means of land lines, so as to avoid the worst part of the Red Sea, say to Souakin or to Massowah, and from Massowah to Aden, Maculah, Kooria Moorah, Muscat, and Kurrachee, by submarine cable.

1800. One advantage of that would be, that there would be a continuous cable in English hands, under English responsibility and management?—Yes; for present purposes, no doubt, such a plan as Mr. Glass has mentioned, as to the working arrangements through Italy and France would be the best, but eventually I have no doubt that the line will be made as I have

stated, being a more independent route for English messages.

1801. Are you at all acquainted with the progress of telegraphic construction in Egypt at this time?—I had a letter not long ago from Mr. Hartley Gisborne who is superintendent of telegraphs in Upper Egypt; he wrote to me on the 26th of January last, that the lines were under construction from Cairo to Khartoum, including a branch from Schendy to Souakin.

1802. Sir Charles Bright.] Are you acquainted with the bottom of the Red Sea, especially between Massowah and Aden?—Yes; I am acquainted with it from the charts, and from selecting the best routes.

1803. Have you seen the report of Mr. Mayes of the soundings and survey there during the repair of the cable?—Yes, I have seen it.

1804. There is no difficulty in laying a permanent line of cable between Massowah and Aden, in your opinion?—I should think not the least; it will require rather more care and attention than it will along the coast of Arabia.

1805. You are quite clear in your opinion on the subject of a permanent line being carried without difficulty along the Arabian coast to Kurrachee?—Quite clear.

1806. What is the depth of water between the Kooria Moorah Islands and Bombay?—As well as I remember, I should think it is about 2,000 fathoms.

1807. Then you probably would not recommend laying a cable direct from the Kooria Moorahs to Bombay without further study and further survey?—No, I should not.

1808. The distance between Bombay and Calcutta is about 1,500 miles. If you were told that the average rate of working between Calcutta and Bombay was reported upon by the director of telegraphs for the eastern division to the director general of telegraphs in India as late as August 1864 to be nearly 48 hours, or two days for each average message, should you consider that a creditable mode of conducting the telegraphic business?—Quite the reverse. I should say that between Calcutta and Bombay, a distance of 1,500 miles an hour, for a message would be ample time, or less if you worked by relay. In fact, we have worked from Aden to India through 2,000 miles of cable at the rate of four words a minute backward and forward without any difficulty.

1809. Supposing such a line were adopted as that which you have described as a line which can be carried out with the greatest facility without loss or delay; that is to say, from the Italian frontier through Egypt to India, in what time should you think that a message could be relied upon as being carried from England to India by that route, supposing it were entirely under English management?—Under one management a message should not take more than two or three hours, and at the most six hours.

FLEEMING JENKIN, ESQ., called in; and Examined.

F. Jenkin,
Esq.

1810. *Chairman.*] ARE you a Civil Engineer?—Yes.

1811. And a Fellow of the Royal Society?—Yes.

1812. Have you had any experience in fitting out expeditions for laying submarine cables?—I had considerable experience when acting as

assistant to Mr. Newall, the contractor, who laid down the Red Sea cable and many other cables; and since that also, I have directed my attention chiefly to submarine telegraphy.

1813. Are you acquainted with the evidence which was given before this Committee by Mr. Latimer Clark a few days ago?—Yes.

1814. Do

1814. Do you concur with him?—I concur almost entirely with Mr. Clark in his evidence. There is, in fact, only one point upon which I should wish to insist somewhat more strongly than he did, and that is the necessity of further surveys, and of more complete surveys when the cables are being laid. I think that we have already sufficient information to enable us to say with certainty, that a favourable line can be selected between Massowah and Aden, and also from Aden to India; but I think it would be absolutely essential that, when the cables are laid or immediately before they are laid, vessels, perhaps Government vessels, should accompany the expedition and survey the bottom very much more closely, putting down buoys at very short distances where an uneven bottom is to be expected. Something of the kind was done in the case of the Malta and Alexandria cable. In that case, my partner, Mr. Forde, did insist upon a very much more accurate survey than was originally contemplated, so as to feel the way by soundings, mile-by-mile, at the time the cable was laid. Nevertheless, we had it in evidence to-day, and I also know it independently, that by a still more careful selection of the route, and avoiding such rocky places as occur from time to time, a great many interruptions would have been avoided. And I may say, in connection with the Red Sea, that although the cable certainly was too light, I examined the cable during its manufacture, and tested it electrically; and I have no doubt that the materials used were extremely good, and that all the improvements that have been made since, in testing and examining materials, would have confirmed that opinion, and that the radical fault in the cable was its being altogether too light, and insufficient on that ground only, and not on account of the quality of the materials.

1815. Do you concur with Mr. Forde in thinking that the loss of that cable is to be attributed, in some degree, to its being laid too taut?—I think, in some degree, it is to be attributed to its being laid too taut, and especially to its being laid too taut across places which had been imperfectly surveyed; so that there were great changes in the depth, and that when any decay did take place—as decay will always take place where such uncovered cables are laid—the weight of coral hanging between two points of suspension broke the cable. No doubt, if it had been laid more carefully, there would not have been so great a number of places of that description.

1816. The progress in the improvement of the manufacture of cables has been very great during the last eight or ten years?—Yes, it has been very great. The materials themselves are better, and people have learned to spend more money; that, I think, perhaps, is the chief improvement. The cables are laid now of a very much heavier and more substantial kind than used to be laid.

1817. There has been a great deal of dearly-bought experience?—Yes, undoubtedly; but almost all failures have taken place in cables which are laid in deep seas, where no access can be had to them, and where they cannot be repaired. I have prepared statistics by which I find that almost every cable weighing two tons per mile and upwards, has been permanent at least for 5, and often for 10, and 15 years, and that almost every cable weighing less than two tons has failed within five years of its being laid; so that the weight and substantial construction

seem to give the greatest guarantee of permanent success.

1818. Do you think that, on the whole, a good route to India may be found by way of the Red Sea?—I have no doubt of it.

1819. The object of this Committee is to ascertain what is the best method of communicating with India by telegraph; should you give it to the Committee as your opinion that the Red Sea affords the best route of communication?—That would depend upon how the best routes were defined. If you were to look simply to geographical conditions, then I think the Persian Gulf route is the best. The bottom of the Persian Gulf is more favourable than the bottom of the Red Sea, and so much care would not have to be taken in paying out the cable; but when you consider how large a portion of that route is in foreign hands, and in the hands of the Turkish and Persian Governments, I think the Red Sea route very preferable; but only on that account; and if I may be allowed to express an opinion I think that a double route is almost essential, and that one route, whichever was selected, would be insufficient.

1820. And there would be the advantage of the double route affording great public security?—Yes, it would afford great public security, especially if it were joined at various points. For instance, if a scheme which I have heard described here were carried out, the double route would be joined at Diarbekir and Alexandria, and at the foot of the Persian Gulf, near Cape Mussendon. A break might occur at several points upon both those routes; nevertheless a message, by going backwards and forwards from the first route back to the second route, and then from the second route back to the first route, would still reach England safely; so that it is not only important to have alternative routes, but that they should be joined together at as many points as possible, forming loop lines; and I should further urge, if it were possible, that the two alternative routes should be, as far as might be, under one management; that not only one route should be under one management, but that both routes should be, as far as possible, in one hand.

1821. But there would be no security would there to the public in that case against monopoly?—Pardon me, you would certainly not have competition bringing down the price of the messages, but you would have this security, that there would be no reason for the messages, which are started by one route not being transmitted on by the second route, in case there was any delay, or choke upon the first. The message then would find its natural and easiest route, in every such case, whereas if the lines are in two hands which compete, you can only have one line in each hand, and a single break then would either stop a message or delay it by making it strongly to the interest of the company in whose hand it was to keep it as long as possible.

1822. Have you considered what would be the proper time for communicating if we had one or two perfect systems of communication with India?—I think that the average time might be about three hours, and I will give my reason for saying so. It is found that even now the average time between Kurrachee and the head of the Persian Gulf is about 45 minutes, and only 10 minutes has occasionally been occupied in that manner. Looking to that experience and also to the experience

F. Jenkin,
Esq.

24 April
1866.

F. Jenkin,
Esq.

24 April
1866.

experience of the Alexandria and Malta line which is managed by Mr. Glass, and which is very similar, and comparing the relative lengths of the Persian Gulf cable, and of the Malta and Alexandria cable with the total distance between England and India, I arrive at the conclusion as a simple matter of arithmetic, that a message need not take longer than three hours, even according to the present system of management; and I am far from saying that even that would not be diminished.

1823. Which do you think, upon the whole, is the best, a land line or a submarine line?—It depends entirely upon the country through which the land line passes. Where you can have a thoroughly good access to the land line, there can be no question that it is more convenient and safe. It is cheaper in the first instance, and therefore more advantageous; but where, as in the case of India and other semi-civilised countries, a good access cannot be had to the land line, far more satisfactory results are obtained by submarine cables. I have had some information from a clerk whom I had recommended for employment in India; he has written to me once, towards the end of last year, to tell me, that on the line between Gwadur and Kurrachee, the alternative land line, they had never been able to transmit messages at all during the night; that even the short line, at the Kurrachee terminus, of about 18 miles, very often was interrupted, according to the conditions of the weather, chiefly during the night, or in damp weather, and that frequently, although there was no hitch whatever upon the submarine line between the Persian Gulf and that terminus, the 18 miles of land line stopped them.

1824. Is it your suggestion that there is some occult influence at work?—No, simply that the land lines were not properly erected, possibly in the first instance, and secondly, that a good access cannot be had to them, if they are laid where there are no railways and no sufficient roads. I have also had experience in that respect; for instance, in the Island of Sardinia, where the service is very bad, and the land lines are in a detestable condition, because from similar causes loss of insulation and even breakages of the wire cannot be readily repaired.

1825. Then you would draw another distinction. As you distinguish a land line from a submarine line, so you draw a great distinction, I suppose, between a line going across country, and a line taking the course of a railway?—A very great distinction, indeed. It is a question of access, both with submarine lines and land lines. If you can get to them to repair them, they answer admirably well, but if you put them out of your own reach, they answer very badly indeed. In Australia, on the contrary, the land lines are found to answer very well.

1826. Have you any view as to the manner in which the Government may best assist undertakings of this kind, without grants of money?—I think that by assisting in surveying the ground and carrying out work, which they have officers specially trained to perform, and vessels specially adapted for, they can give great assistance, and that assistance would not be for one company only, but for many companies. It is not an advantage to private individuals, so much as a public gain.

1827. Do you think that services of that kind

are almost invariably well performed by Government officers?—I think they are when the object is clearly explained to the officers who are employed; in the surveys and the soundings which have hitherto been made, the object has been to make quite certain that not less than a certain depth of water existed. They did not care how much more there was; but now for our purposes we require to know really the configuration of the bottom, and when that is explained to the officers of Her Majesty's service I think that they can perform the work more efficiently, probably, than any other persons.

1828. You think that there is an amount of public interest in the case sufficient to justify the Government being called upon to incur some expenditure?—I do; and I feel no doubt about it. A message which arrives, giving the price of cotton or the price of corn, costing the individual who gets that message, 4*l.* or 5*l.*, certainly benefits the country at large, so much as to justify the moderate expenditure I recommend.

1829. Mr. *Laird.*] Have you considered the question of telegraphic communication with China and Australia?—Yes, I have been consulted by several gentlemen with regard to lines in connection with India between China and India, and from India also to Australia.

1830. Are there any difficulties either with regard to China or Australia?—The evidence which has been given with regard to the communication between England and India will apply to the communication with China, and to a great portion of the line to Australia. We have already sufficient information to know that good lines can be selected all the way to China, and for a great portion of the route between India and Australia. But some further surveys are required between the Islands of Java and Timor before we can be quite certain that a good route can be selected. There is every probability of it, but we cannot be sure.

1831. So far as inquiries have been made there seems to be no difficulty?—Probably none.

1832. Mr. *Moffatt.*] Are the Committee to understand you to state that in your judgment it would be wise that the Government should make preliminary surveys for most of the lines of sea telegraph?—I think so.

1833. Irrespective of whether the companies will propose to undertake the construction of them?—Irrespective of any of the companies.

1834. It was stated by a previous witness that the first cable laid down in the Red Sea had been liable to very sudden and rapid decay; has the same effect been observed upon the cables recently laid down in the Red Sea?—There have been no cables recently laid down in the Red Sea; but we find that both in the Mediterranean and Channel, and other Seas, there are certain bottoms in which the cables do decay very rapidly, especially where they are covered with very small wires, as was the case with the Red Sea cable; there is a larger surface exposed to oxidation, and the decay is more rapid; and in large wires we find the decay very much more slow. Where such cables as the Persian Gulf are covered with a bituminous compound, the decay is not sensible.

1835. What has been the effect of the high temperature of the Red Sea upon the cable?—I think that no injury has resulted from that temperature.

JAMES RUSSELL, Esq., called in; and Examined.

1836. *Chairman.*] Have you prepared a translation from the Livret Chaix French guide of the table of the Messageries Impariales Company?—I have.

1837. Will you put it in?—Yes (*delivering in the same*).

J. Russell,
Esq.

24 April
1866.

Sir JAMES CARMICHAEL recalled.

1838. *Chairman.*] Have you prepared a memorandum on the subject of improving the system of telegraphic communication between England and India?—Yes.

[*The same was delivered in, and is as follows.*]

"SUGGESTIONS for improving the System of Telegraphic Communications between Great Britain and India, so far as relates to the Lines between London and Constantinople.

"It is proposed, in the first place, to apply to the French and Austrian Telegraph administrations to organise a direct service between Paris and Vienna.

"Secondly, to apply to the Austrian administration to organise a direct service between Vienna and Belgrade; and, thirdly, to obtain permission from the Turkish Administration to organise a direct communication between Belgrade and Constantinople, placing at both stations competent English or French telegraph clerks, so as to insure that messages arriving at Belgrade would be transmitted direct to Constantinople, and *vice versa*.

"In the event of these direct services being established, a despatch would first be transmitted from London to Paris; secondly, from Paris to Vienna; thirdly, from Vienna to Belgrade; and, fourthly, from Belgrade to Constantinople. It would thus be only repeated four times in its transit; while all liability to the occurrence of mistakes at the Servian and Turkish stations, between Belgrade and Constantinople, would be entirely avoided.

"The advantages of this route over any other between London and Constantinople would consist in the direct and unbroken communication between Paris and Vienna, in the acknowledged efficiency of the French telegraphic system, and in the fact of the Submarine Telegraphic Company possessing three cables, containing 14 wires, between England and France, thus making any interruption to this route most improbable. In the event, however, of any such emergency, the lines to Berlin, through Belgium and Holland, and the line from Paris *via* Turin, Otranto, and Valona, would still be available.

"The establishment of the direct line to Vienna would further obviate the delays so frequently complained of, consequent on messages

for India being transmitted from Berlin through Russia.

"The ideas above stated were suggested to the late Colonel Stewart, by whom they were favourably entertained, and the Director General of Telegraphs in France, to whom they have also been submitted, has promised, when required, to negotiate with Austria for the establishment of the direct service with Vienna.

"At the same time the Director General pointed out the following reasons, which might, to a certain extent, influence both the French and Austrian authorities against embarking in this plan:—

"1. That the actual number of Indian messages is at present unimportant; and,

"2. That the proportionate receipts of the French and Austrian Governments would hardly warrant an additional outlay to secure this traffic, especially as, in case of errors occurring on their respective lines, the amount of reimbursement is very considerable.

"It appears, therefore, most necessary to make some arrangement to secure the hearty goodwill and co-operation of the French and Austrian Governments, and this might be effected by allowing to them a small additional rate on the transit of the messages between Paris and Belgrade. Suppose, for instance, that from the 2*l.* 10*s.* now received by the Indian Government on each despatch an amount of 10 per cent., or 5*s.*, were deducted for this special service, this sum would enable an additional 2*s.* 6*d.*, or three francs, per message to be allowed to the French and Austrian Governments respectively, and would most probably fully meet any objections which might arise from the increased expenses caused by the establishment of this system; while, on the other hand, the advantages derived from it by the commercial classes, and the public generally, and the consequent development of traffic, would amply compensate the Government of India for the small reduction of their present tariff.

"J. R. Carmichael,
Chairman."

"Submarine Telegraph Office,
"58, Threadneedle-street,
"26 April 1866."

Friday, 27th April 1866.

MEMBERS PRESENT:

Mr. Baillie.
Sir C. Bright.
Mr. Childers.
Mr. Crawford.
Mr. Laird.
Mr. Marsh.
Mr. Moffatt.

Lord R. Montagu.
Sir H. Rawlinson.
Mr. Schreiber.
Admiral Seymour.
Mr. Stansfeld.
Mr. Turner.
Mr. Weguelin.

ROBERT WYGRAM CRAWFORD, Esq., IN THE CHAIR.

GEORGE D. CHETWYND, Esq., called in; and Examined.

G. D.
Chetwynd,
Esq.

27 April
1866.

1839. *Chairman.*] ARE you the Accountant at the Post Office?—The Receiver and Accountant-General.

1840. Have you any statement to make to the Committee, with reference to a remark made by Mr. Howell, in his evidence the other day, as to the apportionment of the charge between the Bombay and the China services?—I should like to state to the Committee what took place when the communication was made to me by the Peninsular and Oriental Company, with reference to the estimated cost of the Bombay service. When Mr. Bayley, the assistant managing director of the Peninsular and Oriental Company called upon me with reference to the question of the cost of the Bombay service, he brought with him a memorandum showing what the Peninsular and Oriental Company considered to be the cost of the Bombay service. Mr. Bayley told me that the estimate which the Post Office had given in, differed very materially from the estimate which the Peninsular and Oriental Company had made, and I told him that the estimate which we had put in was intended to show the comparative cost of the India portion of the service, as distinguished from the China portion, and that it was not intended in the paper in question to distinguish the cost of the Calcutta line from the cost of the Bombay line; that in framing the estimate we had followed the usual course, and had taken the average rate of 4 s. 6 d. per mile for the whole service, as applicable to parts of the service; and that as regarded his memorandum of cost, I could give no opinion upon it until I had caused it to be examined. In reply to his request that I would correct the figures, I pointed out to him that even if I found his statement to be quite accurate with regard to the Bombay line, the only result of any alteration which I could make, would be to throw the difference of cost on other portions of the Peninsular and Oriental service. I think, therefore, that Mr. Howell has fallen into a mistake in supposing that I have made any admission of error, as no such admission was made by me. Moreover, I am still of opinion that our estimates are correct for all practical purposes, and especially as regards the object for

which they were constructed, namely, the separation of the cost of the China service from the cost of the Indian service generally; and I think that they are as nearly accurate as the circumstances of the case will readily admit, with reference to the division of the two branches of the Indian service.

1841. Mr. Howell's statement was to this effect, at Question 1255, "In the papers which are furnished to the Committee, the cost of the Bombay service is set down at 80,000*l.*; that is incorrect, and I believe the Post Office are quite ready to correct it. The actual cost of the service is 48,000*l.*, giving us a rate per mile upon that service which I believe is the lowest of any known ocean service. The rate per mile that we receive on that service is 9*s.* 7½*d.*, which is a misprint for 2*s.* 7½*d.*?—Yes, it is 2*s.* 7½*d.*: that is what they say they receive.

1842. How do you correct your statement?—I do not propose to correct our statements.

1843. How do you propose to correct Mr. Howell's statement; in what respect do you allege Mr. Howell's statement to be incorrect?—I do not admit that my statement was inaccurate. I say that Mr. Howell's statement is incorrect with regard to that. I made no such admission. I consider that our estimate is roughly accurate. Of course, absolute accuracy is impossible in matters of this kind. We could only hope to give a rough estimate of a service like that. The services of the Peninsular and Oriental Company are so mixed up together, and their contracts extend over such a long period of time, and the whole service is so fragmentary, as one may say, that it is very difficult to separate the portions.

1844. The difference between you and Mr. Howell appears to be this, that in your estimate you have taken the average as 4*s.* 6*d.* a mile, extending over the whole of the India and China service of the Peninsular and Oriental Company, and Mr. Howell has taken the actual mileage amount receivable upon the Bombay service only?—Yes; that is so.

1845. Are you aware whether any negotiation is going on between the Peninsular and Oriental Company and the Post Office authorities with reference

reference to a payment being made for the services performed by the Company between Shanghai and Japan?—Although that is not in my particular department, I am able to state from my knowledge of the fact that a communication was received from the Peninsular and Oriental Company last year stating that they had carried on a bi-monthly service between Shanghai and Japan for two years, for which they had charged the Post Office nothing, and that they would be unable to continue that service with the same regularity; or they would not bind themselves to carry on the service with the same regu-

larly unless a moderate subsidy were paid to them, and they applied for such a subsidy. The matter has been for some time under consideration, and it is not yet decided; indeed, it is still under consideration.

1846. Do you know whether the Company receive any payment at all for the letters that they carry between Shanghai and Japan?—Not any payment whatever.

1847. Do you know whether they levy privately any postage charge upon the letters?—Not any, that we are aware of.

HENRY CHARLES FORDE, Esq., recalled, and further Examined.

1848. *Chairman.*] HAVE you brought with you your report to the Secretary to the Board of Trade upon the Malta and Alexandria Telegraph?—I have.

1849. Will you be so good as to put it in?—Yes (*delivering in the same*).

1850. Have you also with you a map illustrating the proposed line to India by way of Egypt and Arabia?—I have.

1851. Will you put it in?—Yes (*delivering in the same*).

JOHN HENRY GREENER, Esq., called in; and Examined.

1852. *Chairman.*] I BELIEVE you have been employed as telegraphic assistant to Colonel Kemball, the Consul General of Bagdad?—Yes.

1853. For how long were you in that department?—Five years.

1854. When did you go out?—At the end of 1860.

1855. Have you recently returned?—Yes, five months ago.

1856. During that period were you employed in connection with the Turkish line in Asia?—Yes, upon the Turkish and Arabian line.

1857. In what capacity have you been associated with that line?—I was employed as assistant to Colonel Kemball in constructing the line from Bagdad down to the head of the Persian Gulf through the Arab districts, and in going over the line to inspect it from Constantinople to Bagdad, that is to say, the line already made by the Turks.

1858. You say that you were assistant to Colonel Kemball; are the Committee to understand that he had the responsible charge of the construction?—Yes, he had the responsible charge of the construction from Bagdad down to the head of the Persian Gulf.

1859. You were in charge of the engineering department, I presume?—Yes, under Colonel Kemball's instructions.

1860. In what condition did you leave the line?—It was in very good condition when I left, and it was working very well; the line from Bagdad to the head of the Persian Gulf, was the most perfect part of the line through the Arab district, and is I believe the part of the line which has been working best; since the first construction of it, from 12 days after it was finished, it has never been touched at all by the Arabs, and it has been continually working.

1861. Is that line constructed up to the best standard of the present day?—Yes, I can safely say that it is. It has iron poles of a very good description, and very good insulators, but the arms are of cast iron, and too weak; many were broken during the construction of the line; they ought to have been stronger; but since the line

was finished they have not broken so much as I anticipated.

1862. During the time that you have been connected with it, there has been no failure arising from defective construction?—No, not at all; not in that part of the line.

1863. The only case of defect, I think I understood you to say, has been from interference on the part of the Arabs?—Yes, they broke the poles, cut the stays away, and cut the wires; while we were constructing the line, we had several cases of that kind, but not since.

1864. You were in communication at Fao with the Indo-European wire, were you not?—Yes.

1865. Are they in separate offices there?—Yes, in separate offices; the Turks have one office, and the Indo-European people have another office contiguous.

1866. Are the wires connected?—No, they are not connected; the messages have to be handed over from the Turkish office to the Indo-European.

1867. Are you also practically acquainted with the line between Constantinople and Bagdad?—Yes, I went over the whole of it from Constantinople to Bagdad with Colonel Kemball.

1868. That was a line which was constructed by the Turkish Government, was it not?—Yes, it was constructed by the Turkish Government under English superintendence.

1869. Was that done under a contract?—No, it was no contract; it was constructed by salaried men belonging to the English artillery.

1870. Will you describe, in a few words, the direction of that line, beginning at Constantinople?—From Constantinople to Ismid, Ismid to Angora, Angora to Jyzgat, Jyzgat to Sivas, Sivas to Kharput. Those are the principal towns where there are stations; from Kharput to Diarbekir, Diarbekir to Mardin, Mardin to Iezireh, Iezireh to Moasul, Moasul to Kerkuk, Kerkuk to Bagdad, and then the Arabian line from Bagdad to Hillah, Hillah to Dewaniyeh, Dewaniyeh to Dirajee, Dirajee to Bussorah, Bussorah to Fao, at the head of the Persian Gulf.

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27 April
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Esq.

27 April
1866.

1871. What is the general character of the line with regard to its construction?—From Constantinople to Bagdad it is constructed on wooden poles, and one wire is insulated by Mr. Latimer Clark's porcelain insulators, and the other is insulated by Siemens's insulators.

1872. Does the line work well when it is properly managed?—Very well indeed.

1873. So far as complaints are made in this country, and in India, as to the irregularity of the communication, they do not, in your judgment, arise from any imperfection in the construction of the telegraph?—Not the slightest. I tested the line all the way through, and I consider that the line ought to work as well as any line in the world.

1874. Does the severity of the winter, in some parts of Asia Minor and Armenia, interfere with the working of the line?—In some parts it does. The line has been taken through the valleys; instead of keeping the beaten track and making a more circuitous route, they have taken a direct line in Asia Minor.

1875. What effect has that upon the working?—In the winter time the valleys get filled up with snow, and the men who look after it, in case of the wire breaking, cannot get to it; they are obliged to wait until the snow melts. That has been the case once or twice with one wire, but never with the two at the same time. We recommended, on our way down, that those portions of the line should be removed on to the main road, and the Turks promised that they would do so; and I believe that they have done so in many instances, which is a great improvement. This winter the line has been working remarkably well through Asia Minor, and, of course, this has been the worst time.

1876. Where are the head quarters of the superintendents of the line as between Constantinople and Fao?—At Angora, Sivas, and Bagdad.

1877. Where are the general head quarters?—Constantinople.

1878. Is the telegraph worked from Constantinople practically?—Yes, everything has to go from Constantinople, as regards the working of the line; instructions of every kind, and stores of every kind.

1879. The construction of the line being good, to what do you attribute its imperfect working?—In the first place, I attribute it to the line not being properly looked after as regards the insulation being kept up properly; the insulators get broken, which they will do, and instead of the Turkish line-men putting in a new insulator, they take a piece of wire and tie it round the iron bracket, thus making a connection with the earth down the pole, and dozens of these will cause the line to work very imperfectly.

1880. Has that often been the case?—Yes, often; there were numbers of them when I went the first time, and on my road home, now through Asia Minor, I saw many cases of the kind.

1881. Did you point it out to those who were in charge?—Yes; and I altered many of them whenever I could, to show them that it was wrong; when I came over the line just now I saw a great improvement in that respect, but still I did see cases. These things being numerous, they cause the line to cease working altogether; a few of them would not matter, but they are very numerous.

1882. Is there any other cause to which you

can ascribe the imperfection of the working of the line?—That is the principal cause, and in case of the wire being broken, the men will not go out to look after it; they are indolent, lazy fellows, and stop in their villages until somebody turns them out to go to the place; those are the great faults as regards the engineering part of it.

1883. What does the indoor establishment consist of?—There are about six clerks at each principal station; according to the terms of the convention between Turkey and England, they ought to be clerks who understand English, but very few of them do; most of them understand it very imperfectly; they are Armenians; there are a few Italians, but they are mostly Armenians, Turkish subjects.

1884. Are there any Greeks?—Yes, there are some Greeks; but they are mostly Armenians, Turkish subjects.

1885. Are they tolerably well up to their work?—They can work their instruments very well, but they do not understand the English language; perhaps one man at a station will understand English pretty well, but that man is only on duty half his time; when he is away, a message comes through with little errors which are not detected, and the error is increased, and then sent on to the next station, and from not understanding English, the error is increased again at that station; the great cause of messages being so mutilated is that they do not understand the English language. Colonel Stewart managed to get an English clerk appointed to each of the principal stations when the line was first opened, and it was arranged that those Englishmen were to check all messages passing through; but instead of those Englishmen being employed in that way, they are put on duty as regular clerks to send messages; and the consequence is, that they get their messages all right enough while they are on duty, but they are only on duty a certain number of hours, and when they are away there is no check at all, and consequently the messages are sent on in a mutilated condition.

1886. As one person cannot well be constantly present, you think that there ought to be more than one clerk who is competent to read English messages?—There ought to be two, at least: one there all day, and the other all night; the offices are supposed to be open 24 hours, so that there ought to be two good English clerks at each station.

1887. How often is a message repeated between Constantinople and Bagdad?—When the line is working well it is repeated only once, that is at Sivas; but sometimes it is repeated at Mosul, and sometimes at Diarbekir, just according to the state of the line; if the clerks were up to their work, and properly attended to their instruments, they ought to send it through from Constantinople to Fao every day; there is no reason why they should not; it is merely a matter of attention.

1888. What ought to be the average time upon the Turkish section from Constantinople eastward?—As to the average time, I should think that two hours ought to be ample, most decidedly, for a message to Fao, and that is giving sufficient time for everything; of course, if there is a breakdown it is a very different matter; but when the line is in working order two hours is ample time; in fact, it ought to be less.

1889. Do

133

1889. Do the authorities listen readily to any representations that are made to them?—Yes; they do listen to them, but they are a long time acting upon anything; they are a long time making any alterations that may be pointed out to them.

1890. Do you think that that is owing to indifference rather than unwillingness?—Yes, decidedly indifference; I think it is not in them to act promptly upon any matter; they cannot do it; they must sit down and smoke upon it.

1891. Is it true that at some of the offices messages are sometimes kept for days without being sent on?—Yes; as I was coming through Constantinople there were upwards of 200 messages waiting there to be sent on. Fuad Pasha had taken the line for the use of the Turkish Government, and it had been closed for I do not know how long; there was an accumulation of upwards of 250 messages at Constantinople.

1892. The evidence before the Committee is that from London about 30 messages pass per diem; that would indicate that there must have been a delay, including Continental messages, of probably five or six days?—Yes, I dare say it would be so; but of course that is an exceptional case; it is only rarely that they take the line in that way; but they do it when they have anything particular to do, and stop the European work.

1893. Do you know what they do with the messages when they receive them; do they put them on a file?—Yes; they put them on a file on the instrument generally, or close by the instrument.

1894. Is it a fact that when the clerks are clearing the file they take those that are at the top first, and consequently they send the latest messages before the earlier ones?—I do not think they do that at Constantinople, but they may do it at the smaller stations; take Sivas, for instance; they may do it there, because they do not know the difference scarcely, the clerks not understanding English; they may know the dates, but they do not trouble themselves about the matter; but at Constantinople they send them away according as they are sent into the office, I should think.

1895. Considering the great importance of this telegraphic communication between England and India, do you consider the prospect satisfactory as to the efficient performance of the service?—If the Turks keep the thing entirely in their own hands, I do not think that the work will be got off satisfactorily to the public; but if they would allow the English Government to have a little control over it, and to place two or three English signallers and good English inspectors on the line, there is not the least doubt that the work would be got off through Turkey very satisfactorily. Of late messages have been coming through the Turkish dominions in two or three hours, because the lines have been in good order, and if they were kept up to their work it would be done so every day.

1896. What is the system of inspection that is carried on by the Turkish Government?—They have one inspector for about 350 miles, and this inspector is supposed to go over his length twice a year, in the spring and autumn; that is not sufficient considering that you have Turkish workmen on the line to do everything that is required; and in the interim the line gets into very bad order by those men not doing their

duty, not renewing their insulators, and attending to all the little minutiae that are required in telegraphy; the consequence is that by the time the inspector goes again he finds that the line is almost out of working order by not being attended to by those Turkish workmen. If the Turks would employ, as I recommended long ago, a kind of sub-inspector for each length, so that he should be continuously on the line, it would be a very different matter, because he would turn the line men out and make them do their duty, and instead of the line being gone over only once in six months, the sub-inspector would be able to go over it almost every month, which would be a great advantage.

1897. It appears to be your opinion that the construction of the line, being in all respects good, the imperfections of which the public complain so much, are due entirely to inefficient administration?—Precisely so; that is just the case; if they would improve their administration and management, there is not the least doubt about messages going through satisfactorily.

1898. You think that the administration would improve by placing two or more Englishmen, or persons understanding the English language sufficiently, at every repeating station?—At every principal station on the line.

1899. And by the establishment of an efficient system of inspection?—Yes.

1900. Would you suggest that those inspectors should be Englishmen or Europeans?—No, I would let the sub-inspectors be Turks; the men who are now performing the duty of chief line men, if they were put into a position to go along the whole length, I would have them Turks, as that would answer better; there are some of them very good men indeed, several whom I have seen do their work well.

1901. Your observations apply, do they not, to the whole of what we may term the Asiatic system?—Yes, to the Asiatic system, south and east of Constantinople.

1902. Do you find that the messages that you receive at Fao from India are generally in a correct and satisfactory condition?—No, very far from it, some of them. In one instance, a Swiss merchant in Bagdad had a telegram from India, and he could not understand a word of it, except that it was meant to be English, but it was no more English than Persian; it might be any thing. He had it repeated, but it was no better, and he had it repeated a third time, but he could not understand it even then. That is one instance, and there are many from India in that condition.

1903. Where do you suppose the fault in that case to rest; is it in the internal system of India, or in the Indo-European part of it?—In the internal system, no doubt, in India.

1904. Do you find, as far as you are acquainted with the Indo-European line, that it is well worked?—Yes, I think it is. I have no hesitation in saying so. Take the cable, for example; messages have always come through that cable very quickly indeed, and reached Bagdad from Kurrachee.

1905. Do you find that the messages which you deliver to that line from Fao received from Europe, are sent on expeditiously?—Yes, always.

1906. Then as representing, so to speak, here the Turkish line, you have no complaint to make of the working of the Indo-European line?—Not

J. H.
Greener,
Esq.

27 April
1866.

*J. H.
Greener,
Esq.*

27 April
1866.

the slightest. I presume the Honourable Member alludes now to the line from Fao to Kurra-
chee; I am persuaded that that line has worked
as well as any line possibly could do; messages
always come through it quickly.

1907. Is not a line being recently made from
Diarbekir to Alexandria or to El Arish?—Yes.

1908. Are you at all acquainted with that
line?—No, I am not.

1909. Do you know by whom it was made?—
It was made by the Turks.

1910. On the same principles of construction
as the line through Asia Minor?—Very nearly
the same. The wire is much smaller, and not so
well adapted for sending messages a long dis-
tance; but it was merely put up for the accom-
modation of the Turks, merely for their local
work.

1911. Do they receive messages by it? For
instance, is there a junction at Diarbekir?—Yes.

1912. Would the office at Diarbekir receive a
message from Fao and forward it to England by
way of Alexandria?—It has been done from
England to India, but I know that messages
have been very much delayed by going that
route.

1913. In the event of a message being re-
ceived from Europe by way of Alexandria, at
Diarbekir, would that message be immediately
sent on to India?—Most decidedly it would; and
it would go quickly enough from Diarbekir, I
have no doubt.

1914. Looking at the risks which always attend
a single line of communication, are you not of
opinion that the line from Diarbekir to Alexan-
dria may become of material public advantage in
relieving the public of its dependence upon a
single line?—I should think it would if it were
put into proper working order, but the Turks
have not done so yet. I am in a position to say
that that line is not working so well as it may be
made to do. It was merely meant for the Turk-
ish work.

1915. However, you are well aware, are you
not, of the terms of the convention between Her
Majesty's Government and the Government of
the Sultan with reference to this telegraphic
communication?—Yes.

1916. Is that convention in its terms sufficient,
do you think, for the purpose of securing to us
all that we desire?—I think perhaps it is, if the
Turks would carry out the terms of it; but they
do not seem to do so. I think that we might
put a pressure upon them to make them carry it
out more to the letter.

1917. Is not one of the terms that an English
staff should be employed?—The signallers at all
events are to understand the English language;
that is plain enough in the convention.

1918. The term is "thoroughly conversant
with the English language" is it not?—Yes.

1919. You think that in that respect the Turks
have not complied with that term of the conven-
tion?—They have not; and it would make all
the difference in the world if they did comply
with it.

1920. *Sir Charles Bright.*] Do you know any-
thing of the line from Constantinople to Belgrade?
No, nothing at all, further than that I saw it here
and there as I was coming home up the Danube.

1921. Does it work pretty well?—I believe it
works very well indeed.

1922. You stated that you think that messages
might be carried in two hours from Constanti-

nople to the head of the Persian Gulf. What
do you think is the average time now occupied
by a message on the Persian Gulf line proper,
that is to say, from Fao to Kurachee?—I do not
remember at this moment, but I know it is some-
thing very short.

1923. Is it half an hour, do you think?—I
think it is something a little over that, perhaps.
I know it is something considerably under an
hour, but I cannot tell you what it is.

1924. At all events, a message ought now to
go from Constantinople to Kurra-
chee in three or
four hours, ought it not?—Most decidedly.

1925. You state that there are two wires in-
sulated in different manners between Constan-
tinople and Bagdad; which of those wires is used
for the local service?—The lower one; the one
insulated by Siemen's insulators.

1926. Which do you consider the best wire of
the two?—The wire in the best condition is
Siemens's.

1927. They use the best wire, therefore, for
their local business?—Yes; the fact of the case
is that if they would keep the insulation on the
other wire up, it would be by far the best wire;
but the insulators being porcelain, there is great
risk of continual breaking. It is a wire that
was meant for the English Government when-
ever this line was used for communication with
India, and we have that wire, and they take the
other, but it is not kept in sufficiently good
order. You will understand that when one of
these insulators breaks, instead of putting another
in, they bind the wire down to the bracket.

1928. When you spoke of Fuad Pacha having
taken the line for some time, did he take the
wire which was devoted to the exclusive service
of the Indian and European traffic?—I expect
so, or otherwise the work would not have been
stopped. That is what I understood when I was
at Constantinople. He must have done so.

1929. According to the terms of the conven-
tion, one wire shall always be exclusively de-
voted to the Indo-European messages; is it the
fact that one wire is always so devoted?—Gene-
rally it is so, except on an occasion of that kind,
I imagine.

1930. But that being the worst wire, it is
divided into more circuits than the other, is it
not?—No; they work the same distance, and
they go to the same places precisely.

1931. However, if that wire were put in good
order, you could work direct from Constantinople
to Bagdad?—Yes; we have done so several
times.

1932. But you would do so always, would you
not, if it was put in good order?—Always; there
is no reason why it should not be so.

1933. What instruments have the Turks on
that line?—Morse's instruments.

1934. Are they in good order?—In very good
order indeed. They are very good instruments,
working very well. They are Siemens's instru-
ments.

1935. How many line men have they for every
100 miles of line?—They have a line man every
three hours; that is one man every nine miles.

1936. Will you explain the nature of the ser-
vice of the staff for maintenance, the number of
men employed, and their different duties?—
There is one line man every three hours; that is
every nine miles; he is supposed to go over his
nine miles every day, but I doubt very much
whether he does; and then, as I have said be-
fore,

*J. H.
Greener,
Esq.*

27 April
1868.

fore, the inspector comes once in the half year; that is all the supervision that exists.

1937. How long does it take to repair a defect now, according to your experience?—I have known several wires break, and they have generally managed to repair it in a day; sometimes they take two or three days over it; but generally speaking they manage to get it done the second day.

1938. How do you account for a message being 10 days between Constantinople and Fao?—I should think it must have been in the spring time when it was 10 days.

1939. We have it in evidence that it was in the months of October, November, and December last year. How do you account for it at that time?—I cannot account for it; I cannot understand why it should be so. Of course immense delays occur in this way; the offices are open 24 hours, and some of the clerks are on duty 24 hours. It is a very long time for clerks to be in office, and at night after 12 o'clock, it is a common thing that instead of keeping up their work, they sit down and smoke, and go to sleep until six o'clock in the morning. There is therefore a delay of six hours, which causes an accumulation westward or eastward, and it throws the messages very likely a day out.

1940. They have no regular change of clerks, have they?—No; the clerks are on duty 24 hours, and off 48 hours.

1941. On the Persian Gulf line, they have regular watches, have they not?—Yes, I believe they have; they divide their time, I think, into eight hours or less than that even, as far as I remember.

1942. In what season of the year does the Asia Minor line work best?—After May; from May up to November.

1943. And during the winter months it is more liable to interference?—Yes; in the winter months in Asia Minor, on account of the snow through the valleys, and in the spring months in Turkish Arabia, on account of the rushes of water down from the mountains, which very often wash the poles away, and we have been broken down for 12 and 14 days owing to that, and could not do anything on account of the water rushing down and deluging the beds of the rivers.

1944. Shall you always be liable to that?—In the places where they are subject to that, they have fixed iron poles and well stayed them with brickwork and so on, so that I think now it is most likely it will not be so much the case; the accidents will not be so frequent.

1945. You will always be liable to broken wires in winter in Asia Minor, will you not?—Yes, but they can be taken out of those valleys and be put on to the beaten track where you can go the whole year round. For instance, we left Constantinople on the 7th of January in the middle of winter, and we were up to the middle in snow all the way, but we could travel; but where the line is taken, the snow was up almost to the tops of the poles, and the wires touching the snow, nearly.

1946. Will not this route be always open to those objections?—No, the route can be altered and can be worked all the year round easily, where the snow will never affect it.

1947. You have described the course of the line which you erected from Bagdad by the banks of the Euphrates, that goes to Kurna and from there to the head of the Persian Gulf; do

0.43.

you consider that that is the best route?—It is undoubtedly the best; in fact at the time it was the only available route.

1948. Do you consider it better than by the Tigris?—Yes; the Arabs are far more settled than on the Tigris; four years ago it would have been impossible to have got a line there when we started with the line down the Euphrates; all the way down the Tigris there are numbers of small tribes. I cannot tell how many tribes there are, and those tribes are always fighting; whereas on the Euphrates it is through the Montefidje district all the way.

1949. Have you now the means of getting stores by water on the Euphrates?—Yes; we brought up all our stores by the Euphrates; there is one place where the water is very shallow, we had small boats, where the banks of the Euphrates are broken away for 15 miles; in fact, it is a complete sea.

1950. You cannot send any steamers up?—No; not any farther than Suk-esh-Shinekh, about 150 miles above Bussora. For 15 miles, as I said, the banks of the river are broken away, and it is a perfect sea on each side, and then above Suk-esh-Shinekh there is plenty of water in the river again, where steamers could go.

1951. Are the Arabs pretty well settled there now?—Yes, they were very quiet indeed when I came away, and all the time we were putting up the line (after we were fairly started), they were quiet; the sheik is appointed for three years; a year and a half of the time is gone now, I suppose; when the time is up, if they appoint another sheik, it is a question whether there will not be a revolt in the country again; if a new sheik is appointed, probably there will be, and the chances are that something will happen to the line, but as long as the present sheik holds office it is all right, the line will be protected.

1952. Then we are not to be surprised if there should be an interruption arising from the Arabs being in revolt?—Not if there is an alteration in the sheikship.

1953. Do you know anything of the working from Teheran and Bushire?—I know that up to the time when I left, they were working the whole line from Bagdad and Teheran and Bushire in summer; it works very well indeed, it is a long length; they have breaks down there as at any other places.

1954. Are there English signallers there?—Yes; there are English signallers right through, from Bagdad to Bushire.

1955. At Teheran to Shiraz and Bushire?—Yes; there are English signallers at all those places.

1956. Do you know anything of the working of the line from Teheran to Russia and Tiflis?—I do not know anything about it any further than I know that it works very badly; I had a communication lately from Major Champaign, now in Constantinople, and he says it is working very badly indeed; messages that have been sent that way have been delayed a very long time, and he wrote home to ask me if I could do anything to prevent messages being sent that way. Messages going by Russia have been three weeks, and so on, at the same time that messages from Constantinople to India and to England have been going through in two days, therefore I am led to believe that the Russian line is very defective; and in Persia also they have been rather unfortunate; they have been broken down there

J. H.
Greener,
Esq.

27 April
1866.

there for some considerable time through heavy snow storms, Major Champain informed me.

1957. Do you know anything of the internal lines in India between Kurrachee and Calcutta and Bombay?—I do not know much about them. I have merely passed through that part of India on my way out three years ago; the lines then appeared to me to be in a very bad condition; I made many inquiries of the state of the line from Bombay to Kurrachee, and I was then told it was very seldom that merchants got their messages through in less than three or four days; that was in 1863.

1958. That line is about 500 miles, is it not?—Yes, it is about 500 miles. At that time they were finding very great fault, but I imagine that it will now soon be better. You must understand that they had no insulation, or if they had any it was very bad, owing to the wet and one thing and another.

1959. Lord Robert Montague.] Where was it that you said the Arabs cut the line; was it between Bagdad and the head of the Persian Gulf?—Yes, between Bagdad and the head of the gulf.

1960. Was that from a spirit of animosity, or from cupidity, do you think?—It was a little bit of mischief, and in a fit of pique with the Sheik, and they cut it down, but it was not on our account at all; it was spite against him. On one occasion, just after we had got the line up, and we were going ahead with the work, we had about two miles of wire cut down; they did not touch the posts, but merely cut the wire and took it away. Some of my people went back to see what was the matter, and they found that some Arabs had taken the wire and made a bridge across a canal, where they had some thousands of sheep, that they wanted to cross; they had stretched wires across this canal, and put a lot of reeds on them; the place is very marshy, with reeds growing about 13 feet high, and they laid those reeds across upon the pieces of wire and made a kind of little bridge for the sheep to cross.

1961. What is to prevent their doing the same mischief now?—They do not care about doing it now; they thought that they would like to do it just in the same way as they do in England up to this day, when new telegraph lines are put up.

1962. Except in case of a revolt, you think they are not likely to do it again?—There is not the least chance, I think.

1963. If they should do so, is there anything to prevent a message being sent round through Persia to join the Persian Gulf line at Bushire?—No; that could be done, and it will be done more satisfactorily very shortly, because about next November I think they will have a second wire to Persia, which will make all the difference. They have been broken down very much this winter in Persia, but it is simply because, in one or two places, they have made the line through the valleys instead of keeping on the high ground; but that will be altered now.

1964. Is there no other portion of the line where the natives would be likely to cut it, or injure it at all?—No. The Arab district is the most dangerous, but it is safe enough as long as the present Sheik is in his place, but if anything should happen, there is the Teheran route. I might observe, that on my way home from Diarbekir towards Constantinople (I came through

Asia Minor home), I saw that the Turks had put up a third wire which was meant to take the Alexandria work, in order to relieve the two Constantinople wires of any work coming from Constantinople; the total Turkish work for Syria was to be sent by this third wire to Diarbekir. However, instead of their putting up insulators, they had merely stapled the wires up to the poles all the way, and in some places they had driven in a nail and twisted the wire two or three times tightly round the head of the nail. I remember when I got to Sivas, the English clerk on duty there came to me, at the house where I was stopping, and he said, we have had a third wire put up from Diarbekir, going on to Scutari, but he said we cannot work it either up or down. I said I do not think it is likely that you will, as it happens not to be insulated in any way. He said we never knew a word about that; our inspector never told us that there were no insulators. That is a specimen of the way the Turks do their work. It is very likely that money was granted to put up this wire and the insulators, but the insulators never found their way there. That is just the sort of thing that is done in Turkey, and excepting we can get some alteration in the management, I do not think there is much chance of our doing much good.

1965. Sir Henry Rawlinson.] When you went with Colonel Kemball to inspect the line, did you not find that the porcelain insulators were in a bad condition, and recommend that they should be altered?—Yes, that they should be altered and replaced by stronger insulators.

1966. And that has never been done?—That has never been done. There were parts of the line when I came through Asia Minor that were in a much better condition, because I saw that the insulators had been replaced.

1967. Were the insulators that were replaced the same sort of insulators that were used before?—Yes, the same kind.

1968. In your representation you took objection, did you not, to the system of porcelain insulators?—Yes; I said that they were too fragile in my report to Colonel Kemball, and he recommended, as the porcelain ones broke, to put in stronger insulators. Siemens's insulators have never broken; the insulation is not so good, but still it is good enough for a country like Turkish Arabia and Asia Minor, where it is so very dry.

1969. Are the porcelain insulators continued the whole way from Constantinople to Bagdad?—Yes.

1970. But not from Bagdad to the head of the gulf?—No; Siemens's double insulators on cast-iron arms are used from Bagdad to the head of the Persian Gulf.

1971. The convention provides, does it not, that in the case of the English wire becoming out of order, the messages shall be sent by the other wire, the second wire?—Yes.

1972. Is that course followed out?—Yes. I believe that is done, as far as it is possible; they do very well in that way; they are very accommodating, they never object to it.

1973. Have the Government messages priority, or do they send public and private messages according to their order?—Supposing the English wire were broken, and we were sending work through the other wire, the Turkish Government messages would certainly take priority over ours.

1974. I am

137
J. H.
Greener,
Esq.

27 April
1866.

1974. I am speaking now of the Indo-European public and private messages; have the messages of the English Government priority of despatch over the English wire?—I do not know; I do not think they have, but I cannot speak positively on that point. It was very few messages that the English Government had sent up to the time when I left Bagdad; but I scarcely think they have priority, I believe they take their turn with other messages, as far as I know.

1975. With regard to the track of the line through Asia Minor, in the first place, the track from Ismid or Angora to Jyzgat and Sivas is not the caravan line, I believe?—No; it is a cross-country line, not the post road.

1976. Did you make any objection to that when you came through the country with Colonel Kemball?—We did not make any objection to the route the line took, as far as its not being on the post road was concerned, because the route that we went was good. There is a beaten track through that part of the country; but we objected to the route that the line took, inasmuch as it went straight across the country, through ravines, and over mountains, and through valleys, instead of taking a more circuitous route and keeping the beaten track, where it could have been gone over at any time of the year. When we went it was in the middle of the winter, and the snow was deepest then; Colonel Kemball was very anxious to see it at the very worst. We went comparatively easily; of course we were deep in the snow, but still you could go over it at any time.

1977. I presume that really the worst part of the line in winter is the bit between Kerkuk and Diarbekir?—There is a very bad part there, but it does not go over the Maharab Dagh, it goes through the other mountain pass. The snow is very deep, and there are 12 huts placed there for the men to live in. Colonel Kemball had objected to that route very much; he went and saw it, I did not; but still he thought it was not sufficiently bad to have it altered and brought over the Maharab Dagh. There has never been any break or stoppage since the line was up, and therefore I do not think that there is any particular objection to the route.

1978. But, considering that the line from Diarbekir through Syria to Alexandria would avoid the great natural difficulty of the snows in Asia Minor, do not you think that it would be of great importance to have that as an alternative line?—Most decidedly. If the Turks would work that piece of line up to our requirements it would be a great benefit, and it would always keep us open in the winter time. Of course, through a country like Asia Minor, there must be a certain fear of the line being broken down, as there is so much snow.

1979. And as there is an article in the convention stipulating that any modifications that might appear useful should be subsequently introduced, you think, do you not, that it would be very desirable to bring the line, so far as Turkey is concerned, from Diarbekir towards El-Arish, under the same conditions as the Indo-European line?—Most decidedly it would be much better in every case where that could be done.

1980. With regard to the line between Diarbekir and Mosul, I believe it goes through Djubeltore and not down in the plain?—Yes, it keeps up on the high ground.

0.43.

1981. Is it in good working order generally, in that part?—Very good. It is a very rough road, but it was taken that way to avoid the Arabs, and it is a very difficult country to get over.

1982. It goes through Midijad, does it not?—Yes, but it is kept in very good working order. There is no snow to contend against. It is merely just a rough country, and the line men are very close in that part.

1983. I believe that you stated that there is no danger from the Arabs anywhere, except in the lower country; have there never been any difficulties between Mosul and Bagdad?—When the line was first opened there were.

1984. I believe that a subsidy, or black mail, is paid to those tribes still, in order to induce them to respect the line of telegraph?—I am not certain whether it is still kept up or not. It was done, I know, but whether it is still going on, I do not know. There is nothing paid below Bagdad, not a penny; but whether the Shalimur receive anything I do not know; but, at all events, the line has never been touched since the first opening of it.

1985. Has there never been any interruption?—Speaking from memory, it must be about two years ago, I think, that they broke the wires, but they did not do much harm. And just before we went down in 1860 they had knocked a few poles down; but there has been nothing very serious done.

1986. With regard to the lower portion of the line, of which you have given some very interesting evidence, you are aware, are you not, that in the first instance it was proposed to carry the line down the Tigris, and that wires were actually laid as far as Koot?—Yes.

1987. Has that wire been all taken up again?—Yes, it was taken up.

1988. You also state, do you not, that you consider the Euphrates line to the very much more safe as regards the Arabs than the Tigris line?—I think so; in 1864 most decidedly I should say that that was so.

1989. And you attribute that mainly to the power of the Sheikh of Montefidje?—Yes.

1990. But the worst part is out of the jurisdiction of Montefidje, between Diwanieh and Samara, where you have the Khuzil and the Ali Biage?—But still the Montefidje has some power, I believe.

1991. There is no black mail paid to the Khuzil?—No, not a cent all through.

1992. At present the country is quite tranquil through Diwanieh and Khuzil?—Yes.

1993. There is a Turkish garrison in Diwanieh, is not there?—Yes, and at Sumara now.

1994. Does that line go through Sumara?—No, it keeps on the east side of the river.

1995. It goes round the lake, I suppose?—Yes.

1996. You have stated that the river now above Suk-esh-Shiueckh overflows its banks?—Yes.

1997. And it forms a large marsh?—Yes; we keep away to the left; to the eastward of Suk-esh-Shiueckh; we keep on the high ground to the eastward of the river.

1998. But in so doing you come nearer to the Arabs of the Jubbel Shamur?—Yes; but I do not think they come across there at all. I never heard of it. The line has never been touched at that part by them. If anything does happen to

N 4

J. H.
Greener,
Esq.

27 April
1866.

the Montefidje Sheik there is a chance of the line being injured.

1999. Are you not aware that in that particular part of the country the normal state is revolt?—Yes, I am.

2000. It is a perfectly exceptional case, is it not, to find the Montefidje Sheik in such power as to be able to keep the Arabs in order about the junction of the Tigris and the Euphrates?—I think that during the last 18 months, since we started with the line, and since the present Sheik has been Sheik, they have been in a more quiet mood than they have been for many years; I have heard so. He seems to manage them well, and it is to be hoped that he will not be removed, but of course there is no certainty in it. The Pasha of Bagdad, Namuck Pasha, is not very likely to remove him, I think.

2001. Is Namuck Pasha favourable to the telegraph now?—I can scarcely say whether he is or not; he gave us a great deal of trouble while we were constructing it; he did not put any actual obstacles in the way, but he gave us a great deal of trouble; he did not want us to interfere in the matter.

2002. Have you any repeating stations between Bagdad and Fao?—We repeat sometimes at Diwaniyeh, but not always.

2003. And have you a signaller at Diwaniyeh who understands English?—He is just as good as the rest of them; he understands English very imperfectly.

2004. The arrangement provided for in the convention is to this effect—the Turkish government engages to appoint a staff at all the stations along the line between Constantinople and Fao, possessing a knowledge of the English language sufficient for the perfect performance of that important service; are you of opinion that that provision is carried out?—I think it is not; they do not understand the English language sufficiently well to do their duty properly, and that is a great drawback.

2005. Who are the people that are actually employed in transmitting messages; are they Armenians who have learned English at Constantinople?—Yes, Armenians, Greeks, and some Italians.

2006. Are there no English at all?—There is one Englishman at Bagdad, another at Sivas, and another at Diarbekir; they were appointed, as I have stated before, by Colonel Stewart, to examine the messages, to see if there were any faults in the messages when they arrived at those stations; they were not appointed to send messages, but that arrangement has not been carried out, and they have never done that duty.

2007. It is also stated that, "It's officers" (that is to say the officers of the Turkish government), "and especially the station master, shall be selected from the Ottoman telegraph officials, who are thoroughly conversant with the English language;" so that the station master at every one of the great stations between Constantinople and Fao ought, according to the terms of this convention, to be thoroughly conversant with the English language?—Yes.

2008. At the whole of the 11 stations that you have mentioned, is that provision carried out?—No; they do not understand the English language sufficiently well to carry on the telegraphic business; that provision is not complied

with, and that is what I have said all along, is the great drawback to the Turkish line.

2009. Are you aware whether there has been any pressure put upon the Turkish government to carry out that engagement?—Yes, I think so; I am aware that the English Government have been doing all they possibly can to get it carried out.

2010. And to what do you attribute their failure?—I imagine it is one of those things which it takes the Turks a long time before they will move in the matter; I have no doubt it will be done eventually; I think it is only a matter of time.

2011. Are you aware of any foreign pressure being exerted in the contrary direction?—I have heard that the reason why they have not allowed us to have English signallers has been on account of the pressure from foreign Governments, from France and Russia, but whether it is so or not I do not know; I have heard that that is the case, and I think it is quite likely; however, the Teheran line will always be a great advantage in the same manner as the Diarbekir and Beyrout line will be; in case anything does happen in the Arab district, we shall have the Teheran line to fall back upon.

2012. With regard to the line through Persia, is it arranged at Bagdad and Bushire respectively, whether messages shall come by Bussorah and Diwaniyeh, or through Persia, there being two alternative lines?—The arrangement is, that one half of the messages go *viâ* Teheran, and the other half *viâ* Fao.

2013. Both coming and going?—Yes.

2014. That is to say, half of the messages daily?—Yes, half of the messages daily; but that has never been carried out for this reason, that there has been only one wire in Persia, and for 12 hours in the day it has been in the hands of the Persians to work, and we have only had the line the other 12 hours, therefore we have never been able to send from Bagdad half the work by Persia, and the Turks have always got three parts of it, for that reason.

2015. Are the messages sufficient to keep the wire constantly working on the Turkish line?—Up to a short time back I heard that they were working fully, but they had a long break down, and people got frightened of it, I suppose, and then there was not work sufficient. But at one time there were 100 and odd messages passing through Bagdad daily.

2016. And you work day and night?—Yes; the offices are open 24 hours, and the clerks are supposed to work, but they do not work at night; they go to sleep.

2017. There is a statement contained in a report of Mr. Courtenay from Constantinople, dated the 21st of February last, saying "on the 8th instant," that is to say, on the 8th of February, "I sent a message direct," that is from Constantinople to Kurrachee," the acknowledgment of which was received here," that is, back at Constantinople "three minutes afterwards." Did you ever hear of this circumstance before?—No, I have not heard of it.

2018. Do you think it possible?—I suppose that at certain times it would be.

2019. As the message has to go to the east, and return from the east to the west, the one longitude corrects the other?—Yes, precisely.

2020. That allows simply three minutes for the whole distance from Constantinople to Fao, where

where it must have been repeated, and to Kurrachee and back to Fao and Constantinople?—It is very quick indeed to have done that. However, if they were all ready and looking for it, it might be done.

2021. What is the quickest time that you are aware of from Constantinople to Fao?—We have many times sent messages direct, which have gone just as quickly as we are now talking; and it would be done always if they would look after their instruments. On two or three days of the week they work direct if they can get the clerks in a humour to look after their instruments; but on the other three or four days they will not adjust their instruments, and consequently they cannot send through relays.

2022. Do messages generally come direct from Kurrachee to Fao, or are they repeated in the

interval?—They are repeated generally; Mr. Walton is here, from the Persian line, who will be able to tell the Committee more about the Gulf line than I can, but I believe the messages are generally repeated.

2023. You have not personally visited the Persian line?—No, not personally; I have not been on the Persian line at all; I have been exclusively in Turkey, between Fao and Constantinople.

2024. *Chairman.*] In the case of that message which went through in three minutes, it had to be repeated at Fao, had it not, by word of mouth?—Yes, it had to be repeated at Fao both ways; therefore I should think it must merely have been an acknowledgment of having received the message, and not an answer to it.

HENRY WALTON, Esq., called in; and Examined.

2025. *Chairman.*] You are in the Telegraph Service of the Government of India, are you not?—Yes.

2026. In what capacity?—I was appointed to the telegraph in India at the end of 1856, as assistant in that department. When the Court of Directors sent out 60 gentlemen to India to reorganise the Indian department, I was one of the first four who went out.

2027. Where have you been employed in India?—In Bengal and the North Western Provinces, and in the Punjab.

2028. Have you been employed in the Persian Gulf?—Not in the Persian Gulf itself, but in the Persian department; in constructing a portion of the Persian line, from Kermanshah to Teheran. I have also visited stations in the Gulf, and know somewhat about them.

2029. Then your experience has been rather on the Persian part of the line?—Yes; since I left India I have been entirely in Persia.

2030. When did you leave India?—In 1862.

2031. What is the condition of the line in Persia with which you have been connected?—I think the line in most parts is very good. From Khanikeen on to Teheran, and Teheran again to Abadeh, which is half way between Ispahan and Shiraz, the line is as good as it can be, and well insulated. Siemens' insulators are used; we procured very good poles from the Persians, and that part of the line is worked very well; but between Abadeh and Shiraz it is a very bad country; that is to say, there were very few poles to be got, and the Governor behaved very badly; he got a certain amount of money from the Shah for the poles, about 7*s.* or 6*s.* 6*d.* for each pole, and he only spent 2*s.* or 2*s.* 6*d.*, and consequently the poles are very bad, and this winter they failed. The line was taken through a defile where the snow collected, and for five weeks the road was impassable. I sent two or three inspectors, and they were obliged to return. We then sent a number of villagers down, and they could not get through. At last our inspector managed to get through and restored the line, and it has worked well since then; that is about six weeks since.

2032. Is that defect likely to occur in the winter season?—No, not the least. They say it has been the severest winter they have had for 0.43.

60 years in Persia, and we now know where the bad part is, and the line will be immediately altered. We have sent out men with orders to change the line immediately, and, instead of taking it in the valley, to take it on the tops of the hills, which has been chiefly done in Persia.

2033. Have you had anything to do with the service of the cable between Kurrachee and Fao?—I have not been actually employed on it, but I have visited their offices and stations, and have been frequently there and have seen how the work is going on at the different stations.

2034. Have you heard it stated that a message had been sent from Constantinople to Kurrachee, and an answer had been received in three minutes?—Yes; I was in Constantinople a few days since when that was done. Mr. Courtenay and Major Champain mentioned to me that it had been done the morning I was there. I was not actually in the office, but I can perfectly believe that it was done. I do not know whether they repeated the message at Fao, and then transmitted it on, or whether they sent it direct through the cable, which I think was hardly advisable or possible. The message must have been very short, of course; it must have been an almost instantaneous communication. Constantinople was working regularly with Fao during the eight days that I was in Constantinople, and they said that lately it had been done regularly.

2035. How long ago were you in Constantinople?—Ten days ago.

2036. Do you think that the Persian line, as you have described it, presents a useful alternative in the event of the line from Bagdad to Fao direct being interrupted?—I think it does, very much so, especially when we get up the second wire, which is being now shipped for Persia. It never failed in the summer. The weather is so favourable for a telegraph that even if the posts give way we could work very well if the line were on the ground. I worked with the line for 14 miles on the ground before the line was erected, and all the wire ran out, there being no rain there for seven, eight, and nine months together. The air is so dry that I think the country is very favourable for telegraphy.

2037. Are you acquainted with the line between Teheran and Tabriz?—Yes; I looked carefully at that line as I came along. I was asked to do so by Major Smith. That line is entirely in the hands

J. H. Greener, Esq.

27 April 1866.

H. Walton, Esq.

H. Walton,
Esq.

27 April
1866.

hands of the Persians themselves; but, owing to strong representations at Teheran, and Mr. Alison constantly telling them of it, they have got three Englishmen and two or three Frenchmen for the Tabriz service with Russia, and there are two or three Frenchmen stationed at Djoulfa, which is on the frontier between Russia and Persia. There are two or three at Tabriz, and again two or three at Teheran, distinct from our staff altogether, and they are paid by the Persian Government, with a view of keeping up the communication with Russia, with whom they have recently made a treaty on the subject.

2038. You are probably aware that last year a good many messages were forwarded from this country to India, by way of Russia, with the intention of being forwarded over the line which you have been describing, by the Persian Gulf?—Yes.

2039. And the result has been very unsatisfactory. Does that want of satisfaction, as far as you know, lie in Persia or in the Russian system?—I heard the Russian Minister at Teheran say, that when those messages were started from London the Russian line had not been opened by the Government for service. Those were the first messages that were sent, or attempted to be sent, through the line, and some of them took six weeks in reaching Teheran. The Russians themselves did not desire the messages to be sent; but, after that time, that is to say since October last, the Russian line has been working wonderfully well. We used to get messages from London in six hours, and seven hours by Russia, and I think the line has worked excellently.

2040. Do you know what route messages take after leaving Berlin, for instance?—Through St. Petersburg and then to Moscow, through Nizni to Novogorod, to Bakoo, and so to Tiflis, and so to Djoulfa, and so to Tabriz; we always use that line in preference to the Turkish line. In Teheran when wishing to telegraph to Europe the French Minister and the English and Russian Ministers use it in preference to the Turkish line, because we find that we always get replies quicker.

2041. Is there any jealousy on the part of the different European Powers in Persia as to the matter of control over the wires?—The Russians were said to have endeavoured to hinder the English staff at present employed in Persia from being allowed to remain there; but when the great advantage of the line between Djoulfa and the Gulf being well managed was pointed out to the Russians, they immediately turned their minds towards getting their own line in good order, and to reaping the benefit of being a link in the line between England and India, with the view of getting messages for themselves.

2042. Do you think that if a message were given in to-day at the office of one of our telegraph companies here, with a request that it might be forwarded by way of Russia to Teheran, it would reach there in a reasonable time?—I think it would reach within 12 hours; they were doing so when I left Teheran. The recent delays which have taken place no doubt were on our line in Persia; we got messages from Russia in six, seven, and ten hours, but we could not forward them on; our own line was broken between Ispahan and Shiraz. The fault recently has lain quite on the Persian line, but I am of opinion that the

Russian line will be one of the lines to India and one of the best; they are said to have Englishmen almost entirely employed on their line; they are very liberal in payment and in their general management.

2043. Did you hear the evidence given by Mr. Greener with regard to the management of the line between Constantinople and Bagdad?—Yes.

2044. Do the same difficulties exist on the Persian system?—No; they do not exist there, because the staff is paid by the Government of India. We have English clerks at Teheran and at Kermanshah, and at all the repeating stations; the only difficulty is in the system of guarding the line; that has been a point in dispute ever since we have been in Persia; but by the recent treaty made in Persia by Mr. Alison that is still unsettled, and we are still not allowed to have the management of the line guards, that is, not exactly the management of them, but the payment of them; because if the Persian Government paid them, or said they would pay them, they never did, whereas if we paid them they would be sure to get their money, and they would do their work; that is really the difficulty which exists with regard to the Persian line, for the villagers or the people in the country never molest the line, and the Persian Government is very anxious indeed to keep the line in good order.

2045. But they will insist on keeping the control of the line in their own hands?—Yes; they will insist upon keeping the control of the line guards in their own hands; in fact, they said candidly, that they did not like us to have 100 or 200 horsemen in our own hands in Persia.

2046. Sir Charles Bright.] What are the places where you state that the Russians have Englishmen employed on their lines?—They have two, I know, and we have generally heard that Englishmen were employed throughout the Russian line. Two men left our department and went to Russia and they were employed at once; they were two signallers, who had been many years in our employ; they were not dissatisfied, but they had an idea that they should better themselves by going into the Russian service. There is one man between Tiflis and Bakoo, and Tiflis and the frontier Djoulfa; and we find messages come very correctly by that route.

2047. How is the line between Teheran and Tabriz working now?—It worked very well indeed during last winter; it has been one of the best working lines in Persia, but I think it might be improved; the insulators are not very good; they bought the wire from the Russians, and insulators, as well as the instruments, and they are not so good as those that we have on our own line.

2048. Do you think that if we tried the experiment now of sending 100 messages by way of Russia we should meet with a successful result?—I think so, decidedly, as far as Teheran.

2049. Sir Henry Rawlinson.] You mentioned something about the Russian Treaty; you were alluding, I presume, to the Russian Government having recently made a convention with Persia about the line between Teheran and the Russian frontier?—Yes; I have not seen the treaty, but I am perfectly aware that it has been made; I have heard it mentioned by the Persian Director of Telegraphs.

2050. Is that with a view of giving the Russian Government

H. Walton,
Esq.
27 April
1866.

Government control over that line, or an interest in it?—Not the least; it is more with a view to insisting upon the Persians keeping it in good order and as regards the tariff.

2051. Do our officers work harmoniously with the Persians in the conduct of the line?—Very well indeed; the control is with the English superintendents, and if there is any dispute it is referred to the two directors, the English and Persian; but we have worked three years, and I have never known a case of a quarrel or anything of that kind with the Persian telegraphic officials; they are very willing indeed to learn, and they have learnt to signal and work the instruments, and under our direction they do very well. The Persians employ the line a great deal themselves; they have no post, and formerly they sent their messages by footmen, and now they send them by telegraph.

2052. At present there is only one wire throughout Persia, from Khanikée on the frontier, by Teheran to Bushire?—Only one line.

2053. Through that line messages are sent indiscriminately, that is to say, Indo-European and native messages?—Yes, and also the Turko-Persian messages; that is to say, between Constantinople and Persia.

2054. Are they all sent indiscriminately?—Yes.

2055. But when the second wire is put up, that is to be reserved exclusively, is it not, for the Indo-European messages?—Exclusively for the Indo-European messages; and we can work regularly from Bagdad to Bushire, which is about 1,250 miles, instantaneously.

2056. How often do you usually repeat between Bagdad and Bushire?—I think, when I was in Persia, perhaps half the messages were repeated, and half of them were sent direct from Bagdad to Bushire, not halting in Persia at all.

2057. Have you had no difficulty in the mountains between the frontier and Hamadan, the Elwend mountains?—No; the line has lasted very well on those mountains.

2058. I mean with regard to snow?—No, we have not had so much difficulty there as on the high plains, where the snow appears to lie; over the mountains it does not; it blows off. I erected the line over the Hamadan mountains.

2059. Did you follow the post road?—Yes, we followed the post road always.

2060. Are you aware that at present that line is in good working order?—Very good indeed; from Khanikée to Abadeh, which is below Ispahan, the line has worked very well indeed, and it had been repaired to Bushire before I left. As I stated, the poles were bad there, and gave us a great deal of trouble, but the Shah had given orders that every pole should be removed and better ones put up.

2061. *Chairman.* Are you able to give the Committee any information with respect to the working of the telegraph lines in India?—Yes; I served for six years in India, in the Indian Department.

2062. That was some time ago, was it not?—Three and a half years ago; but I was in India at Bombay, nine months since, and also at Kurrachee for some little while. I was there on duty to obtain clerks for the Persian line.

2063. Did you get any from the Indian service?—I got them in Bombay; they were all men who had been trained in the Indian Department, but who had resigned.

2064. Do you know why they had resigned?—Because they were not sufficiently paid in most cases, and they disliked being overworked.

2065. Were they men of some experience?—One man whom I engaged had been 11 years in the Indian Department, and he was very glad to be employed in Persia at 160 rupees a month. He had been in charge of the Bombay office, one of the largest offices in India; and I heard him speak of it, saying that he was very much discontented with the hard work which he had and the small remuneration.

2066. When you were at Kurrachee, nine months since, did you hear anything there of the discontent which seems to prevail generally in India, as to the manner in which the services were performed?—Yes; I visited the Kurrachee office; I knew Mr. Gordon, the superintendent of the Scinde circle, and he told me that it would be impossible to do the extra work brought on by the Indo-European line, because he had no extra staff allowed him for that purpose; and also that in some places, at Deesa for example, which is one of the points of communication, they had only one clerk to three instruments; and at one time when I was at Kurrachee there were over 200 messages on hand, this clerk having to attend to three different instruments at a time.

2067. To what do you ascribe the difficulty of getting clerks in India; is it to the inadequacy of the pay, or to indisposition to the work?—Entirely to the small pay that is offered. The Indian Telegraph Department is used by young men, whose parents have brought them up in India, as a sort of school. Those lads join the department when they can hardly read or write; and they learn to read and write, and they get a little sharp, and when they have served two or three years they go away and get something else to do. They make use of the department, because when they have learned to signal, and have become practised a little in the office work, the Government does not give them sufficient pay to induce them to remain in the telegraph service, and they go elsewhere.

2068. Do they go into other employments not necessarily telegraphic?—Any employment; as apothecaries, or clerks in mercantile houses, or anything they can get to do. I may remark that I consider that one of the greatest causes of the mistakes that are made on the Indian lines, is the employment of what they call sounding instruments, that is to say, instruments where the tape is not employed. The messages are not printed upon paper at all. They have instruments now in the Kurrachee office, where they read at the rate of from 32 to 35 words a minute, and they must do so very incorrectly, as the message is not printed at all on paper.

2069. *Sir Charles Bright.* Do not you know that in America the use of paper has been entirely abolished, and that the sounding instruments are used everywhere?—Yes. If the clerks are very good, and are men who have had a fair education, which very few signallers in the Indian telegraph service have, perhaps they may be able to do it better; but I am sure, from what I saw in the Kurrachee office with those sounding instruments, and the number of messages that they have on hand from the Indo-European line, and with their large local traffic, it was utterly impossible, at the rate they were working, that they could do the thing at all satisfactorily.

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H. Walton,
Esq.
—
27 April
1865.

2070. A great many of the signallers employed in the telegraph department in India are half-caste, are they not?—Yes, half of them, I should think.

2071. What is your opinion of their scale of education?—As a rule, their penmanship is very good indeed; but they are very slow, lazy, and deceitful, and not to be trusted at all in keeping messages secret, which is so desirable in India.

2072. And there are many complaints, are there not, in India in respect to that very subject of divulging information from messages?—Yes, a great many. It is almost impossible that messages can be kept secret from the public that are intended for one person.

2073. In fact, a message for a European merchant is generally known in the bazaar before it reaches the merchant's office?—Yes, I am sorry to say it is so.

2074. Do you know anything of the state of the lines themselves in India, as regards construction?—In the North West Provinces, from Agra up to Lahore, and from Agra to Benares, and Agra to Indore, they were destroyed in the mutiny and put up again in a very hurried way in order to re-open the communication, which was of great importance; and in many cases there were no insulators at all; and I believe that the new insulators which have been introduced lately on Hamilton's poles are found to be very faulty. In fact, I have heard on the Mekran line they could not work two wires at a time, and very frequently they could not work one wire at all.

2075. Are those known as Brooks's insulators?—I have heard them called Douglas's insulators. I think they were an improvement by Colonel Douglas on Sir William Brooks's insulators.

2076. But they are very bad, at all events?—I think they are very bad.

2077. Do you know anything of the state of the line between Kurrachee and Bombay?—Yes; it was described to me by the superintendent, and it was reported generally, in the papers, to be very bad when I was in Kurrachee; and I saw messages remaining in the Kurrachee office for 12 and 14, and perhaps 20 hours, owing to interruptions on the line, which goes through a very difficult tract of country, and owing to a deficiency in the number of clerks.

2078. It passes over a swamp, does it not?—Part of it goes through the Run of Cutch, which is a very difficult country; I have not been over the line myself.

2079. Do you know anything of the line between Bombay and Calcutta?—The line between Agra and Indore, which is one of the chief pieces, and also between Agra and Benares, I know very well, and it was in a very bad state indeed when I left India.

2080. What time does a message take between Bombay and Calcutta?—It all depends upon circumstances; sometimes they pass through in two hours, and sometimes they take three weeks, it is so very uncertain. They have no system of guarding the line; if the line broke it was a question who should mend it, or how it could get mended.

2081. To what cause do you attribute the bad working of the Indian line?—I attribute it a great deal to the dissatisfaction that exists throughout the whole department, or that there was when I was there; and I have heard from private sources that it continues, but I cannot speak personally; it is from the centralisation

system, in fact, a man being unable to act on his own responsibility in any part of the department, and always having to refer to Calcutta.

2082. What is a station master allowed to do upon his own authority; what can he purchase?—I do not know what a station master can purchase, but a superintendent, who is of a much higher grade, can purchase nothing; stores for Kurrachee, such as blotting-paper, pens, sealing-wax, and things of that kind, are sent from Calcutta to Kurrachee, and also to Peshawar, I believe. Also when I was in Bombay, and leaving for Persia again, about nine months since, I required for the officers in Persia some small galvanometers and needles such as are used in India, and are very useful for inspectors on the line for testing the line; and I telegraphed to Colonel Douglas and asked him if he could allow me to take those stores from his store department in Bombay. He replied, certainly, that the superintendent would give me whatever I required; so I went to the store department, and said, that I required so many, 30 I think it was, magnets, so many needles, and coils, and other things, and maps of the telegraph in India, which I thought would be useful in Persia for the Persian Department; but he said, "I can give you nothing at all; I have got nothing, and can get nothing." So I telegraphed back to Colonel Douglas, and those things were sent to me from Calcutta to Teheran; but they are such things as no office should be without, or could hardly go on without.

2083. Lord Robert Montagu.] Has there been any instance, since 1861, of cutting the wire in order to send a falsified message on?—I believe there has been, but I am unable to state any particulars; I have merely seen it in the newspapers. I may mention that another great source of discontent in India is the long time that the signallers are kept on duty; in fact it almost amounts to cruelty, I think; 14 hours or 12 hours at a time they are kept at the instrument, and in that hot climate it is impossible that young men can work properly for 12 and 14 hours at a time.

2084. Mr. Moffatt.] What is the usual pay of manipulators on the Indian line?—When I first went to India they were engaged at 16 rupees a month.

2085. At the present time, what is it?—After six months, by which time they will have learnt to work the instruments, their pay was raised to 30 rupees. At the present time I am unable to say what it is; but before I left India I engaged nearly 100 signallers for the department in India, and I, against orders, gave them 35 rupees a month to start with; that is to say, I got rebuked afterwards for doing it.

2086. Can you inform the Committee what is the amount paid to manipulators on the Indian lines of telegraph?—I believe 60 rupees a month is to be the lowest by the new scale.

2087. When is that new scale to come into operation?—I am not sure whether it has been sanctioned by the Government.

2088. What is the rate of pay for a similar service on the Persian telegraph?—One hundred rupees a month is the lowest.

2089. Can you inform the Committee what the station master's pay is on the Indian service?—They have no system of station masters; the senior signallers often did the work and received no remuneration for doing it; at some offices, such as Bombay, Calcutta, and Agra, there was an extra allowance

allowance, called the personal allowance, given for doing that duty, attached to the signaller's pay, whatever that pay might happen to be at the time; that allowance was 50 rupees a month in Agra, and 75 in Bombay.

2090. Are the Committee to understand that in the general system of the Indian telegraph there is no station master or chief to have control over the persons employed?—There is always a senior signalman, who is called the assistant in charge, but he merely happens to be the senior man at the place.

2091. He is paid, I think, you say, a slight increase upon his pay as a signaller, by reason of his somewhat increased responsibility?—In some offices he is, and in some he is not.

2092. What is the system pursued in the Persian telegraphic department?—In the Persian department the pay of the head clerk, or, as he is called, the clerk in charge, is from 180 to 200 rupees per mensem, and an allowance of 25 rupees per mensem for taking the charge in all stations except Bushire, which is particularly unhealthy, and therefore it is 50.

2093. Is there any material difference between the rate of charge for the transmission of messages along the Persian line and the Indian line?—The rate of charge in Persia among the Persians for their local messages is at so much a word, so many shais per word; but in India, when I was in India, it was two rupees a message; but it has been recently altered to so much for 20 words; there is no local traffic in Persia for European messages.

2094. For a message of 20 words, what would be the difference of cost between the Persian telegraph and the Indian telegraph?—There would be, I think, a difference of about nine on every 20 words in favour of Persia; it is entirely a system of the Persians themselves for Persian messages; messages in the European languages are prohibited on the Persian lines by the Persians; they say that if people wish to telegraph in Persia they must send in the Persian language, and they have clerks who perform the duties efficiently.

2095. The whole of the messages that affect English interests that go through Persia have to be translated, have they not?—No, not at all; all European messages are sent by English clerks in the language in which they come; but Persian messages between Shiraz and Ispahan, and between two Persian merchants, are carried on in the Persian language by Persian clerks.

2096. But for all foreign messages the Persian telegraph system provides that they shall be transmitted in the language in which they start?—Yes.

2097. In India, what is the custom with regard to the language in which a message is transmitted; has the Government of India established any regulation in that respect?—It has been decided, after some talk upon the subject, that a message shall not be translated at Kurrachee; it was wished at first by the Indian telegraph department that messages should be translated there.

2098. So that messages coming from Europe go *via* Kurrachee to Bombay, or Calcutta, in the language in which they start?—Yes.

2099. And in the internal telegraphic communication, what is the regulation?—It is entirely in the Roman character.

2100. They do not allow the various dialects

of the country to be used, do they?—No, not at all.

2101. Can you give the Committee any information as to the revenue of the Indian telegraph?—I am only able to speak as to what happened 3½ years since; but when I left India the revenue was, I believe, about 40,000 rupees per mensem, but I cannot state it accurately; no doubt it has vastly improved since.

2102. Did you make any recommendations to the chiefs of the telegraphic administration in India, with regard to the lowness of the pay and the inferiority of the service, which you stated to the Committee obtain in India?—I was despatched from Calcutta to Merut, by Colonel Douglas, to engage 100 signallers for the department in 1861; and I was authorised to give them at the rate of from 20 to 25 rupees per mensem. On my arrival there, I found that I could not get anybody for that sum; and therefore, on my own responsibility, I gave them 35 rupees per mensem to start with, and I promised them an increase according to the manner in which they did their duties; but Mr. Galbraith, who was then at Agra, was displeased at this, and reported me for so doing to the director general, who was however, obliged, after I had committed myself in writing to the relations of those boys, to give them the pay that I had promised them.

2103. Can you inform the Committee what is the general pay of European clerks in mercantile offices in Bombay and Calcutta?—One hundred and sixty to 250 rupees per month, as mere writers.

2104. *Chairman.*] Did you restrict your inquiries for servants entirely to Europeans, or lads of European descent?—No, not at all; natives of India are not allowed to be employed in the telegraph.

2105. Why not?—I suppose from their untrustworthiness.

2106. By whom are they not allowed to be employed?—The director general does not authorise natives of India being taken on in the same way as I took on those 100 clerks at that time.

2107. Are there no natives of India, that is to say, no Hindoos or Mahometans, in the telegraph service?—Not that I am aware of; not in the part of India in which I was, in Bengal; I am sure there were not; but they are East Indians, who are not quite natives perhaps, though very nearly so.

2108. *Mr. Childers.*] Are Urasians allowed to be employed?—Yes; the class of boys who are employed in India as signallers, when they first join the department, are such as in England would get nothing to do; they would not get bread-and-butter even.

2109. *Mr. Moffatt.*] At what age do you engage those signallers?—From 12 to 16 years of age.

2110. *Sir Henry Rawlinson.*] Do you know anything of the cost of telegraphic communication through Russia; I mean the expense of sending a message of 20 words from Teheran to London, *via* Russia?—Yes, it is 38 krauns, which would be about 33s.; it is cheaper than by the route through Turkey.

2111. Can you state what the amount would be from Teheran by Bagdad, that is to say through Turkey?—I am not sure what it is; it has been altered two or three times; but I know that

H. Hutton,
Esq.

27 April
1866.

H. Walton,
Esq.

27 April
1866.

that the route through Russia is cheaper than the route through Turkey, because I sent two messages myself.

2112. The expense through Persia, from one terminus to the other, is 14s., is it not?—Yes.

2113. What is the proportion to Teheran; is it half; is it 7s.?—No, it is not half; it is seven krauns to Teheran, and nine on to Bushire. The Persians have a separate treaty with Turkey for messages between Persia and Turkey; and they have a separate treaty with Russia for messages

between Persia and Russia, and they have a separate treaty with us.

2114. Have you heard anything of a proposal to continue the telegraph direct from Tabriz, by Sivas, to Constantinople?—I heard it mentioned, and that is all. In the same way I have heard mentioned an extension of the line from Ispahan, by Yezd and Kerman, to Bunder Abbas, which would make a continuous land-line to India. I believe the land line from the Mekran coast is already being extended.

CHARLES ADLEY, Esq., called in; and Examined.

C. Adley,
Esq.

2115. *Chairman.*] ARE you a Civil Engineer?—I am.

2116. You have had considerable experience in the matter of telegraphs in India, I believe?—Yes, both in this country and in India.

2117. In what capacity have you been employed in India?—I joined the East Indian Railway in 1853, as one of their engineers, and had charge of the construction of one of the first sections of that railway at Burdwan; I was there about two years.

2118. How long did you remain in the service of the East India Railway Company?—I think it was eight or nine years altogether. After I had been at Burdwan, I was requested to take charge of the telegraph in addition to my other engineering duties.

2119. You did not go out in the telegraphic employment of the railway?—No.

2120. During the time you were in India you had the responsible charge, I believe, of the telegraph service of the railway company?—Latterly I had entirely the distinct charge of it.

2121. And of the construction of the line?—And of the construction of the line throughout.

2122. Had you any opportunity during the time you were so employed, of comparing the system of telegraph on the East Indian Railway Company's line with that of the Government?—On one occasion the question was discussed; it was stated that it was not fair to compare the East Indian Railway telegraph with the Government lines, because the Government lines passed through primeval forests, swamps, and all kinds of places, whereas the railway line passed alongside the railway, and in consequence was easier of access for repairs and supervision, and that the circumstances were totally different; but in answer to that question, I just took the previous month and compared a section of the East Indian Railway line with a section of the Government line which passed side by side with it up to Bhagulpore and Moughyr; during that period, for eight days the Government line was in working order, and for the remaining 22 it was out of order; but during the whole time the East Indian Railway was forwarding 500 messages a day, which proved satisfactorily that the difference was not due entirely to the difficulties of effecting repairs.

2123. Do you draw a great distinction as regards the convenience of inspection of the telegraph between a line of telegraph which goes across the country and a line which follows the course of the railway?—Of course, for the convenience of repair, the line going along the railway is certainly very much better; but I

merely mention this to show that the causes of failure and of interruptions on the Government lines are not simply to be attributed to that one fact; that is my only reason for mentioning it.

2124. Had you an opportunity of forming an opinion generally as to the manner in which the Government telegraphic service was performed?—I had constant contact with different officers of the department, and it was constantly brought to my notice, and I must say that it was very indifferently performed; I found it so on any occasion that I had to use it. On one occasion I wanted to send some important message to Galle, and the answer that I received every day for a week was that the line was interrupted, and that the message could not be sent. Another time I wanted to send a message to Dacca, and I got the same answer for several days; both the opportunities for those messages passed by, and there was no occasion to send them.

2125. Were those delays of frequent occurrence in the case of your own line?—Certainly not; I do not remember our line ever being interrupted at all while I was in India.

2126. Except during the mutiny?—We were out of the sphere of the mutinies; our line between Allahabad and Cawnpore was not constructed at the time of the mutinies.

2127. Are the instruments used the same on the two systems?—We use two kinds of instruments, we use a single needle and a double needle; and we also use Morse's; the needle we use for the intermediate communications, and the Morse's we use for the through communications. This sketch will show the Committee how they are worked—(producing the same, and explaining it to the Committee).

2128. How long are the lines of wire upon the East Indian Railway?—There are about 1,300 miles; there are two wires on some parts of the line, four upon others, and seven for a distance of 75 miles.

2129. Are we to understand you to state that the instruments that you use are of a different description from those that are used on the Government lines?—Not if you take the through signalling; that is to say, for the stations which will correspond with the Government stations, they are the same; they are Morse's; but for the intermediate stations they are Cooke and Wheatstone's, because Morse's would not answer. We are obliged to work through several stations together sometimes, and it is more convenient.

2130. What is the difference as to the character of the work done, as to speed for instance, between the system of the East Indian Railway and the Government system?—As regards speed, whenever we could send messages every one preferred to

to send by us, and we could send very much more quickly than the Government.

2131. Were you allowed to carry messages for the public during the time you were in India?—Just at the time I left India, that question was under discussion, but we did take them by giving rather a liberal interpretation to the permission that the Government gave us with regard to railway travellers. They allowed us to take them for railway travellers, and so we gave rather a free interpretation of the term "railway travellers."

2132. Up to that time was there an absolute prohibition?—They would not allow us to take messages for the public in any way whatever; till at last, on one occasion, the Lieutenant Governor of Bengal wanted to send a message, and he was prohibited, and so at last the Government gave in.

2133. Out of the four wires to which you have referred, how many are required for the service of the railway company?—I should say that the whole four of them would be required now. Two of them are required exclusively for signalling trains, and the other two are required for the ordinary messages of the railway company, which are very numerous.

2134. Can you give any information to the Committee as to the extent to which the public now avail themselves of the permission to send messages over the railway company's telegraph lines?—They avail themselves of it, when they can, very largely; but in the case of the railway lines they do not, in some instances, go into the towns: for instance, take Benares; the town of Benares is six miles away; but in the case of the town of Mirzapore, the railway, I think, take there something like 500 l. in telegrams, whereas I believe the Government only take about 300 l., at least before the railway was opened they only took about 300 l.

2135. Do you attribute that difference to the superior manner in which the service of the railway company's telegraph line is performed?—Entirely; because the natives are quite aware of the advantage of rapidity in sending telegraphic messages. In fact, I know of cases where, before we were allowed to send messages for the public, the public used to come and pay the Government and pay us too. They would send a message both ways, and of course the Government could not make any objection to that.

2136. Who are the signallers upon the railway telegraph line?—We use principally Eurasians, and natives of the country very largely.

2137. Do you use Bengalees?—Nearly always Bengalees; almost entirely, I may say, and we employ a few Mahomedans; we are not particular. We use either Hindoos or Mahomedans without distinction. They have to pass an examination in reading and writing before they join.

2138. It was stated by the last witness that, during the time he was in the employment of the Government, the natives of India, as contradistinguished from what we call Eurasians, were excluded from the Government service; are you aware of that being the fact?—Yes; I believe they did do so at one time, and I took a few of them on when they were changing; that is to say, when they introduced signallers from this country, they got rid of a number of their native signallers, to make way for the signallers from this country, and I took a few of them on; but I found that I had to get rid of them almost at once.

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2139. What were those whom you took over?—They were nearly all natives; the Government retained all the Eurasians.

2140. But do you find the native to be as useful for your purposes as signallers as the Eurasians?—I think so; I think it is a work which is peculiarly adapted to the native. At first we had some trouble, but now there is no difficulty in getting signallers; we can get any number without any trouble. Before the time that the rule was passed against the natives being employed in the Government telegraphic service, I could have got anyone I chose from the Government employ; they preferred the railway employ, especially the natives, because they were not moved about very much.

2141. Was there any difference in the rates of pay?—The Government rates were higher than ours.

2142. And hence they preferred to come to the railway company?—Yes; and we paid a great deal of attention to their comforts, and we do not knock them about. A Government signaller was one day, say, at Agra, and he was sent off to Benares the next day; but we do not find any occasion to do that.

2143. I suppose the people whom you employ at your different stations are people belonging to the neighbouring town or village?—No, not in the North West, only just in the lower parts of Bengal. Nearly all the signallers are Bengalees, who have to be sent up from Calcutta. They are obliged to be in some degree educated men to understand English, and it is hard to get such men except in the vicinity of Calcutta.

2144. Generally speaking, do you find now that natives of India, especially in the neighbourhood of large towns, can both read and write English very well?—They can, but not so well as the Bengalees. The up-country natives cannot write well. I do not know any up-country native who is in charge of an office; all the offices in charge of natives are in charge of Bengalees.

2145. Have you any doubt that the railway company would be able to obtain at all times a sufficient number of signallers for such purposes?—I have no fear at all about it. I think we have something like from 500 to 600 signallers at the present moment. I have never had any difficulty; in fact, we have always more applying than we require.

2146. Have you had any reason to question the integrity of those native signalmen?—No, I have not; in fact, I have found them rather ready to peach upon each other.

2147. Are you aware that a proposal was made some time ago, on the part of gentlemen in this country, to form a company for the purpose of taking over the telegraphic service of the railway companies, so as to place the whole of India in that respect under one management?—I am quite aware of that; it originated with a proposal made by myself to the Indian Government. There was a great outcry in 1861, and the Government wrote to the Chamber of Commerce to inform them that they would be very willing to hand over the erection of a line between Calcutta and Bombay to a private company; and being in England at the time I was in communication with two of the directors of the East Indian Railway Company, and a certain proposal was made to the Government which they did not accede to. It was also at the same time

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C. Adley,
Esq.

27 April,
1866.

C. Adley,
Esq.
27 April
1866

suggested that they should remove the restrictions regarding private telegrams, and should allow the two railway companies, the Great Indian Peninsular Railway Company and the East Indian Railway Company, to perform that service, which the Government consented to do, and upon that a company was formed in this country for carrying out that scheme. I know that negotiations have been going on upon that subject ever since up to the present time; but I am afraid that beyond the bare invitation we have not got any further.

2148. Have you received an answer from the railway companies stating why the arrangement has not proceeded as far as they are concerned?—I have seen all the correspondence in India, and, as far as I can see, the objection is as to the terms. They seem in India to object to the terms; they consider them hardly fair; that is really the only objection that has been raised. The Governor General, in the Minute which he makes upon the question, does not seem opposed to the proposal on principle; he merely suggests that the company shall have power either to erect wires upon the railway standards, or to take over the railway lines altogether, so as not to have a divided authority upon the line; that is as far as I understand it.

2149. What is the general practice in this country?—The general practice in this country is that the wires are almost entirely in the hands of the telegraph companies, as far as I understand. Latterly I believe that some railway companies have been taking their own telegraphs into their own hands; but hitherto the telegraphs in this country have generally been the property, I may say, of the telegraph companies, but rented to the railway companies.

2150. The practice in this country is not, I believe, for the railway companies to use the telegraph wires for purposes of profit as between themselves and the public?—It is not the practice in this country, and I do not see how a railway company in India could carry on an extensive communication and correspondence without erecting special wires for that purpose exclusively, and having exclusive clerks for them; for a very simple reason, that whenever an accident occurs and there is an interruption, and the traffic of the line is deranged, we have to stop all public messages, every one is stopped, because without this we could not avail ourselves of the railway company's telegraph, which is then wanted exclusively for the railway; we should then be obliged to shut out all private messages, and sometimes this has occurred for 8 hours and sometimes for 12 hours, so that the public would gain very little; unless there were exclusive wires for the purpose, they would not be better served than they are now.

2151. Was not this the proposal, that the telegraph company should rent a certain number of wires erected upon the standards of the railway company?—That was, I believe, the proposal. As far as I understand, it has been objected to in India on account of the terms not being sufficiently fair; that is the objection raised by the railway authorities, but the Governor General does not seem to object to it except simply on that ground, but that there should not be a divided authority upon the line.

2152. Do you think that it would be for the advantage of the community in India, and also for the advantage of persons here who send mes-

sages to India which have to pass over the Indian system, that they should be forwarded by an independent company exercising a general control through India over telegraph communications by means of railways, or that the telegraph service should be left as it is now, in the hands of the Government?—I think of course it would be done better by a private company; if you are speaking as regards the railways, the railway companies would have, as I say, to erect special wires for that purpose, and I do not know whether Government would allow guaranteed capital to be used for cutting their own throats. They must erect wires also to go into the large towns; the railway telegraph is over at Howrah, and not in Calcutta. At Benares again, it is a long way off; at Patna you require to go into the town, and there are some very large towns which are very far from the railway. There is the town of Ghazeeapore, in which there is an enormous business done; it supplies the whole of the northern parts of India, and there the railway telegraph station is, I think, eleven miles away from the town, so that as far as the railway is concerned they would have to have separate superintendence, and to find separate capital. Then with regard to the Government lines, they would have to do the same, and the whole question must be viewed in a very comprehensive light; I have gone very carefully into the whole matter with persons in this country, and it is imperative that there should be a commercial system erected throughout India. Really at present, without saying anything with reference to Government lines, whether they are good or bad, the Indian public have no telegraph at all—it really comes to that; the Government telegraph is for their own purposes, and whenever there are Government messages to be sent, the public messages are stopped just the same way as the railway companies stop public messages also; so that really the commercial and mercantile public of India have no telegraph entirely at their disposal.

2153. One disadvantage of the system of separate railway authority when the railways are completed will be, will it not, that the responsibility will become divided according to the extent of the jurisdiction of each railway company?—Certainly so; and you would get no satisfaction as regards messages; they would just shelve it off on the other division. In fact, it is very much the same in India, as regards the Government line; if you make a complaint in Calcutta, the Government Director General will shelve it off on the Bombay side; he will say it occurred in the Bombay division. I have known this done, although there is a general complaint office established in Calcutta.

2154. Would the Committee be justified in assuming it to be your opinion, you having had considerable experience of telegraphy in India, that any Government system of telegraphy would not be so well suited to the public requirements as that of a public company?—I think not, for this reason, that the Government do not cultivate the traffic; they do not put themselves out of the way to meet the requirements of the public. Take most of the principal stations; take Mirzapore, or Benares, or Allahabad, or most of the large telegraph stations; the telegraph office is in the vicinity of the Civil Commissioner's or the principal military officer's bungalow, which is away from the town entirely; so

so that the public requirements, as far as that goes, are not consulted, and, as they admit, they do not put themselves out of the way at all. I know, on one occasion, I was going to send a message from Raneegunge, and the signaller said, "We do not care about private messages;" in fact he was rather indignant at the idea of having to send a private message. He said, "We only care about Government messages, and sometimes we have private messages delayed for days at our office." I must say, when he knew who I was, he sent off my message directly.

2155. The first consideration of a Government establishment would probably be the interest of the Government?—They really do consider their own interests; of course they are bound to do so, having the telegraph in their own hands.

2156. The convenience of the public would necessarily be a secondary consideration?—Naturally so.

2157. The question of profit or loss would be no consideration at all?—It is no consideration at all to the Government.

2158. In the case of a public company the first consideration would be the convenience of the public, would it not?—That would be absolutely necessary, because their own profits would depend upon it.

2159. Mr. Stansfeld.] What do you pay your native signallers?—We pay them differently, according to the station at which they are employed; just as I was leaving India the lowest figure was 35 rupees a month. At the higher stations, that is to say the through signalling stations, there are generally Eurasians in charge, and they get from 150 to 200 rupees a month.

2160. You stated, did you not, that you found the native signallers faithful?—I have no occasion to complain; I do not say that if we had an immense number of commercial messages, and we have rather a large number it is true, whether they might not betray their trust if the temptation were thrown in their way; but still I have found them exceedingly faithful, and have had no occasion to find fault with them.

2161. We have heard that by the Government telegraphic communication messages would reach the bazaar before they reached the person to whom they were sent; do you find that not to be the case on the railway lines?—We have had no through messages; to Bombay, for instance, we do not work through. The great point with regard to which there have been complaints has been the opium messages.

2162. I presume that you do not wish to draw a distinction between the native signallers and the half-caste signallers in that respect?—No, I would not, certainly; I think one class is just as good as the other. The reason we place Eurasians in charge of stations is simply because they are better educated; they can read and write English well, and you can depend more upon them.

2163. We have had other evidence to the effect that they were not to be trusted with commercial messages; my question to you is, whether you would rather trust a native signaller than a Eurasian?—I do not think I would make any difference between them, as far as my experience goes.

2164. Sir Charles Bright.] The Government lose very largely every year by their telegraph administration in India, do they not?—To a very great extent; they lose an enormous sum, something like 130,000*l.* a year, I should say; that is,

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if you take into consideration the interest on the capital expended.

2165. Do you ascribe that to their not paying sufficient attention to the public messages, not doing their work well enough?—Entirely to their not doing their work well enough, and not paying sufficient attention to public messages. There is no doubt that there would be twice or three times the number of messages if the work was really properly performed.

2166. You think that a line of telegraph on a railway would be in every respect better than one which runs through a jungle?—Of course it is better with regard to repairs; but there again you must take a very wide view of it, because there are some commercial districts where there are no railways, so that you would require to have branch extensions; for instance, all down the Madras coast there is a large business done, but there is no railway.

2167. What time do you think a message ought to average between Bombay and Calcutta if wires were established especially for commercial business?—I should think from two to three hours; that is making due allowance for press of messages, and having to work off arrears, or anything of that kind. I should say from two to three hours ought to be the maximum.

2168. You could work direct, could you not, from Bombay to Calcutta?—I see no reason why you should not. We have worked to Monghyr, that is 300 miles distance, with only two copper cells, and I have known Government to be unable to work 120 miles with 80 cells.

2169. Sir Henry Rawlinson.] When you say that the Government experiences such a heavy loss on the telegraph establishment in India, you do not take into account, do you, the value of their messages?—Yes, I take everything into account, giving them credit for the value of their own messages. According to their own last published statement for 1863–64, the total amount of deficit, if you take interest upon capital into account, would amount to 129,777 *l.*, but the Government do not take in the interest upon capital.

2170. Mr. Moffatt.] Do they state what the capital sunk in the Government line of telegraph has been?—I have worked it all out. It is not very clear in the returns. According to the returns, the capital sunk in India up to 1863–64 was 559,013 *l.*, and in England 585,021 *l.*, making a total of 1,144,034 *l.* I may say that the actual expenditure is a good deal more, if you take the losses on the working expenses.

2171. Sir Henry Rawlinson.] Having those documents before you, are you of opinion that in private hands the whole system could be made remunerative?—Most decidedly. I am of opinion that it ought to pay remarkably well. If it were properly managed, I should say that from 10 to 15 per cent. ought to be the annual dividend.

2172. Mr. Moffatt.] Can you inform the Committee how this loss of 129,000*l.* and odd accrued in the year as to which you have given evidence?—The maintenance and working charges for that year were 136,556 *l.*, supplementary 10,746 *l.*, total 147,302 *l.*, and the revenue was 94,202 *l.*, showing a loss of 53,099 *l.* Then there is the interest on capital, which is not taken into account, 76,678 *l.*, and these two last items make up 129,777 *l.*; the interest that I have mentioned is the interest on capital in 1864; but at the present time it amounts to upwards of 100,000 *l.*

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2173. Chairman.]

C. Adley,
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27 April
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2173. *Chairman.*] Returns have been put in up to a comparatively late period, have they not; have you seen those returns?—I have seen the very latest published by authority of Parliament.

2174. *Mr. Moffatt.*] Those returns show, do they not, that there has been a loss exceeding 100,000*l.* to the Indian Government under the administration of their telegraphic system throughout India?—Yes, they do, if you take into credit, which anyone would do, the interest upon capital.

2175. In their statement of accounts do they credit themselves for the work done on account of the Government?—Yes entirely; it is all included.

2176. At the same rate of charge as that which they make to the public?—Precisely the same, so I understand.

2177. What proportion would the Government messages bear to the public messages?—I do not know what it has been recently, but I think that in 1862 the Government messages were about 15 per cent. of the public messages.

2178. Is there any material difference between the pay of the signallers employed on the railway telegraph line, and those employed on the Government telegraphs in India?—As a rule we pay them less; we have several classes of signallers on the East Indian Railway; we are obliged to have large main stations and we have an immense number of intermediate stations, and at the intermediate stations we do not require hands who are so forward; but at the main stations, where it is necessary that we should have better hands, we pay them better.

2179. You require throughout that they should have a knowledge of the English language?—Yes; they have to pass an examination before they enter the department, and also are required to have a good character.

2180. What is the average pay for signallers on your railway telegraph lines?—The lowest pay is 35 rupees a month, and it goes up to 200 rupees; and I think that there are some who get 250 rupees a month.

2181. You have been asked with regard to the

fidelity and accuracy of the signallers in transmitting messages, I apprehend that in the general class of messages, which they have to transmit with reference to railway business there is no inducement to be otherwise than accurate or secret?—They must be accurate, because there would be accidents if they were not.

2182. There would be no gain or any inducement to their being inaccurate?—None whatever, unless they do so in commercial messages.

2183. What proportion of commercial messages do you take along your telegraph line?—I think about 15 per cent.

2184. For that do you make the same charge as the Government Telegraph Department make?—Precisely the same rates.

2185. Are there in any case competing lines as between the railway telegraph and the Government telegraph?—We compete to several places, to Mirzapore for instance, but still we compete under great disadvantages.

2186. What are those disadvantages?—With regard to Calcutta, our telegraph office is at Howrah, which is on the other side of the river, and which often takes half an hour to cross; we have no office in Calcutta.

2187. Do you find generally that persons desirous of communicating by telegraph give the preference to the railway telegraph or the Government telegraph?—To the railway, naturally; because they are pretty certain to get their messages sent in reasonable time.

2188. Which you mean to say they are by no means certain of by the Government telegraph?—No, not at all. I might say that one time, in order to test the speed of the Government lines, I sent 12 messages, which were the very shortest possible, consisting of only three words; ten of those messages took 24 hours, and one of them took eight hours, and another 13, to go a distance of 500 miles.

2189. Have you known any similar instances of delay on your railway telegraph?—Certainly not as long as that.

Tuesday, 8th May 1866.

PRESENT:

Mr. Ayrton.
Mr. Baillie.
Sir Charles Bright.
Mr. Brooks.
Mr. Childers.
Mr. Crawford.

Mr. Laird.
Mr. Marsh.
Mr. Moffatt.
Admiral Seymour.
Mr. Stansfeld.

ROBERT WYGRAM CRAWFORD, Esq., IN THE CHAIR.

Sir MACDONALD STEPHENSON; further Examined.

2190. *Chairman.*] HAVE you prepared any statement, setting out a proposal on the part of the company to which you referred in your former evidence, for the establishment of a line of telegraphic communication between this country and India by way of Egypt?—Yes, I have.

2191. Will you put it in?—Yes. (*The Witness delivered in the same.*)

2192. Have you also prepared a map showing the existing and proposed lines of telegraphic communication between this country and India, Japan, and the Australian colonies?—Yes. (*The Witness delivered in the same.*)

Sir M^d.
Stephenson.

8 May 1866.

CHARLES STRONGE, Esq.; Examined.

2193. Mr. Childers.] ARE you one of the principal officers in the Treasury?—Yes.

2194. And have you charge, under the Secretaries of the Treasury, of all the business relating to telegraphs?—Yes.

2195. Can you tell the Committee in what telegraphs between England and the East Her Majesty's Government have an interest?—The Mediterranean Extension, on which they give a guarantee on a capital of 120,000*l.*; the Malta and Alexandria, which belongs to the Government, and is on lease; and there is a small line between Alexandria and Suez which they have now only an indirect interest in.

2196. The last line is not worth mentioning, is it?—No.

2197. We have the power, have we not, on the payment of 46,000*l.*, to recover it if we think fit?—Yes.

2198. But, coming now to the Malta and Alexandria telegraph line, that you say is the property of the Government?—That is the property of the Government. Perhaps I may be allowed to state that the Malta and Alexandria telegraph cable was originally designed to be laid between Falmouth and Gibraltar, its destination was subsequently altered to between Rangoon and Singapore, and was then changed between Malta and Alexandria. It was successfully laid in sections, viz., between Malta and Tripoli, Tripoli and Bengazi, and Bengazi and Alexandria, towards the end of the year 1861. The total expense of the cable-laying, &c., &c., amounted to 436,283*l.* 10*s.* 8*d.*, three-fifths of which were defrayed by the Imperial Government, and two-fifths by the Indian Government. Application having been made by Messrs. Glass,

Elliot & Co., the contractors who had laid the line, for a lease of the line, after some negotiation, a lease was granted to them for five years. (I presume that I need not enter into the terms of the lease.) In the year 1864, the business of Messrs. Glass, Elliot & Co., having been transferred to the Telegraph Construction and Maintenance Company, application was made to the Treasury for permission for that firm to transfer also to the company the lease of the Malta and Alexandria telegraph, to which, after inquiries had been made as to the respectability of the company, the Treasury assented. In the early part of last year, the line having repeatedly become interrupted, owing to the unsuitableness of the deep-sea portion of the cable, to the rocky coast upon which a large amount of it has been laid (particularly between Bengazi and Alexandria), Mr. Pender, the chairman of the Telegraph Construction and Maintenance Company, entered into negotiations with Mr. Peel, the late Financial Secretary to the Treasury, for a new lease of the line, which new lease has not yet been carried out; there are various arrangements yet to be made.

C. Stronge,
Esq.

2199. The company have, however, agreed to take a lease at 3½ per cent. upon the capital?—Yes; at 3½ per cent. upon 436,000*l.*

2200. And that lease will be completed in due course?—Yes.

2201. How long is the lease for?—Forty-two years.

2202. Are there any conditions of resumption in the meanwhile?—The company will be able to give it up at the end of 10 years on giving notice.

P 2

2203. Going

C. Stronge,
Esq.
8 May 1866.

2203. Going now to the line between Malta and Sicily, what interest have the Government in that?—With regard to the Mediterranean Extension Telegraph Company, this company having obtained the sanction of Her Majesty's Government for laying telegraph lines between Cagliari and Malta, and Malta and Corfu, cables were submerged at the end of the year 1857; and Her Majesty's Government granted a conditional guarantee upon the lines being kept in working order for a period of 25 years, on a capital of 120,000 *l*. The cable between Cagliari and Malta having been twice broken, and large sums of money expended in attempting to repair it, it was finally abandoned in the autumn of 1859. Application was then made to the Treasury by the company to be allowed to lay a cable to connect Sicily with Malta, in lieu of the Malta and Cagliari line abandoned, and a concession was obtained from the Neapolitan Government for the purpose; such concession being submitted to the Treasury, objection was taken to the 14th Article therein, whereby the exclusive privilege of landing cables in Sicily from Malta was granted to the company for a term of 30 years from the date of the convention. The company agreed to renounce such Article, and Her Majesty's Government thereupon agreed to transfer the guarantee of the Malta and Cagliari line to the new route.

2204. So that at the present time the Government have guaranteed 6 per cent. upon a capital of 120,000 *l*., which is supposed to be expended upon the line between Malta and Sicily?—There are two lines which the company have; there is the line between Corfu and Italy, which was accepted in lieu of the line between Corfu and Malta, on which an interruption occurred in 1859, which it was found impossible to repair.

2205. Then does the guarantee extend to the two lines?—It extends to the two lines virtually.

2206. That is to say, the line between Malta and Sicily, and the line between Corfu and Italy?—Yes; between Corfu and Otranto.

2207. So that we are responsible to the extent of 7,200 *l*. a year, practically, for the communication between Malta and Sicily?—Practically we are, because that is the line which earns the money now.

2208. So that any line between Egypt and England, which missed the line between Malta and Sicily, might put the Government to the expense of 7,200 *l*. a year?—Precisely so.

2209. How long is that guarantee for?—For 25 years from the end of 1857.

2210. That is the whole interest, is it not, which at the present time the Government has between Egypt and England?—That is the whole interest.

2211. *Chairman.*] Has any proposition ever been made to the Treasury, on the part of the company, which has leased the Malta and Alexandria line to take over the line between Malta and Sicily?—Mr. Glass has spoken to me on the subject, but I do not think that the proposition has ever come in an official shape.

2212. Would it be objected to, on the part of the Treasury, to transfer that lease with its guarantee to the Malta and Alexandria lessees, if they could make terms with the present owners?—If the public were relieved from the guarantee, and they could make satisfactory terms with the owners of the present line, I can see no objection to it at all.

2213. Would not that sanction include the re-

linquishment of the guarantee?—The guarantee is on behalf of the Mediterranean Extension Telegraph Company, and we should have to look very carefully into the bearings of such a matter as that, when it was brought before us. Certainly the Mediterranean Extension Company, I think, require some little support; they have had very bad times, and they have done their work, as far as we are concerned, very well.

2214. What I meant was this, that as the Government have accepted the present lessees of their line from Malta to Alexandria, would there be any hesitation on the part of the Government to allow of the transfer of the line between Malta and Sicily, now belonging to the Mediterranean Extension Company, to the Malta and Alexandria lessees, if the two made terms together?—I could see no objection to it. The only thing would be the protection of the Government. If they took the guarantee off our hands, and the Mediterranean Extension Telegraph Company would agree to part with the Government Guarantee, I can see no objection to it.

2215. What I mean is this: the Treasury having accepted, we may call them Glass, Elliot & Co., as lessees at 15,260 *l*. a year for 42 years to come, would there be any objection to their taking the Mediterranean Extension Guarantee, amounting to 7,200 *l*. in addition?—That would be a question for the Secretary to the Treasury to decide rather than for me; of course one would have to look at it in all its bearings, to see how it affected the Government.

2216. *Mr. Childers.*] It would depend, would it not, upon its being clearly shown that the accounts of the Malta and Sicily line were so clear as to enable the guarantee to operate?—Of course it would.

2217. The guarantee is upon the net profits of that section of the line, is it not?—Yes; the only thing is this, that since 1862 we have not been called upon to pay anything to the Mediterranean Extension Telegraph Company, so that at present we are, you may say, in clover.

2218. *Chairman.*] Instead of paying money, have you been receiving anything?—No, we have received nothing at all; the company have not paid any very high dividend. We have paid nothing since 1862 upon the Mediterranean Extension Guarantee. Directly the line between Malta and Alexandria was opened, of course there was a flow of traffic into the Mediterranean Extension Company, which has enabled them to pay their dividend without coming upon us on account of our guarantee.

2219. In fact, at present, neither of those two lines is a charge upon the Imperial Exchequer?—Neither, I think, is any charge upon the exchequer; on the contrary, we are to get a rent from the Telegraph Construction and Maintenance Company for the Malta and Alexandria line, and the Mediterranean Company pays its way.

2220. Has the rent from the Malta and Alexandria Company been regularly paid?—It has not been so regularly paid as it might have been; it is to be regularly paid when we get the new lease all settled. But there is a sort of cross claim against us on account of repairs now, which has prevented, up to the present time, the settlement of the accounts to 13th of May 1865, the date from which the new lease is to take effect.

2221. Do they render you any account of their receipts?—Yes, we have an officer at Malta who sees after that for us. We have the accounts every

every quarter examined into, settled and balanced; and that amount would show the gross receipt. I can give you the amount of the gross receipt now if the Committee would wish it. The gross receipts for messages, after deducting 10 per cent. for the reserve fund, for repairs, from November 1861, when the line was first opened, up to the 13th of May 1865, when the new lease will take effect from, amounted to 141,903 *l.* The proportion of the receipts due to Her Majesty's Government, as lessors of the line, amounted to 68,718 *l.* odd.

2222. What were the working expenses?—We have nothing to say as to the working expenses. The lessees work the line out of their share of profits. The proportion of the receipts payable to the Imperial Exchequer out of that amounted to 41,231 *l.*; the remaining two-fifths were paid to the Indian Exchequer, they having paid two-fifths of the original expense of the line.

2223. How much is the Indian share in figures?—The difference between the 68,718 *l.* and 41,231 *l.*

2224. And do the lessees get the balance?—Yes; I could give the proportions of how it was settled up to the 13th of May, and how the receipts were assigned, if the Committee would wish to hear them. The lease is in existence up to the end of this year; but the new lease is to take effect from the 13th of May last year, and by the terms of that lease 10 per cent. of the gross receipts were to be paid to a reserve fund, and after that, from all receipts up to 25,000 *l.* a year, the lessees were to receive two-thirds, and the Government one-third; from 25,000 *l.* up to 55,000 *l.* the Government were to receive two-thirds, and the lessees one-third; and after that, on all receipts the Government were to receive three-fourths, and the lessees one-fourth. Those were the terms of the old lease, the payments to the Government being divided between the Imperial and the Indian Governments; three-fifths to the Imperial Government, and two-fifths to the Indian Government.

2225. Sir Charles Bright.] Is the reserve fund 10 per cent. upon the gross receipts?—Yes, the reserved fund is 10 per cent. upon the gross receipts. The reserved fund, as you may say, now is virtually exhausted, because there is a large amount due on account of repairs; and I think that will take very nearly the whole of it, if not the whole of it; in fact, it was a reserved fund intended for repairs; but the line, owing to the light cable that was laid between Benghazi and Alexandria, has failed so often that the repairs have been very expensive.

2226. What is the present state of the line?—It is working very well, I believe, now; it is in good order, but we can never trust that light cable. It was a light cable which was originally designed to be laid between Falmouth and Gibraltar, for a very deep sea-line; but it was laid upon a rocky coast, and is constantly being broken.

2227. Mr. Childers.] Have you no official means of knowing the expenditure of the reserve fund?—The lessees have at different times sent us in accounts for repairs. One set of repairs were settled and paid for some time ago out of the reserve fund, after an arbitration, which cost a good deal of money; and now there is an account for some repairs before us, which has not been settled in consequence of one of the trustees of

the reserve fund, on behalf of the lessees of the line, not having returned us the power of attorney for the sale of reserve fund stock, which was sent to him to be signed.

2228. But, under the present lease, the Government have nothing to do with repairs?—No, under the new lease they have nothing to do with repairs; they are in the position of landlords, receiving a rental.

2229. Sir Charles Bright.] Then it was not a reserve fund properly so called?—That is what it is denominated in the lease.

2230. Was it employed from year to year for repairs?—No, not altogether so. It was allowed to go on accumulating, and when the repairs took place, then the company made the claim; because they would not have been paid out of the reserved fund if an accident to the line had occurred through any latches on their part; but after it was certified that the damage had not occurred through any mismanagement of the company, then their claim was good against the reserved fund.

2231. Do you consider the cable, at the present time, worth the amount that was paid for it?—I think that an engineer would give a better opinion upon that than I can. It cost a great deal of money, 436,000 *l.*; but it has cost, in fact, a great deal more than it should, because its destination was several times altered, and that made it cost a great deal more than it otherwise would have cost. Now, I believe, they can make the cables cheaper, at least I am told so; I am not an engineer, so that I can give no decided opinion upon that point.

2232. But your reserve has not apparently been sufficient to keep the cable up to its original value?—No, I should think hardly. Up to this moment the claims which are against it I think will exhaust it, and those claims are not quite settled; but after the 13th of May we shall have nothing to do with a reserve fund at all.

2233. Have you had any valuation of the cable made by any competent persons at any time?—I think it is hardly possible to value it, because it is at the bottom of the sea; and we know that it is very deteriorated between Benghazi and Alexandria.

2234. Mr. Marsh.] Do they fish it up when it is broken?—Yes; and they cut the weak piece out, and put a fresh piece in. Several times they have taken it up, and cut out the weak cable, and put in a heavier cable wherever the ground is very rocky.

2235. Sir Charles Bright.] Cannot you discover its condition at such periods?—It is an expensive work to take it up; besides, it is very brittle in the parts where they have lifted it, and it snaps.

2236. During such repairs, do not you get some insight into the condition of the cable?—Yes; we get a report when it is repaired. But you must consider it is 1,300 miles long, and between Benghazi and Alexandria, where the worst part of it is, it is between 500 and 600 miles long.

2237. However, you have not made any valuation of the cable since it became your property?—No; we can only value it by its receipts; and during the American war the receipts were larger than they are now.

2238. Have you ever had any communication with the Austrian Government about the line from Ragusa to Malta?—That was before I had any charge of the department, which I have now. There was a considerable correspondence; and

C. Stronge,
Esq.

8 May 1866.

**C. Stronge,
Esq.**

8 May 1866.

you will find papers laid before Parliament giving the details of the correspondence between the Austrian Government and our own Government; but I am not cognisant of the matter at all.

2239. Have you had no communication lately at all from the Austrian Government?—I have not seen anything lately.

2240. Mr. Ayrton.] Have you laid before Parliament the last contract entered into about Malta?—We have not got the lease yet; it is not finished.

2241. Is it not settled?—It is in course of settlement by the solicitor of the Treasury and the solicitors to the company, upon terms which were virtually agreed upon between Mr. Peel and Mr. Pender.

2242. Has that contract been made subject to the approbation of Parliament?—I suppose there would be no objection to lay it before Parliament; but it is not a contract at all, it is a lease.

2243. Is it not in the nature of a contract?—It is a lease, like letting a house; it is a lease of the line to a company upon their paying a certain rent for it. We do not pay them, they pay us.

2244. You have no objections, you say, to lay it before Parliament?—There is not the slightest objection, when the lease is made, to laying it before Parliament.

2245. Is the Malta and Egypt line no longer a part of the communication with India?—I suppose they send messages by it still for the packet. I do not know anything about the Persian Gulf; but I fancy that the Persian Gulf line is very expensive, and that the messages do not always come through correct. I know no particulars about it.

2246. Have you ever paid any money, under the contract, for telegraphic communication between Malta, Sicily, and Otranto?—Yes, we paid up to the end of the year 1862. The following statement will show all that we have paid under our agreement with the Mediterranean Extension Telegraph Company.

The Amounts paid by the English Government under the Guarantee, during each Half-year, are as follows:—

		£	s.	d.
Paid on or about 30 Oct. 1859:—	To 30 June 1859	5,828	19	10
" " " 7 Feb. 1860	" 31 Dec. 1859	976	8	9
" " " 30 Aug. 1860	" 30 June 1860	1,800	-	-
" " " 21 Feb. 1861	" 31 Dec. 1860	1,800	-	-
" " " 26 Aug. 1861	" 30 June 1861	3,101	18	4
" " " 21 Feb. 1862	" 31 Dec. 1861	3,023	15	4
" " " 11 Aug. 1862	" 30 June 1862	1,791	4	-
" " " 16 Feb. 1863	" 31 Dec. 1862	286	2	6
Total Amount Received under the Guarantee -		£.	18,608	8 9

2247. Was it not in 1862 that the line broke down?—No; the line broke down, I think, in 1859.

2248. You mean that the line has been self-sustaining since then, and that you have not been called upon to pay the guarantee?—Yes, it has been perfectly self-sustaining; we have paid nothing since the 31st December 1862.

2249. Do you know whether those substituted contracts were laid before Parliament?—That is mentioned in the correspondence; I have the correspondence here, and I see marks upon it which show that it must have been printed for Parliament.

2250. You have nothing to pay now, in the communication with India, by way of subsidy, excepting in the charge for the Indian line; the Treasury pay nothing for it?—No; the Treasury pay nothing. I know nothing about the Indian line; that does not come into the Treasury at all.

2251. What did the Treasury pay this subsidy for; for the communication with Malta?—I suppose it was a part of the scheme to India; and of course it was to Malta too, it being a fortress under the Government. Mr. Wilson was the person who originally carried it out. I find a letter of his, in which the arrangement for making that line, and for the payment, was laid down, and that has been before Parliament.

ROBERT KNIGHT, Esq., further Examined.

**R. Knight,
Esq.**

2252. Chairman.] Do you wish to offer any further evidence to the Committee, with respect to the performance of the Peninsular and Oriental Company of their Indian contract?—Yes.

2253. On what point do you wish to offer evidence?—Upon the speed of the company, and the effects of the monopoly which they possess.

2254. Do you complain of the speed maintained upon the Indian lines?—Upon the Bombay line especially.

2255. What do you conceive the present rate of speed to be?—In the last returns, the speed for 1863, upon the Bombay and Suez line, is given at $9\frac{1}{2}$ knots, and for 1864 at nine knots; and I myself tried the outward voyages of 1865; and, as far as I could make out, it was about $8\frac{1}{2}$ knots for the year; so that there has been a steady deterioration of late years.

2256. What do you think the speed ought to be?—Eleven or $11\frac{1}{2}$ knots an hour.

2257. Are you aware of any mail steamers which perform the service at that rate?—The Cunard steamers are doing better than that, and have been for years.

2258. Are you quite sure upon that point?—Mr. Howell, the other day, told the Committee that the average speed of the Cunard lines, ac-

cording to the latest returns before Parliament (the returns of 1862), was about the same speed as that of the Peninsular and Oriental Company to-day. I have in my hand the latest return dated the 20th of May 1862, in which the speed of the Cunard line is given for 1861; and I have taken out the average speed upon the New York line, homewards and outwards; and I find that the outward mails were carried, on the average, in 12 days and $11\frac{1}{2}$ hours in the year 1861.

2259. Mr. Laird.] Was that from Queens-town?—No, from Liverpool; and there was a detention of six hours, on the average, at Queens-town; so that they were 12 days and 5 hours under steam.

2260. Chairman.] What speed per hour do you conceive that to be?— $10\cdot58$ knots. The homeward mails of 1861 averaged 11 days 6 hours, which is an average speed of $11\cdot48$ knots. These are the averages taken from the last return.

2261. What distance do you assume that as being?—3,100 miles, from "Rainey's Ocean Post," which I have in my hand. I also took out the average speed of the "Persia" for the year 1861, upon the same line, and I find that she was exactly 10 days on the average outwards, and 10 days and 15 hours homewards, giving a speed respectively

153

spectively of 13 knots and 12·15 knots. That was the Cunard speed in 1861. If Mr. Howell were right in what he told the Committee the other day, that the Cunard steamers were running at about the same rate as the Peninsular and Oriental vessels, at all events on the Bombay line, you would be 16½ days getting your mails from New York. The present average is 10½ days from New York, which gives a speed of between 12 and 13 knots. I beg leave to hand in these returns. (*The Witness delivered in the same.*)

2262. *Chairman.*] Do you think that the speed of the Indian mail steamers ought to be the same as that of the North American steamers, whatever that speed may be?—Most certainly.

2263. Do you think that the circumstances of the cases are analogous, so as to justify you in making that statement?—I am satisfied that the Indian line is a far more favourable one for steam power than the Atlantic line. On the Atlantic line there are constant detentions from fogs, from icebergs, and from storms; we have nothing of the kind on the Indian line; and though it may be the case, that there is some little loss of power in the Indian seas from the higher rate of temperature of the water, and the difficulty of condensing, the Committee must know that that can only be a very trifling consideration; if you put it down at half a knot an hour, I imagine it would be the full extent of it, or more. But the argument is worth nothing, because the speed of the Peninsular and Oriental Company's vessels on this side of Suez, is almost the same as on the other side.

2264. Is your allegation that the Peninsular and Oriental Company employ an inferior class of vessels, or that they do not propel the vessels that they have at the rate at which they could propel them?—I am disposed to think that it is not the inferior class of ship that is employed, but the expenditure of fuel which prevents their doing it. They will not expend the fuel to get a high rate of speed, while the Post Office allow them to be either within or without their contract, as they now do.

2265. You argue that it is a question wholly of expense, in connection with fuel?—Yes, wholly of expense; we ought to get a better speed on the Indian line than upon the Atlantic.

2266. Practically, it comes to a question of an increase in the subsidy paid?—I will speak upon that presently if you will allow me. I am not satisfied that we require a subsidy at all, for the carriage of the Indian mails; at all events at the present rate of speed.

2267. Are you aware that it was given in evidence the other day that vessels which have attained a certain speed in the Mediterranean lose half a knot when they are transferred to the other side of the Isthmus?—I heard that, and I say that possibly it may be true. From the increased difficulty of condensation, there may be a loss of half a knot, but here is a difference of knots: the speed of last year, on the Bombay line, was 8½ knots, compared with 12½ knots on the Atlantic service.

2268. Where do you get the distances from upon which you base your computation of the time taken in the transit of the North American steamers?—"The Ocean Steam Navigation, by Thomas Rainey;" it is there given as 3,100 miles.

2269. I asked the question because I am under the impression myself that the Post Office distance

is 3,012 miles?—That would make only a small difference, about $\frac{1}{10}$ th of the whole.

2270. Supposing the rate at which you state the North American steamers are propelled was attained on the Bombay line, in how many days would the mail then be carried?—In from 20 to 21 days; say 20½ days.

2271. What is the time at present occupied?—Twenty-four and a half days; there would be a saving of four days.

2272. What do you compute to be the exact distance by sea and railway from Dover to Bombay by way of Marseilles?—There are 1,085 miles of railway exactly from London to Bombay, and 4,461 knots at sea.

2273. Have you got the constituent parts of those 4,461 knots?—Yes; from Dover to Calais 22 miles; from Marseilles to Malta 650; from Malta to Alexandria 815; from Suez to Aden 1,308, and from Aden to Bombay 1,664; I have taken those figures from the Peninsular and Oriental Company's published prospectus.

2274. What time do you allow for detentions in your estimate of the time?—Sixty-six hours; nearly three full days.

2275. At what places?—I will give the particulars. I allow a stoppage at Dover of four hours; a needlessly large stoppage, I imagine; at Calais four hours; at Paris four hours; at Marseilles four hours; at Malta eight hours for coal; at Alexandria five hours.

2276. But is it not a matter of one's own personal experience that the mails are taken alongside the steamer on Dover Pier?—I am giving these large detentions that I may not be considered extravagant in estimating the period within which the mails should be carried.

2277. Practically, there is no detention at all, is there?—It is very little; I had put down two hours in my paper, but am ready to allow four.

2278. We know that the mail leaves London on the evening of one day, and on the morning of the following day but one, at eight o'clock, it leaves Marseilles?—No doubt that is so; I have allowed for a detention at Aden of 10 to 15 hours; but there ought to be no stoppage at Aden at all; it is a mere question of fuel; again, they do not want to coal at Suez because of the expense.

2279. What is the shortest time in which you have ever known the mails to be carried to Bombay?—Nineteen days and six hours.

2280. Under what circumstances was that exceptional passage made?—We have frequently had the mail in 20 days and a few hours: the instance I refer to was during the monsoon, probably, under circumstances which I do not know, when the company must have chosen to expend more fuel; I can only account for it so. We have frequently had it in 20 days and a few hours.

2281. Are you aware of what the contract rate of speed is?—It is 10 knots.

2282. As a matter of fact, within your experience, have the Bombay mails generally been carried within the contract time?—Certainly not. The Parliamentary Return shows they have not; they have been constantly below it.

2283. Has the company laid itself open to penalties?—In all their contracts there is this noticeable fact, that there is no provision whatever for penalties.

2284. *Mr. Childers.*] Is that the case under the present contract?—That I will come to presently.

B. Knight,
Esq.

8 May 1866.

R. Knight, Esq.
 8 May 1866. sently. There is no provision for penalties in the old contracts; the company has been allowed to go at any speed they pleased, so long as they maintained what the Post Office thought a decent speed.

2285. *Chairman.*] Are you not aware that it appears upon the face of the documents which have been handed in to the Committee, that an annual adjustment has been made, between the Post Office and the Peninsular and Oriental Company, under which penalties are inflicted, and premiums awarded, the result of which has been in favour of the Peninsular and Oriental Company?—I think that evidence has exclusive reference to something which has taken place within the last two months, when, as I suppose, the company and the Post Office foresaw that this inquiry was coming on. The Return of the 10th of May 1865 professes to include the excess of penalties over premiums; and I find that there are no penalties whatever.

2286. When you use the word “profess,” do you dispute the accuracy of the Return?—I suppose I should say that it gives it; it gives the rates of charges, and the deductions for penalties, and the premiums awarded, for 1863 and 1864; there is a foot note, “Excess of penalties over premiums,” and the text shows that no penalties have ever been inflicted upon the Peninsular and Oriental Company; I doubt whether there has ever been a remonstrance.

2287. Are you aware that, under the present contract which has been entered into between the Government and the Peninsular and Oriental Company, the question of time has been otherwise regulated, and that the company is not bound to perform its voyages at a certain rate per hour, but to perform the voyage within a certain time?—Yes, I am aware of it, but it is a very recent regulation.

2288. And there is a penalty of 50*l.* inflicted upon the company for every day beyond time, and a premium of 25*l.* awarded to the company for every day that the steamer is within the time?—The penalty is ridiculous. When you remember that it is a question of fuel, 50*l.* a day is of no importance whatever.

2289. But the papers before the Committee show, and the evidence given shows that the company has not been behind its time?—The Bombay line is the one that I am specially referring to; the most important of all the lines; there is no line which will compare with it for a moment; and on that line the Returns show a speed constantly below the contract rate.

2290. Do you confine your observations just now to the Bombay line?—Specially to the Bombay line.

2291. Do you state, that upon that line the Peninsular and Oriental Company have been habitually behind their time?—Yes, habitually; they have carried at a rate at which we could have got the mails carried for the ocean postage, without any subsidy at all; we might have had steamers running between Bombay and Suez, receiving simply the ocean postage, and we should have got the mails carried as quickly.

2292. Do you maintain that the present speed shows no improvement upon the speed of ten years ago?—I have not the data to refer to, but I affirm from memory that the time in which the mails have been carried for years past shows a deterioration; they are not carried as quickly as they were ten years ago.

2293. Are you aware that a question of speed

is practically a question of expense, and the question of expense depends, in a great degree, upon the consumption and the cost of fuel in the Eastern seas?—I believe it is entirely a question of the cost of fuel with such vessels as the company possess.

2294. Are you acquainted with the cost of coal in the Eastern seas?—I have a strong impression that Mr. Howell's statement that the average cost of coal in Bombay for the last five years has been 29 rupees a ton is incorrect; I am reasonably sure that the average cost of coal in Bombay has not been more than 20 rupees to 22 rupees a ton during the last five years; I mean the sale price of it.

2295. Have you any documentary evidence to prove that?—No, I have not; I am stating my impression.

2296. Are you speaking of the price of coal as delivered by the seller to the buyer?—Yes.

2297. Does that include the charges of handling, management, storage, or the loss in weight by exposure to the air?—Yes; all that is included in the selling price, I state my belief that the selling price of coal in Bombay has not exceeded 20 rupees to 22 rupees a ton upon the average of the last five years.

2298. Do you mean delivered at that price?—I mean as quoted in the price currents.

2299. Do you think that that would have been a fair price for a company, using such an enormous amount of coal as the Peninsular and Oriental Company do, to have relied upon?—I should have supposed that the Peninsular and Oriental Company would have been able to supply themselves upon much better terms. In their report ending the 31st of March, 1860, the Directors told the shareholders that the average cost of coal at all their stations was 51*s.* 7*d.*; in a subsequent report I think it was stated to be 46*s.* Now Bombay certainly cannot be one of their most expensive stations: I should think it would be one of the cheapest, because vessels going there obtain freight only on the homeward voyage.

2300. Supposing, for the sake of argument, that 22 rupees a ton is a fair average market price for coal in Bombay, may it not be the fact that that comparative cheapness of price is due to the circumstance that the Peninsular and Oriental Company do not look to the Bombay market for their supplies; but they guard themselves against the contingency of high prices there by making contracts in this country for the delivery of coal to them in Bombay and Aden, and elsewhere?—Yes; but a company which can keep 360 vessels at once afloat at sea with coal, is likely, I think, to make the very best of the price of coal that can be made, and to lay in their stores at the very lowest rate possible.

2301. Do you dispute the fact of the figures being correct that Mr. Howell gave in the other day as representing the sum which the coal cost the company for consumption?—We are satisfied in India that the accounts of the Peninsular and Oriental Company are so made up, so that their dividends do not show fairly what their profits really are.

2302. Will you have the goodness to answer my question?—We are perfectly persuaded that from the coal-stores of the company large deductions on the ground of deterioration are made year by year to lessen their profits; and large additions made to the cost, in making up the accounts for the Post Office or for this Committee,

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to show how costly their service is. Large deductions are made in their books by which the apparent value of the stores by no means corresponds with the stores in their godowns. We do not trust the company's statements.

2303. When you say that you are persuaded that that is the fact; I presume you mean no more than to give the Committee to believe that that is your idea; you have no evidence of the fact to give the Committee?—It is a very strong idea, and it rests upon a very close inspection of their published accounts for many years.

2304. But the secretary to the company has stated here the method by which they obtain their supplies of coal, and he stated that it was done by advertisements, or by applications made to shipowners, and that they have the benefit of competition, and he has given us the prices at which their contracts are deliverable at Suez, and at Aden, and at Bombay; do not you give the Peninsular and Oriental Company credit for getting coals on the cheapest terms they can?—You will observe that there was 25 per cent. added to that cost for some extraordinary accumulation of charges, which I confess I could not understand.

2305. I understand that 25 per cent. to represent the expenses of the management of the coal, the deterioration of the quality and the loss of weight; and the secretary stated in answer to a question which was put to him, that they made no profit upon their coal account; the Committee, I think, would be bound to receive that as a fact, unless you can give us any documentary evidence in opposition to it?—I think you would be bound to receive it as a fact.

2306. However, your opinion generally is, that the cost of the coal has been somewhat exaggerated?—Yes.

2307. Have you any knowledge of your own as to the expenditure of coals in vessels of certain dimensions, with reference to the rate of speed at which they are to be propelled?—None of my own knowledge; but I have here "Rainey's Ocean Post," in which the consumption of coals is given as follows: a vessel of 2,500 tons displacement, at eight miles an hour, will burn 21·1 tons per day, at nine miles she will burn 30 tons, and at ten miles she will burn 41·2 tons.

2308. So that the effect of increasing the rate of speed $1\frac{1}{2}$ knots an hour, would be to double the consumption of coals?—I take it that the consumption of coal at $8\frac{1}{2}$ knots would be about 25 tons per day, at 10 knots about 41 tons. So that it would be virtually an enhancement of the subsidy by a very large amount, if they are allowed to run at the speed of 9 knots, or $8\frac{1}{2}$ knots when the contract rate is 10, and they are paid at the rate of 10 knots. If they are allowed to run at a lower rate, the expenditure of coal is greatly lessened, which is virtually an enhancement of the subsidy; and I think I can show that the lessened speed is equivalent to an enhancement of the subsidy on the Bombay line of 30,000 *l.* odd a year.

2309. How do you arrive at that?—I take the number of days voyage, 14 days; and the saving per day, 15 tons of coal. I multiply that by 48, the number of voyages, and take the cost of coal at Mr. Howell's rate, 2 *l.* 18 *s.* per ton, and I find the amount to be 30,000 *l.*

2310. What is the mileage rate, according to your information, of the subsidy paid to the company?—I cannot understand Mr. Howell's evi-

dence upon this point. The mileage rate is most distinctly, in the contract of July 1854, stated to be on the Bombay line 6 *s.* 2 *d.* a mile. Mr. Howell stated it to be 2 *s.* 7 $\frac{1}{2}$ *d.*

2311. How do you get at the 6 *s.* 2 *d.*?—By the 31st paragraph of the Bombay contract, of the 7th July 1854, under which they are now running, they are liable to a deduction from the contract service money, at the rate of 6 *s.* 2 *d.* per nautical mile, under certain circumstances, and working out the mileage distance at that rate, 6 *s.* 2 *d.*, it gives the amount of the subsidy 24,000 *l.* odd.

2312. Have you anything to say upon the subject of the subsidy generally?—I think the subsidy paid upon this line has been nearer 80,000 *l.* than 40,000 *l.*, for the reasons I have stated. The total amount of the subsidy given to this company is enormous; it is upwards of 400,000 *l.* When I was here before, I was under the impression that it was 200,000 *l.*; but I see by the returns, that it is 402,000 *l.*, which is 20 per cent. per annum upon their paid-up capital.

2313. I presume that the amount of subsidy has reference to the service performed, and not to the amount of capital employed by the company in performing it?—No doubt; but a company which starts with 20 per cent. subsidy upon its capital per annum is plainly in circumstances to destroy competition, however necessary for the public interest competition may be.

2314. Were you a party at any time to a proposition made to the Post Office for the establishment of a fortnightly service to Bombay?—Yes, I saw Mr. Hill two or three times about it, and I proposed to him that we should be allowed to start a fortnightly mail from Bombay, and to receive as remuneration simply the ocean mail postage. Here is a copy of the letter which I addressed to Mr. Hill on that occasion, and it is in these terms: "Jerusalem Coffee House, 20 March 1865. To Frederick Hill, Esq., Secretary, General Post Office, London. Sir,—Will you kindly inform me whether, in the event of my friends running first-class steamers fortnightly between Suez and Bombay, alternately with the vessels of the Peninsular and Oriental Steam Navigation Company, you will be prepared to entrust them by each opportunity, with the carriage of Her Majesty's mails to and from India; and grant them, as remuneration for such service, the ocean postage you now charge for the transit of letters, &c., between the ports named? Should you be able to answer this inquiry in the affirmative, will you then kindly furnish me with particulars of the weight, number of letters, amount of postage, &c., of the Indian mails, now carried fortnightly by the Peninsular and Oriental Company's vessels from Suez, *via* Galle, to Madras and Calcutta, as I am satisfied that the service I seek to establish will attract nearly all the Indian portion of these mails to Bombay, as the most rapid line of transit. I have, &c., (signed) R. Knight, chief proprietor, 'Times of India.'"

2315. Did you make that tender on behalf of any company?—Yes, at the request of a company in India, and I was told that the proposition could not be entertained.

2316. Was that a company whose head quarters were in India?—Yes, their head quarters were in India.

2317. Do you think that there would not have been some practical inconvenience in the Post

R. Knight,
Esq.
8 May 1866

B. Knight,
Esq.
8 May 1866.

Office here, making a new contract with a company abroad for the conveyance of its mails?—I do not think that the Post Office here should enter into any such contract; it is a matter for the Indian Post Office. I do not see why the latter should be kept in leading strings for ever by the General Post Office of this country; we are as capable of managing our Post Office in India as Australia is of managing hers.

2318. You mean for the service between Suez and Bombay?—Yes, Suez and Bombay, but right through to England.

2319. If you claim on behalf of the people of India that you should have practically the control of the Post Office communication, what answer should you give to a similar claim made on the part of the people of England?—We do not claim the control of it; but we claim to treat upon equal terms with your Post Office. As it is now, the General Post Office does as it pleases with us, and with our revenues too. In a letter from the Under Secretary of State for India, dated the 5th of October, 1865, to the Secretary of the General Post Office, the Secretary of State says, that "the decision of the question is entirely in the hands of the Postmaster-General." I am satisfied that while the Postmaster-General of this country is allowed to administer our postal finances as he pleases, the people of India will be inequitably dealt with; it is in the nature of things that it should be so.

2320. Are you aware that in all that the Postmaster-General does here in connection with the Indian mails, he acts in communication with the Secretary of State for India?—I am quite aware of it.

2321. Therefore, the people of India, or the Government of India, have a direct influence upon the proceedings of the Postmaster-General through the India Office?—But unfortunately it is a money question, and the Secretary of State for India, and the Postmaster-General of this kingdom, are ministers of the same cabinet, and Parliament is accustomed to scrutinize very closely the expenditure every year, and it is plain, from Mr. Hill's evidence, that the Post Office is determined to make their establishment pay, and so escape criticism.

2322. What is your proposal now; is it that too much or too little is paid for the service?—At the present speed, I am satisfied that too much is paid, for the line is an immensely lucrative one; 10,000,000 £ of specie is carried year after year upon it.

2323. You think, that for the same sum of money, a better service could be obtained?—Yes; at this moment there are steamers running without a subsidy, on account of the traffic on the line.

2324. Would they be able to give the guarantee to the public which a company possessed of a large capital and a large number of steamers like the Peninsular and Oriental Company can give?—They could give any amount of guarantee.

2325. I mean such a guarantee as the possession of a reserve of vessels which, as has been stated in evidence, has always enabled the Peninsular and Oriental Company to supply a vessel when they have been so unfortunate as to lose one?—I should think in six months, or nine months, they would do it. They probably might not be able to do it within a month, or a couple of months; but one of those companies, the

British India Steam Navigation Company, has a very fine fleet now.

2326. What is the size of their vessels?—Many of them are 1,200 tons burthen.

2327. Do you think that a 1,200 ton steamer would be calculated to perform the voyage to Suez in a shorter space of time than one of the Peninsular and Oriental Company's steamers?—No, but they would make the speed attained by the Peninsular and Oriental Company; and the thing is to get the thin end of the wedge of competition in. If we once get that in, we shall soon get an efficient service.

2328. And you think the way to do that would be to have an alternate fortnightly service?—Yes; we shall never get a thoroughly efficient service until it is so; I know the conviction of every man in India who understands the subject, from the Government downwards. I will read the opinions of the Government of India upon the subject if the Committee wish me to do so.

2329. In what form has that opinion been expressed?—In the form of official papers, which have lately been published in India; I imagine that those papers must be before the Committee. If they are not they certainly ought to be.

2330. What date are they?—They arrived by the last mail from India, but I imagine that they are all before the Committee. I refer to the correspondence which has taken place upon the subject of a weekly mail service between England and Bombay.

2331. What is the date of that correspondence?—From July 1865 to February 1866.

2332. Can you state, that in the event of notice being given by the Government to the Peninsular and Oriental Company to terminate their contract, there would be a fair amount of competition from India?—My desire, certainly, would be that the existing service of the Peninsular and Oriental Company to Bombay should *not* be terminated. I say, let it be carried on; but let us have another and an independent fortnightly service from India. I am sure we can get the parties to do it. Parties are in the field already, willing to carry the mails, but, as long as you continue the subsidy exclusively to the Peninsular and Oriental Company, they can do anything they please.

2333. Your suggestion is, that the Peninsular and Oriental Company should be left in the enjoyment of their present contract to convey the mail fortnightly to Bombay, but that tenders should be invited for a service to run every alternate week?—Yes.

2334. Would you exclude the Peninsular and Oriental Company from the privilege of tendering for that service?—You need not exclude them; if it is advertised in India to be given by the Indian Government, the Peninsular and Oriental Company will not get it, let their tender be what it may.

2335. Surely you would not, as a matter of principle, for the purposes of competition, exclude the Peninsular and Oriental Company from tendering for that alternate service?—If there were any chance of their getting it, I would: because I am sure that the public interest would eventually be served by getting competition established upon any terms.

2336. You are so anxious for competition that even if the Peninsular and Oriental Company could afford to do the whole service, that is, the weekly service, to India, at a lower rate than the Peninsular

Peninsular and Oriental and the other one put together, you still think that they ought to be excluded from it, to keep up the principle of competition?—Yes, and I will tell you why. Mr. Hamilton, the representative agent of New South Wales, under date the 19th of March, 1863, gives an official statement of the grounds on which the colonies of New South Wales and New Zealand claim the establishment of a monthly postal service, *via* Panama, and remarks, "The conduct of the Peninsular and Oriental Company in reference to the Australian mail service between 1853 and 1860, proves that their object has been to gain a close monopoly of steam-packet traffic in the Indian Ocean; when the market has been thrown open to competition, they have tendered at a price at which the service could not be profitably worked, and having run competitors off the line, they have made their own terms with the Government; the effect of this monopoly is, that postal communication between this country and Australia is wholly inadequate." We entirely agree with the colonial view of the subject.

2337. Did you receive any answer to that proposal to Mr. Hill, which you stated to the Committee just now?—I was told by Mr. Hill that it could not be entertained.

2338. Are the Committee to understand it to be your opinion that no subsidy would be needed at all, if the whole service were thrown open to general competition, and that persons willing to undertake it, have expressed their readiness to be content with the ocean postage?—Quite so, if the speed of the last three years is to be the mail speed. If we are to have a higher speed, no doubt we must have a subsidy.

2339. Do you think that any steam companies would be ready to bind themselves under the obligation to carry the mails in the manner that the contract packet service does?—I think so, Mr. Riddell, our Post Master General, states his belief in this correspondence I have referred to, that our postal service is very nearly self-sustaining, so that as much, nearly, would be given by the ocean postage as is now given by the subsidy.

2340. What do you mean by ocean postage?—The amount that is charged on the letters, for the sea part of the voyage, 4 *d.* per letter to India.

2341. You stated, just now, did you not, that you thought that there would be no need for the vessels to stop at Aden?—Only as a question of fuel; it is 14 days from Suez to Bombay, and it is the same, by a slow vessel, from New York to Liverpool.

2342. You will bear in mind that a vessel going from Suez to Bombay must necessarily take in her fuel at a most expensive place for receiving it?—At the present time vessels coal as largely as they can at Bombay, where it is cheaper than any where else; but I believe that the cost of fuel at Suez is likely to fall very materially. No doubt if they have to coal simply at Suez and Bombay, the coal will cost a little more than it does now, as coaling at Aden is not so expensive as at Suez.

2343. Do you think that the effect of establishing competition would be beneficial to the public?—Immensely so.

2344. Do you think that it would reduce the rates of passage money?—I think it would reduce the rates of passage money by one half, on the Bombay line.

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2345. Do you look for a great increase in the number of passengers going between Suez and Bombay, when the railways in India are opened?—A very large increase indeed; I should say that it would reduce the rates of passage one half, at all events, upon the rates which were charged when I came home, nearly two years ago; I believe they have made some little reduction since. The public gain would be very great if better speed were made. If four days only were saved in the interest upon the specie which is carried for India, it would represent an amount of from 30,000 *l.* to 40,000 *l.* a year. On the Bombay line we are charged 2 per cent. for the freight of all treasure that goes to Bombay; while the company charge no more to Calcutta, which is 2,000 miles further, and only 2½ to Hong Kong. The rate to Bombay plainly should be no more than 1½ per cent.

2346. Would that be a fair proportion according to the distance that the specie is carried?—Yes; it is more than a fair proportion; and as our average imports of bullion are 10,000,000 *l.* a year, the half per cent. wrongly exacted is 50,000 *l.* loss to the community.

2347. You attribute the whole of that to the effect of there being no competition?—Yes; and the passage-rate was 75 *l.*, instead of about 40 *l.*

2348. You stated, did you not, that they refused to carry second-class passengers?—I am sorry to say that Mr. Howell told you that it was not so. I affirm that second-class passengers are carried only as a matter of favour. The Company require every second-class passenger to sign a certain undertaking, when they do give him a passage, and I will read it to the Committee: "Gentlemen,—With reference to the second-class passage which has been allotted to me, from

to I hereby acknowledge the conditions upon which second-class passengers are conveyed on board the steamers of the Peninsular and Oriental Steam Navigation Company as expressed in the passage-ticket; and being fully aware that the Company do not engage to provide sleeping cabins or berths on board their packets eastward of Suez for second-class passengers, undertake to accept such accommodation in this respect as the Company may appropriate to me; and, moreover, bind myself not to make any claim whatever upon the Company, should they be unable to provide me with a berth." The result is that no one can go second class; there are no berths and no accommodation, and a man who does venture upon it, seldom does so twice.

2349. Is there a very strong sense of grievance in the community of India upon this point?—You may judge of that by my evidence; I am a reflection of that feeling.

2350. Do you represent the opinion of Bombay only?—No; of all India.

2351. You have no doubt upon that point?—None whatever.

2352. Do you know anything of the feeling in the Australian colonies with regard to this service?—I have seen it stated, that according to the last Australian papers, the question has been brought before the Legislative Council in Sydney, and that there are complaints of the same character against the monopoly which this company has established, and the way in which it is used.

2353. Mr. Marsh.] When you talk of Sydney, do you know what were the old rates to Australia?—No, I do not know.

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2354. Chairman.]

R. Knight,
Esq.

8 May 1860.

R. Knight,
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3. May, 1866.

2354. *Chairman.*] With regard to postal arrangements, I think there is no question but that the general view in India, at the present moment, is that Bombay should be the general steam port of India in connection with this country?—There is no difference of opinion upon the subject; all are agreed upon it.

2355. Has any opinion been expressed in India upon the circumstance that the charge for the mails between this country and China is borne, to a certain extent, by the Indian Revenue?—I believe that is an old and great grievance; the East India Company protested against it when the arrangement was first made by the Treasury, and I rather think that it has been re-protested against in a late letter from our Director General of the Post Office. It certainly is inequitable that we should be charged one-half of the cost of carrying the China mails, and, if I mistake not, of the Mediterranean mails also. I rather think that one-half of the cost of carrying the mails to Gibraltar, to Malta, and to Egypt, is borne by us, in which we have not a fraction of interest (and there is a most important mail with Egypt); and we have to pay half of the cost of carrying the mails to Ceylon, and to China. The same was, until lately, the case with regard to Mauritius, and to Australia. I believe that there has been some change made in the Mauritius and Australian mails; but, if I mistake not, we are still required to pay one-half of the loss that arises upon all the mails which I have enumerated, though we have no interest in them whatever, except in the case of the mail to China, in which we have a small interest, which interest may be about one-fourth or one-fifth, probably, compared with what the English interest is.

2356. Speaking from an Indian point of view, your opinion seems to be this, that in making Bombay the principal port of communication for India, India should pay only its proportion of the charge of keeping up the weekly communication between London and Bombay, and that India should not be in any way chargeable with any portion of the expense of keeping up the mail communication between London and China, and London and Australia?—I believe that as regards London and Australia we are now liberated from the charge; but it still exists, if I mistake not, in the case of the Mediterranean mails, the Egyptian mails, and the Ceylon and the China mails. We have no interest whatever in the carriage of any of those mails, except the China, and there our interest is a very subordinate one.

2357. I understand that the strength of your main charge, so to speak, is that at the present moment, India does not get her weekly mail at Bombay, because the India Office here will not consent to provide the small additional amount of postage which is proposed to be charged by the Postmaster General; or to bear, as the Treasury suggest, the additional expenditure?—Quite so. I will read to the Committee, if they will allow me, an official statement, upon which I ground that complaint. Mr. Riddell, the Postmaster General of India, under date the 19th February 1866, writes: "The present postal requirements of India, in connection with Great Britain and Europe, will be satisfied with a weekly mail to Bombay. The cost of the Mediterranean lines might be reduced, without inconvenience to the public, by a reduction in the number of mails sent *via* Southampton; and even

if this were not done, the additional cost of conveying four mails in the course of a year from Marseilles or Brindisi, cannot be serious." "The subsidy for the line between Calcutta and Galle may be altogether withdrawn, as the line will be useless for postal purposes. The line between Galle and Suez must be continued for the conveyance of the China and Australian mails; and if the Indian mails are no longer sent by that route, the cost of the Australian and China mail service will be increased by the sum heretofore paid by India; and it would appear from the tenor of Mr. Hill's letters, that this consideration has been the ground upon which all connected with India have been so long denied the advantage of a weekly mail to and from England, and even of four mails in the month. It is difficult to understand how the revenues of India can equitably be charged for the maintenance of a service which is useless to India; and which, for some time past, has acted as an obstacle to a very great public and private improvement. But, if on any ground of imperial policy, it is considered right to charge upon the revenues of India a portion of the subsidies paid to British mail steamers employed between Australia, China, Ceylon, and Suez, I submit that the charge should be a distinct one, and not be allowed to interfere with the improvement of the postal communications between Great Britain and India." Those sentiments are endorsed by the Government of India. Mr. Riddell does not seem to be aware that India is being made to share the cost of the Egyptian and Mediterranean mails. The Post Office Packet Service Return of the 2d of March 1865, professes to be an exhaustive statement of all the postal subsidies of this country; and the Mediterranean mails, and the Egyptian mails are plainly included under the head of India.

2358. Mr. Childers.] Do you think that the best future arrangement would be this, that there should be a fortnightly service between Suez and Bombay, in the hands of the Peninsular and Oriental Company, and a fortnightly service in the hands of another company?—Yes, another company subsidised from India.

2359. Do you think that the ocean postage would bear the expense of the second company?—I believe it would bear the expense of both.

2360. Will you state to the Committee what you mean by the ocean postage?—The 4 *d.* per letter referred to by Mr. Hill.

2361. But is not that 4 *d.* the charge for conveying a letter from India to Suez and on to England?—Yes; I base my belief upon the statement of our Postmaster-General; I have not myself the data to make the calculations to which you invite me, but I will read to the Committee what he says. In the same letter from which I have quoted, he says: "I think there is reason to hope that, if the rate of postage is not raised, and if a weekly mail is granted, the receipts from postage will, before long, cover the whole cost of the service."

2362. I am asking you as to your own opinion, not as to the opinion of the Postmaster-General of India, which will come to us officially; I want to know why you attribute 4 *d.* a letter as the ocean postage between Bombay and Suez, and whether, in fact, 4 *d.* is not the whole postage between Bombay and England?—I should have said a proportion of 4 *d.*

2363. The distance between Bombay and Suez is about the same, is it not, as the distance between

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tween Suez and England?—It is more on the Indian side.

2364. But by Marseilles, which is 6 *d.*, it is about the same as the charge to Bombay?—Yes, about the same.

2365. Therefore, strictly speaking, the ocean charge between India and Suez should be 2 *d.* rather than 4 *d.*?—It should be about 2½ *d.* for distance merely.

2366. Are you prepared to say that a company could be found to take the fortnightly service for 2 *d.* a letter?—I am not prepared to say that, but I state my impression that, from the growing extent of the Indian mails and the statement of the Director-general, in which I have confidence, the ocean-postage would be sufficient. I have not the means of going into the calculation.

2367. But from the opinion of the Postmaster-general of India, you think that a company could be found to perform a fortnightly service between Bombay and Suez for 2 *d.* a letter?—I think it is very likely.

2368. How would you arrange that service on to England?—The question has come up many times in conversation with gentlemen connected with the Companies in India to which I have referred, and they tell me that they could arrange with half a dozen lines to carry the mails on this side, and that all the difficulty is on the other side.

2369. Is it your opinion that a company would be found to enter into a contract to convey the mails, at exact time, between England and Alexandria fortnightly?—I have a very strong belief that that might be done.

2370. Have you any evidence in support of this impression of yours?—The evidence of close conversation with those who are interested in these matters; there are companies in India who have made all these calculations.

2371. Then it is your impression, that in the present state of commercial relations between England and Alexandria, a company could be found to convey the mails at exactly fortnightly periods, running 11 knots an hour, for the postage of 2 *d.* a letter?—No, I did not say that; I said at the present speed. If we are to have a higher speed, we must have a subsidy.

2372. But you think that, at present, a company could be found who would contract to run between England and Alexandria, at the present rates of speed, for 2 *d.* per letter?—Yes, in correspondence with a company on the other side, because of the lucrative traffic in passengers, specie, and so on.

2373. Starting with that, your plan would be to have a new through company from India to England, running fortnightly?—Yes.

2374. Does not that involve a service from England to India?—Yes; but I wish to maintain the idea of the thing being managed in India. You start your service from this side fortnightly, and we will correspond with a fortnightly service from India.

2375. Is it your plan, that India is only to manage the homeward service, and England the outward service?—Precisely so; probably the cost will have to be divided.

2376. Do you mean that the service homeward from India, once a fortnight, is to be under the management of the Indian Government?—Yes.

2377. But the service outwards, equally once a fortnight, is not to be under the management of

the Indian Government?—No, under the General Post Office.

2378. But that the same company is to carry out the homeward and the outward service?—No, the Peninsular and Oriental Company should retain its present service.

2379. You wish that there should be a weekly service out and home?—Yes.

2380. You wish half the homeward service to be in the hands of the Indian Government?—Yes; starting alternate weeks from Bombay with the Peninsular and Oriental vessels.

2381. But no part of the outward service to be in the hands of the Indian Government?—Once a fortnight only.

2382. In correcting your previous evidence, what you mean is, that half the service, both the homeward and the outward, should be in the hands of the Indian Government?—Yes.

2383. Therefore, the Indian Government would be contractors for the service in the Mediterranean?—Yes.

2384. Have you reason to believe that the Indian Postmaster-General would carry on the service in the Mediterranean any better than the English Postmaster-General carries on the service beyond Suez?—I do not care who carries it on, if you only deal equitably with us; but the Post Office of this country is not dealing equitably with us, and, because of that, I wish to see the service in the hands of the Indian Government.

2385. Do you think that the Postmaster-General of India would deal more equitably with England than the Postmaster-General of England would deal with India?—I am very sure you would make him do so.

2386. Do you mean that there is more pressure of public opinion in India than in England?—No; more here than there.

2387. The influence of public opinion upon the Government of India, you think, is greater than the influence of public opinion upon the Government of England?—Parliament will take care when the estimates come before it that no improper charge is imposed upon the English Treasury by the Indian Government; but whatever charges the English Government impose upon the Indian Treasury we are compelled to submit to.

2388. How shall we be able to check the charge upon England which is in the hands of the Postmaster General of India?—Well; I am very sure that if the Indian Government were disposed to make the English Treasury pay part of the cost of carrying our mails between Bombay and Kurrachee, you would strike the charge out of the account immediately. In like manner, we say that we have no interest in your Egyptian mail, but we cannot strike the charge out of the accounts.

2389. Then, on the whole, your plan is that one of the alternate weekly services throughout from England to India, and from India to England, should be in the hands of a distinct company from the Peninsular and Oriental Company, and under the management of the Indian Government?—Yes; and I recommend its being on the Indian side, simply that we may not be sat upon by the English post-office.

2390. It is your belief, is it not, that the whole of the passenger traffic between England and India will be in future to Bombay, and from

R. Knight,
Esq.

8 May 1866.

R. Knight, Esq.
8 May 1866. Bombay to Calcutta?—Not the whole of it, but the largest part of it. I have no doubt Mr. Howell is right, that as a very large number of passengers now go from Southampton in preference to the Marseilles route, especially ladies, so you will find families returning from Bengal will not face the overland railway journey, they will prefer the sea passage from Calcutta; but we shall drain the north-western provinces almost entirely.

2391. In entering into any contract, you would look exclusively to Bombay as the Indian terminus?—Yes, there cannot be a doubt of it.

2392. With respect to China, you think that India should bear no proportion of the loss on the China service?—I do not say no proportion, but when you make the proportion one-half, it is inequitable. We are independent of any postal service with China started from this country, because we have lines of steamers constantly running with opium from India to China, and it would be the easiest thing possible for the Indian Government to come to some arrangement with them for the carriage of our China mail; I think we should pay a distinct charge based upon the approximate proportion of our interest in the China mails is, say one-fifth or one-sixth. If it really is half, we are willing to pay half.

2393. Is it not a fact, that in arriving at the proportion of half, Mr. Wilson stated that the commercial interest of India with China was as large as the commercial interest of England with China?—I am not aware.

2394. It was stated in the Treasury Minute upon which that division was founded, that the interest of India in the China commerce was as large as that of England?—Whether Mr. Wilson said so or not, the fact is otherwise. It must be borne in mind that a very large proportion of the Indian mails to China are English in their interest, not Indian. The banks and the East India houses are not Indian in any just sense whatever; they are in India for the sake of dividends and fortunes, to be carried where? to be brought to this country. India has the smallest possible interest in all that portion of the mails. Mr. Wilson was not a good authority upon Indian matters; he was not well informed upon them.

2395. You think that the fact which Mr. Wilson stated, that the interest of India in the China commerce was not as large as the interest of England in the China commerce, is not the case at the present time?—No.

2396. Therefore, the nett loss on the China mails, in your opinion, should be very differently divided?—Very differently.

2397. With respect to the Australian service, are you not aware that, instead of India bearing no proportion of the loss, they get credit for a certain amount of the receipt?—Yes, I believe that is the case.

2398. So that if the Australian service were cut off, and the whole of the mails went by Panama, India would lose?—Not if you give us a Bombay mail. At present we are only being recouped from Australia that which was wrongly taken from us for a good many years under the old arrangement; but I doubt very much whether we are getting a full equivalent.

2399. As a matter of fact, at the present moment, if the Australian mails did not connect with the Indian mail, India would lose what now

comes in to her credit?—As long as we are made to carry useless mails to Calcutta and Galle.

2400. But if the Australian mail connected at Aden or Suez, there would be a credit to the Indian service, without any additional charge being thrown upon India?—There would be a small credit on account of the Mediterranean portion of the service.

2401. And if at Aden, on account of the Red Sea service as well?—Yes.

2402. You stated, did you not, that the effect of the competition of another fortnightly Company's service, would be to reduce the rates of passage money?—Yes, heavily.

2403. There is at the present time, is there not, to Calcutta, the competition of the French Company?—Yes.

2404. By that line, is the time to Calcutta the same as the time of the Peninsular and Oriental service?—I believe so.

2405. Has that competition reduced the rates of passage money?—I can tell you what the rates of passage money on the Calcutta line are where there is competition, and what they are on the Bombay line, where there is no competition.

2406. Did the establishment of that line reduce the Calcutta rates of passage money?—I do not remember, not being much interested in that line.

2407. Do you happen to know whether it has reduced the rates to China?—I do not know.

2408. Does it necessarily follow that the establishment of a second company on a line, which only had one company before, does reduce the rates of passage money?—Not necessarily; but I think you may be reasonably sure that it will do so in such circumstances. When the Collins' line started in opposition to the Cunard line, the rates of freight fell from 8*l.* to 3*l.* immediately; and the passage money from 50*l.* to 26*l.*, and they have remained at the lower rate ever since.

2409. Although the Collins' line has been discontinued?—Yes, but others have started; there is the Havre line, and the Southampton line, and the Bremen line. I will give another fact. On this side of Suez we are carried as reasonably by the Peninsular and Oriental Company as we could wish to be, because we can get to Alexandria by half-a-dozen different lines of steamers.

2410. My question was not as to half-a-dozen different lines, but as to two lines; is it likely to be the effect of substituting two lines for one that the passage money will be reduced?—It is certain to be the effect, unless they play into each others hands.

2411. Is it not positively certain that they will play into each others hands?—No, it is not certain.

2412. Has not all our experience of two lines of communication clearly been, that the two companies do play into each others hands?—Let us get two lines started, and, I believe, we shall very soon get three or four.

2413. Your prospect of a reduction of the passage money seems rather to depend upon your getting three or four lines, than upon getting two?—It depends upon getting in the end of the wedge. Only last week a friend, just arrived from Bombay, told me that at this moment no person will go by the Peninsular and Oriental vessels if they can get by the other company's ships that are now running. There is a Bombay Company now running steamers, for the mere sake of the trade between Bombay and Suez, and they are crowded with

with passengers. I am told that the Peninsular and Oriental Company only get passengers who have been refused at the other office, from the vessels being full.

2414. Has the effect of that been to reduce the Peninsular and Oriental passage-money?—You can now get by this company from Liverpool to Bombay, first class, for 65*l.*, and the Peninsular and Oriental Company's charge is 85*l.* from Southampton.

2415. Have the Peninsular and Oriental Company reduced their rate in consequence of this competition?—No, it matters not to us whether they do or not, so long as there is an alternate line by which we can travel cheaper.

2416. Are you of opinion that the China mails ought to continue to be carried by Galle, or would they go from Bombay overland to Calcutta in future?—I have not paid enough attention to the point to be able to give you an opinion.

2417. The object of my question is this, will the establishment of a weekly service by Bombay dispense in any way with the less remunerative future service from Suez to Galle, and Singapore?—Perhaps the best answer I can give, is to say, that we are independent of your China service altogether; we have steamers running constantly with opium from Bombay to Hong Kong, and Shanghai, and they would carry mails; I believe it is the case, that our steamers pick up your English mails at Galle, and carry them on; under no circumstances shall we be without steam postal communication with China, because of our opium trade.

2418. So that it is indifferent to India generally whether the present line to China is continued in future, or is carried through India?—I would not say it is quite indifferent, but it is a matter of small moment to us.

2419. Speaking on the part of India generally, what is the general opinion as to the messengeries?—That it is a most happy thing for the other side of India that the messengeries exist, because if they did not exist voyagers would be charged passage rates, such as we have been charged, and are being charged, on the Bombay side.

2420. Would it, do you think, be agreeable to the Indian community, that the assistance of the messengeries should be obtained in any general system of postal communication with the East?—We are quite cosmopolitan enough for that; we are not at all jealous of the messengeries.

2421. Sir Charles Bright.] Have you had any experience of the working of the telegraph in India?—A good deal.

2422. What is the general opinion respecting the system of telegraphy there?—That it is very inefficient.

2423. To what places do those complaints extend generally?—I think they are pretty general throughout the country; we had no line when I was in India that worked well, and from the papers recently received, I find there is little amelioration, if any.

2424. Are the complaints made as largely as before?—I think so.

2425. What is the time that it generally takes for a message to be transmitted from Bombay to Kurrachee, for example?—That line is in a frightful state; I take from my own paper, the "Times of India," of the 9th of March, the following extract: "The wretchedly inefficient working of the line between Kurrachee and Bombay during the period under review will be seen from the following compilation from the

daily reports supplied by the Indian Telegraph Department itself." Then there is a maximum and minimum delivery from February the 1st to February the 12th; the maximum delivery was four days and three hours and thirty-one minutes while one solitary message came through in four hours. The writer proceeds: "Only on two days does the line appear to have been even approaching proper working order, while for several days subsequent to the 12th, the line was closed for all local traffic. In the middle of January the Indian telegraph rates were considerably increased, and the public naturally looked for increased efficiency, but instead of this, we believe that the lines throughout India were never in a worse condition than they have been since the increased tariff came into operation."

2426. Is that March in this present year?—Yes, and it is the statement of a careful writer.

2427. How long has that state of things existed, to your knowledge, on the Bombay and Kurrachee line?—As long as I can remember; complaints have been incessant of the working of that line.

2428. Have any attempts been made to lay that state of things before the Government in India?—Yes. I hold in my hand a report on the defective working of the Indian telegraph, by Mr. B. C. Bayley, officiating director general of telegraphs, dated the 16th November 1865, addressed to the Government.

2429. Have the mercantile bodies at Kurrachee or Bombay ever memorialised either the Commissioner in Scinde or the Governor of Bombay on the subject, to your knowledge?—Many times. They have memorialised Parliament lately upon the subject. We have had incessant communications with the Indian Government upon the subject within the last few years.

2430. Without obtaining any change in the state of things?—We have received unsatisfactory replies.

2431. It is the fact, is it not, that the telegraph is frequently behind the mail steamer between Kurrachee and Bombay?—It must frequently be so from the figures I have read.

2432. Have you heard any complaints of messages being divulged by the signallers?—Constant complaints.

2433. What is your view of the working of the telegraph between Bombay and Calcutta?—My own experience of it was very unsatisfactory. Whether any improvement has taken place since I left India, I do not know; but I do not think there has been any; the line would even seem to be in worse order now than it ever was.

2434. What used to be about the average time during your experience of it when in India?—It was so uncertain that I should be sorry to attempt the average; we have had a message in a few hours, and we have been many days without a message. We had a public service in connection with my office, and were sending messages daily.

2435. Was the same state of affairs existing between Bombay and Madras?—All over India.

2436. What do you attribute that to?—In the words of the "Bombay Gazette," "A great portion of the lines stand upon wooden posts, which are scarcely strong enough to bear the weight of a single wire. The posts are overturned and the wire is lying upon the ground. The department had forgotten to order insulators, and the wire had to be affixed without them, and in consequence they have become unfit for use; and

R. Knight, Esq. and the signallers are unfit for the work, some unable to read more than six or seven words." That is simply an epitome of the Director General's report.

8 May 1866.

2437. *Mr. Marsh.*] When you talk about the opposition company from Bombay to Suez, they are small and slow ships, are they not?—I do not know the size of their vessels. The company has started since I left Bombay.

2438. Do you think they are fit to carry the mail against the monsoon?—The vessels by which we proposed to carry the mail were certainly fit.

2439. What is the tonnage of them?—Twelve hundred tons, many of them.

2440. Do you think 1,200 tons enough?—Yes, and we should immediately have laid down a much larger class of vessels if we had obtained the contract.

2441. You stated that those Peninsular and Oriental Company's ships always go very slowly; do you notice that they ever break down altogether, and do not carry the mail, but come back, in the case of the monsoon?—I think that the company deserves the praise of having been very regular in that sense; I think we have had a break down, but it has been very rare.

2442-3. Do you know whether the Bombay mail of last June ever reached Suez?—I do not know; I think we lost no mail last year.

2444. As to the mail that left Bombay the latter end of June, do you know whether it ever got to Suez?—I do not know.

2445. You stated that the people in Australia managed their own mails; are you not aware that they are under the same engagement with the General Post Office as the people in India?—I stated that they treat upon equal terms with you; you do not interfere with their revenues, as the Treasury here interferes with our revenues.

2446. You stated to the Committee the agreement which the second-class passengers sign, agreeing to be content without a berth; do the Peninsular and Oriental Company ever do the same during the full season with regard to first-class passengers now; do they ever make them sign an agreement?—The suggestion is altogether untrue; you cannot get second-class passages, except as a matter of favour, by the Peninsular and Oriental vessels. I have tried myself, as a matter of charity, to get a man carried second-class from Bombay to China, and, although the company knew that the money had to be raised by charity, the agent said that the orders of the home direction were imperative, and that he could not give him the passage.

2447. I ask you whether they do not sometimes make the first-class passengers sign an agreement to be content without a berth also?—They may have done so under peculiar circumstances, but this is a systematic thing towards second-class passengers.

2448. *Mr. Ayrton.*] Is it not sometimes the case where a ship is full, that they allow passengers to go who will be content to sleep upon the deck, they paying the full first-class fare to go as deck passengers?—I have heard so.

2449. *Mr. Marsh.*] Do they sign an agreement to that effect?—I think not.

2450. *Chairman.*] That is only where the steamers are full; it is at the option of a man whether he will go or not on those conditions?—Yes; my complaint is that, whereas the Cunard steamers give three or four classes of accommodation, the Peninsular and Oriental Company

give but one class of accommodation, and provide no second-class accommodation; so that in the case of an Indian officer ordered home with a wife and children, he frequently cannot pay the passage-money, except by going heavily into debt.

2451. *Mr. Marsh.*] The Messageries Impériales provide very good second class accommodation, do they not?—I do not know, they do not run on our line.

2452. *Mr. Ayrton.*] Do you know whether there has been any classification with regard to officers coming home, some by the Peninsular and Oriental steamers, and some by the French Company?—I think there was, now you name it, but I had forgotten it; I have an indistinct recollection of something of the kind.

2453. Are you aware that the French company made a classification so that you could come home at a lower rate than the rate of the first class passengers?—Yes, and I think the Peninsular and Oriental Company made a remonstrance with them upon the subject; at all events it was so stated in India.

2454. Do you think that there is a general impression in Bombay, with regard to the Peninsular and Oriental Company, that its affairs are conducted with great waste and extravagance?—Yes.

2455. And that that pervades the whole of their administration in Bombay?—I have heard extraordinary stories of the way in which their stores are managed.

2456. That is the general impression amongst the community?—Yes; I think it is the general impression amongst well-informed people.

2457. Are you aware whether at Aden or at Suez any trouble has been taken to preserve the coal, or is it kept in heaps exposed to the atmosphere?—What dangers it may be exposed to I do not know, but there is no protection whatever, at all events, at Aden.

2458. Are you aware that in consequence of that there is a constant complaint of the deterioration of the fuel in the steamboats on the eastern side of Suez?—I should quite expect it, but I did not know it to be the case.

2459. Do you know whether the loss of speed is chiefly attributable to that?—No; I do not.

2460. Do you think that the practice of putting an unlimited quantity of wine and spirits on the table to be consumed, leads to great waste on board the Peninsular and Oriental Company's vessels?—Yes; I believe it to be a most wasteful plan, and it is very distasteful to passengers, as it is made a pretext for maintaining high passage rates.

2461. Do you not think that it tends also to do a considerable amount of mischief in exposing people who are going out to this unlimited supply of wine and spirits, who have not been accustomed to it before?—With very young people that may be the case; I do not think that it amounts to a scandal.

2462. Do not you think that the consumption is very much increased in consequence of those things being given without restraint?—There is no doubt that it is so, especially in the case of youngsters.

2463. Have you not often heard people in the company's steamers, say they would rather drink for the purpose of punishing the company for their heavy passage rates?—I have heard such things said.

2464. Have

2464. Have you had your attention called to this alleged contract entered into between the Postmaster General and the Peninsular and Oriental Company, at the beginning of this year?—I have never seen it; I have heard it referred to here.

2465. Do not you think that the people of India will be very much astonished when they are told that there is a Standing Order of the House of Commons, to the effect that no such contract should be entered into except subject to the consent of Parliament, and yet that this contract has been entered into in the face of the Committee appointed to inquire into the subject?—Yes; that very resolution of the House of Commons was pleaded by Mr. Hill as an effectual bar to coming to any arrangement with me, even for the payment of the ocean mail postage.

2466. Then you and a large number of persons in India would be very much astonished to find that that contract has been entered into, in total disregard of that resolution?—We should be amazed.

2467. Have you looked at the rate at which, and the time within which, the service is to be performed under this contract?—I have not seen the contract at all. I did not know of its existence.

2468. With regard to your statement, will you observe that the contract is for the service between Suez and Bombay in 312 hours; but it further allows 24 hours without a penalty, making 336 hours, and that, therefore, the contract is now for 9 knots an hour?—I can well suppose that.

2469. But will not it be very astonishing to the people of Bombay to find that in this year a contract has been entered into for a service of 9 knots an hour?—Very astonishing indeed.

2470. Will they not be very much further astonished, when they are told that for every 24 hours added to that time the small penalty of 50 *l.* is to be paid?—I have already expressed my amazement at it.

2471. The saving to the company for every 24 hours, in point of coal, would be 300 *l.* or 400 *l.*, at the rate which has been taken, would it not?—Yes, it would be very large.

2472. That would bring it down nearly to 8 knots an hour, would it not?—Yes.

2473. Therefore, it would be a saving of several hundred pounds?—Yes.

2474. For which they will have to pay the Government 50 *l.*?—Yes, they will pay 50 *l.* to escape the expenditure of 300 *l.* or 400 *l.* for coal.

2475. Therefore the penalty, in point of fact, is a premium upon the delay of the mails?—Plainly.

2476. Mr. Childers.] Do you mean that the agreement that was entered into last February, increases the time between England and India?—I have never seen the contract.

2477. Mr. Ayrton.] Are you not aware that the Government have abandoned their power of having efficient vessels in favour of this contract for a time?—I have heard it stated here.

2478. Mr. Childers.] Have you not seen this agreement?—I have not seen the agreement.

2479. And you know nothing of it except from rumour?—No.

2480. Mr. Ayrton.] Taking the statement of the contract to be that which I have given you, would it not excite amazement among the inhabitants of Bombay that such a transaction should go on with the Post Master General of this country?—Yes.

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2481. Mr. Childers.] Are you aware that the time between England and India is fixed in the former contract?—But there are no penalties.

2482. I am not upon the question of penalties, but the time between England and India is fixed in the former contract, is it not?—I think the time is not fixed.

2483. Is not there a schedule to the contract as to the time?—Not in the Parliamentary Papers.

2484. If you will refer to the printed papers of the 10th May 1865, you will find the contracts there set out in full?—I have not seen those papers.

2485. Mr. Stansfeld.] Have you any reason to think that Bombay could furnish such a fortnightly service as you have been speaking of?—I am persuaded that it can; I am sure it can.

2486. And on whatever terms that service might commence, may the Committee take your view to be that would end in being a service which would require no subsidy?—I think so; it would be content with the ocean postage.

2487. Do you know the docks at Bombay?—Yes, I listened with astonishment to Mr. Howell's statement upon the subject. I think I heard him say, that there were no docks at Bombay, except the Peninsular and Oriental Docks; but the Government has a magnificent establishment there.

2488. Mr. Ayrton.] No, he states that it was not large enough to take in the largest vessels?—We very soon shall have docks large enough, at all events, at the rate that we are progressing there. Then, at Suez, the Messageries Impériales Company are constructing very fine docks, upon which the Peninsular and Oriental Company themselves will depend.

2489. Mr. Stansfeld.] You probably do not know the dimensions of the Government dock at Bombay?—No, I do not.

2490. Your proposal was, that a contract for the alternate fortnightly conveyance of the mails between England and India should be made at Bombay?—Yes, at Bombay, by the Government of India.

2491. You mean by the Director General of the Post Office acting for the Government of India?—Yes.

2492. That contract you would imagine would be made in consequence of a previous understanding between the Government of India and the Government of England?—Yes, it would be negotiated between them.

2493. Therefore, from the fact of the contract being so entered into, it could not result in any terms which would press unduly upon England?—Not at all.

2494. And you think that there would be, at Bombay especially, a readiness on the part of Companies possessing steam vessels, to compete in this respect with the Peninsular and Oriental Company?—I am quite satisfied of it.

2495. And that they would meet with considerable public support in so doing?—They would have all the public sympathies with them.

2496. I think you stated that the result of competition would, sooner or later, be a great reduction in the passage money and the freight?—Unquestionably.

2497. They would be an advantage, though not a postal advantage, to both England and India, would it not?—It would be a very great advantage to both countries.

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8 May 1866.

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8 May 1866.

2498. In your opinion, that is one element, which the Governments of England and India might perfectly well take into consideration in entering into a postal contract?—Yes, that is my opinion.

2499. Mr. Childers.] You are not aware that the contracts with the Peninsular and Oriental Company, established before last February, had a time table attached to them, as part of the contract?—No, I was not aware of it; but I believe I state the fact, when I say that penalties were never inflicted in any case.

2500. Penalties were never inflicted till last February, but they inflicted penalties last February?—That dates very nearly from the establishment of this Committee of Inquiry.

2501. Do you mean to imply by that that the agreement made last February had some connection with the appointment of this Committee?—That there is a very comfortable understanding between the Peninsular and Oriental Company and the Post Office, I am satisfied.

2502. Do you mean to say that the agreement which was entered into last February had some connection with the appointment of this Committee?—It looks very like it.

2503. Mr. Marsh.] You stated, did you not, that the coal at Aden and at Suez was exposed?—At Aden.

2504. Are you aware that it never rains there so that it does not much signify?—Mr. Howell stated, I think, that the exposure of the coal to

the sun caused a great amount of evaporation of the valuable heating qualities in coal.

2505. Mr. Laird.] Do you know what the contract speed was between the Peninsular and Oriental Company and the Post Office?—Ten knots an hour.

2506. Was that while the vessels were under weigh, or from point to point?—The clause in the contract is this, "That the said Company shall, and will, at their own cost and charge, at all times during the continuance of this contract at a speed which on the average of each voyage of each vessel shall not be less than 10 knots an hour, conveying Her Majesty's mails," it does not say from point to point, or not.

2507. In stating that they only go 8½ knots an hour, do you mean to say that they have not gone within a knot and a-half of the required speed in the contract?—Yes, within a knot and a-half on the Bombay line last year; a knot and a-half slower.

2508. You have, perhaps, heard Mr. Hill, of the Post Office, say, that the contract had been performed, on the whole, satisfactorily?—I think that the bland assurances of the Post Office on the subject are not worth very much.

2509. Mr. Ayrton.] The sum of your opinion is, that if all the power of India were concentrated in Bombay, there could be an efficient weekly communication with Suez at a comparatively little expense?—Undoubtedly.

EDMUND D. BOURDILLON, Esq., Examined.

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Esq.

2510. Chairman.] WHAT office do you fill in the Department of the Secretary of State for India?—I am Secretary in the Public Department in which the charge of the Post Office is included.

2511. You are probably aware of the correspondence which has been put in by Mr. Frederick Hill?—Yes.

2512. It appears that the last letter upon the general question, addressed from your office to the Post Office, is dated the 5th of October last year; has any correspondence passed since that time?—Yes, I have some correspondence here, which I will lay before the Committee (*delivering in the same*).

2513. What is the general tenor of the correspondence which you are now putting in?—The whole of the correspondence between the India Department and the Post Office, in the course of last year, was sent out to the Government of India, in a Despatch of the 30th of December last, and a reply has now been received from the Government, expressing its opinion on the correspondence that passed with the Post Office.

2514. Will you read the letter from the Government of India?—This is a letter to the Secretary of State for India, dated the 22d of February 1866: "With reference to your public Despatch (No. 92, dated the 30th of December, and in continuation of the Governor General's telegram, dated the 12th instant), we have the honour to submit for your consideration the accompanying letter received from the Director General of the Post Office in India on the very important question of establishing a weekly mail between England and Bombay."

2515. Mr. Stansfeld.] Will you explain what

that telegram was?—This was a telegram sent off on the 12th of February: "A reply to your Post Office Despatch of 30th December will be sent by next mail. Meanwhile I desire to submit that, if it is meant to make India pay the whole cost of two additional mails between Suez and Bombay, we should be allowed to make our own arrangements as economically as we can either by accepting the Messrs. Stearns', or any other offer that may be eligible. The two additional mails are indispensable." Then the letter goes on to say: "In this letter Mr. Riddell appears to us to state with equal force and justice the position of this question so far as India is concerned. If it is admitted, as it is by the Postmaster General in England, and the point is indeed too clear to leave any room for question about it, that the postal service with India should in future be exclusively to Bombay, it is difficult to understand upon what ground it can be seriously maintained that the Indian Post Office should continue to be charged with a portion of the cost of a postal subsidy given to steamers on the line between Suez and Galle for the conveyance of China and Australian mails, or why any subsidy should be given to steamers running between Galle and Calcutta. We are of opinion that there need be no hesitation in undertaking for the present on the part of the Government of India to defray (in addition to a reasonable share of the cost of the service west of Suez, which is used for other than Indian mails) the whole cost of the mail service between Suez and Bombay; the entire sea postage charged on covers between the two countries being in that case, of course, credited to the Indian post-office. But we do not consider such an arrangement to be altogether unobjectionable. It would apparently be based on the expectation that

that the service must be carried on at a loss; and, if so, we venture to suggest that it would hardly be desired by England that the whole of that loss should fall upon the Indian revenues. It has been well pointed out in Mr. Merivale's letter to the London Post Office of the 5th of October, that the interests of England and India are jointly concerned in this matter. There are, no doubt, thousands in the former country to whom increased facilities for postal communication with India are just as important as they are to their countrymen living in India; and whether we look to the interests of this latter class only, or to the millions from whom Indian revenue is mainly drawn, and who have no direct interest in the matter at all, it would scarcely be generous for England to stipulate that the loss, which might arise from the establishment of a proper and efficient postal service between the two countries, should be borne wholly by the Indian taxpayer. We earnestly trust that this question will receive further and full consideration from the Lords Commissioners of Her Majesty's Treasury, and that some arrangement will be assented to whereby India may obtain the great advantage of a weekly postal service with Bombay, without being compelled at the same time to pay part of the expense of maintaining another line of communication, which is no longer of any service to India. To what an extent the postal service, *viâ* Galle, has ceased to be of use, even to Calcutta, we showed in our Despatch to you on this subject, dated the 23d November."

2516. *Chairman.*] The letter is, in fact, a protest on the part of the Indian Government against the revenues of India being made chargeable with the expense of that portion of the service between England and China, with which India has nothing to do?—Yes, and against the continuance of the useless service between Galle and Calcutta.

2517. Has a copy of that letter been submitted to the Postmaster General?—It was sent to the Post Office on the 5th of this month.

2518. I suppose the Committee may assume that the Government of India are entirely in favour of a weekly mail to Bombay?—Yes, they have been in favour of it for some years.

2519. Are you aware whether there would be any objection in this country to that weekly mail being despatched on a Friday?—There would be no objection as far as the Government is concerned.

2520. *Mr. Ayrton.*] I presume that it would be rather convenient that it should be despatched on a Friday, having regard to the arrangements of the India Office, would it not?—Yes, I think that that would be the best day that could be fixed upon.

2521. *Chairman.*] Upon the point of a weekly mail, it is stated in a letter from the Treasury to the Postmaster General, dated the 14th December last, that the Lords of the Treasury "would not feel warranted in sanctioning the large increase to the charge for postal communication with India, which would be entailed by the alteration in the service proposed, unless the Government of India should think fit to defray the entire amount of that increase"; that letter was, of course, in the possession of the Indian Government at the time that the letter which you have been reading to us was written, was it not?—Yes.

2522. Therefore they were fully aware of the

matter which was in controversy between the Post Office of India and the Post Office here?—Yes.

2523. And that is the opinion of the Government of India, deliberately expressed upon that point?—It is.

2524. *Mr. Childers.*] You are aware that the objection on the part of the Treasury had reference, not to the general question of a weekly mail, but to the amount which it was stated in the Post Office it would involve?—Yes, it is understood that the objection applied to the cost of an additional Bombay mail, in addition to the present subsidy.

2525. It was an objection to the specific additional charge at which the Post Office said they would have to carry out?—Yes, exactly.

2526. But it has never been understood that there was any objection on the part of the Treasury to a weekly mail, if the whole of the arrangements were revised?—I am not aware that there has been any distinct statement of such willingness, but certainly it is understood that the objection applied to the expense of the additional mails, in addition to the present expense.

2527. *Mr. Hill* gave it in evidence that, as far as he was concerned, he was aware that the objection was to that specific expense, and not to the general arrangement?—The objection, as expressed, certainly only applied to that.

2528. *Chairman.*] It has been stated in evidence by the Post Office, that the whole loss upon the India and China services amounts to 48,000*l.* a-year; does that occur to you as being a very large sum as representing the cost of the maintenance of the political and general connection between this country and India, whether it be borne by the Imperial Government or by the Indian Government, or borne in shares?—The Government of India have never considered so much the exact amount of the charge laid upon them, as they have had regard to the principle upon which the adjustment has been made; that is what they have looked to more than to the actual amount of the charge.

2529. Are you aware whether the covers which are despatched from the India Office are sent always bearing postage, or whether they are stamped?—I believe they all carry stamps.

2530. *Mr. Stansfeld.*] What papers are those which you have put in to day?—I have put in the Despatch from the Government of India, which I have just read; a previous letter from the Government of India, showing the way in which the transit of mails through India from Bombay will be carried out; a despatch from the Government of Bombay, on the subject of a tender made for the proposed additional mails to Bombay, by a local company; and the Despatches to the Governments of Bombay and India on the subject of this letter, and also a copy of a letter to the Post Office on the 5th of May 1866.

2531. What date is our last Despatch to the Governments of India and Bombay?—The Despatch to the Government of Bombay is dated the 31st of March, communicating the decision of the Secretary of State on the tender of Messrs. Stearns & Co.

2532. Will you read that letter to the Committee?—This is in reply to a Despatch from the Government of Bombay, which I propose to put in, but which I have not read, communicating a tender for the performance of an additional service

*E. D.
Bourdillon,
Esq.
8 May 1866.*

E. D.
Bourdillon,
Esq.
8 May 1866.

vice by a local company: "I have considered in Council your letter dated 27th January (No. 7) 1866, forwarding correspondence on the subject of an offer made by Messrs. Stearns, Hobart, & Co., on behalf of the Bombay and Bengal Steam Ship Company, to carry two additional mails every month between Bombay and Suez, for a subsidy of 20,000 rupees a-month, and strongly recommending that this tender be accepted for one year. A Committee of the House of Commons has just been appointed to inquire into the whole subject of Telegraphic and Postal Communication between India and England, and I trust that the deliberations of the Committee may result, at no distant period, in that revision and extension of the postal service which is so much desired by all parties connected with India. But, in the mean time, I am not prepared to sanction the proposal you have now submitted to me."

2533. Will you go back to the proposal there referred to by the Bombay and Bengal Steam Ship Company, and give us the particulars of that proposal?—The proposal was to carry two additional mails every month between Bombay and Suez, for 20,000 rupees, or 2,000*l.* a-month, being at the rate of 1,000*l.* for each complete trip.

2534. At what speed?—A speed of eight knots an hour. The company added, "It may not be out of place to mention, although not as a part of our tender, that we have in contemplation the building of a class of boats not only larger and faster, but in every way superior to any now in the East, and capable of delivering the mails within 20 days between England and India; and plans for placing these vessels on the route are so far matured that should the tender we have made be accepted, and a reasonable prospect held out of our securing a fair subsidy through to England, we have little doubt of our being in a position to carry the project into immediate execution."

2535. All consideration of that proposal has been postponed, has it not, until this Committee shall have reported?—Yes.

2536. Have any other companies submitted proposals to the Government of India for a similar purpose?—There has been no formal tender made, but Mr. Riddell, the Director General of the Post Office, has stated, in a recent letter, that he had reason to believe that the British India Steam Navigation Company would be prepared to submit a tender for that service.

2537. Do you put in, to-day, a certain document, quoted by Mr. Knight in his evidence, namely, a Despatch or a Report from the Director General of the Post Office?—Yes, that is amongst those papers which I have put in. There is a Despatch to the Government of India, which has been prepared since the one which I have just read, to the Government of Bombay, in answer to the last Despatch from the Government of India, if the Committee would like to hear it read: "I have considered in Council your letter, dated 22d February (No. 3) 1866, forwarding, with reference to Sir C. Wood's Despatch, dated the 30th December (No. 92) 1865, a letter from the Director General of the Post Office in India, on the present state of the question of establishing a weekly mail between England and India, *via* Bombay. The subject is, as you are aware, much complicated by existing arrangements, but I shall not fail to urge on Her Majesty's Post-

master General, and on the Lords of Her Majesty's Treasury, the importance of putting an end to existing anomalies, and of providing means of extended postal communication between England and India on fair and equitable terms. A Committee of the House of Commons has recently been appointed to consider the whole subject of postal and telegraphic communication between the two countries; and, pending the result of the deliberations of the Committee, I cannot sanction the adoption of any measure which would involve additional charges to be borne exclusively by the revenues of India."

2538. What is the date of that despatch?—That has just been passed. The letter to the Post Office, communicating this document, and conveying the Secretary of State's opinion, is dated the 5th of May, and is in these terms: "With reference to Mr. Hill's letter, dated 21st December last, communicating the decision of the Lords of Her Majesty's Treasury on the subject of establishing weekly postal communication between England and India, *via* Bombay, I am directed by the Secretary of State for India in Council, to acquaint you that a copy of the correspondence which took place with Her Majesty's Post Office, in the course of last year, on the subject in question, was transmitted for the information of the Government of India; and I have now to forward, for the information of Her Majesty's Postmaster General, the accompanying copy of a letter from the Government of India, with its enclosures, relating to the present position of the question at issue. It will be observed that the Government of India continue to urge the establishment of the proposed additional service *via* Bombay, and express the hope that the subject will receive such further consideration from the Lords of Her Majesty's Treasury, as will result in the establishment of a weekly postal service with Bombay, and that India may, at the same time, be relieved from the necessity of paying part of the expense of maintaining the line of postal communication *via* Galle, which is no longer of any public service. The views of the Secretary of State for India in Council have already been fully and repeatedly expressed on this important subject; but as this is the first opportunity which has occurred of stating his opinion on the subject, as presented in Mr. Hill's letter of the 21st December last, I am directed by Earl de Grey to remark that, considering the question of an increase of the rates of postage to have been set at rest by the decision of the Lords of Her Majesty's Treasury, as therein communicated, his Lordship is not prepared to sanction, at the sole charge of India, the establishment of the additional steamers to and from Bombay, which under existing arrangements would be required to maintain a weekly mail communication with India by that route. Earl de Grey, in accordance with the wishes of the Government of India, requests that the subject may again be brought by Lord Stanley of Alderley to the early consideration of the Lords of the Treasury, and that their Lordships may be moved to consent to such a re-arrangement of the postal service with India as may lead to a removal of existing anomalies, and provide for the desired changes and extensions in the service, on fair and equitable terms."

2539. Then, the views of the Secretary of State and the Indian Government, are that if the weekly mail to Bombay should entail any additional

additional loss to the two countries, India should bear not the whole, but her fair proportion of that loss?—Yes, certainly; at the same time the Government believe, with the Director General of the Post Office, that by a re-arrangement of the whole of the services the desired service might be carried on without loss.

2540. It has been put in evidence before the Committee in this way, that the Government of India desired to improve the postal communication, but were not very anxious to pay anything for it; that you would not admit to be a correct representation of the views of the Government of India?—No, certainly not; they would be willing to bear half the charge of any necessary increase of expense.

2541. How is it that the Indian Government came to the conclusion that it would be possible to have a weekly mail to Bombay without any addition to the present cost of the mail contracts?—They propose that the postal line between Galle, Madras and Calcutta should be entirely discontinued, and that the Government of India should be relieved from any share of the expense of maintaining the line as far as Galle.

2542. With reference to the China mails, what is their view?—That they should be relieved from all charge on account of the mails between England and China.

2543. *Chairman.*] That is to say, that they will depend entirely in India upon local means of communication with China?—They seem to be prepared to make their own arrangements for the correspondence between India and China.

2544. If the Government of India is willing to pay its share of any necessary increase of expense in perfecting the communication between this country and India, the question then resolves itself into an unwillingness on the part of the Home Government to pay the difference that is left?—That seems to be the state of the case.

2545. *Mr. Stansfeld.*] As a matter of fact, the Secretary of State for India has acquiesced, has he not, in the principle of the existing arrangements by which the revenues of India sustain half the loss upon the China mail?—The Government of India have never voluntarily agreed to that principle.

2546. They submitted to the decision of the Treasury?—When the principle was first laid down by the Treasury in 1854 the Court of Directors remonstrated against it.

2547. We have had that remonstrance in evidence already, have we not?—No; the remonstrance has not been put in.

2548. Have you got it here?—Yes.

2549. Will you put in?—Yes (*delivering in the same*).

2550. Did those representations produce any effect?—They produced no effect at the time, and they have been renewed since; but the renewed remonstrance led to no alteration of the principle. The remonstrance made at that time led to the arrangement by which a portion of the expense of the mails is defrayed by the Australian Colo-

nies now; but the principle of the arrangement as regards China remains unaltered.

2551. With reference to the increase in the rates of postage, which has been proposed by the Post Office, has that subject been reconsidered at all by the Secretary of State?—No; it was stated in this letter to the Post Office, that that was considered to have been finally settled by the decision of the Lords of the Treasury in December last, in which the Treasury intimated that they should not press it against the wish of the India Department.

2552. You have heard the evidence of Mr. Knight with reference to his three main heads of complaint, namely, the speed of the present mail service, the injurious effect of monopoly, and the necessity of competition and certain new arrangements which he suggests; do you desire to offer any remarks upon that evidence?—With regard to the speed of the steamers, the Government of Bombay have begged that in any new arrangements which may be made a higher speed than that provided for in the old contract, of 10 knots an hour, might be required.

2553. With regard to the supposed injurious effects of the monopoly of the Peninsular and Oriental Company upon passage-money and freight is the opinion of the Indian community a mature, within your personal knowledge?—I know nothing upon the point. The supposed monopoly of the company is believed to operate prejudicially, or to have done so hitherto, in the view of the people in India, as preventing the establishment of an additional mail service.

2554. Generally speaking, are you prepared to agree with the views expressed by Mr. Knight, as to the advisability of alternate fortnightly services starting from Bombay?—I think that, as regards the postal service, it is not of much consequence by whom the service is performed. It is desirable that in inviting tenders for the new services, the thing should be so arranged as to allow independent companies to come in for portions of the service.

2555. And it will appear, will it not, from the documents which you have put in, that there is a great desire on the part of the Indian Government, as well as of the Indian public, that there should be a competition of that nature?—The Government of India are quite prepared to make use of the services of other companies, and they desire to have an opportunity of making arrangements with them.

2556. The view of the Indian Post Office appears, does it not, from the correspondence, to be strongly in favour of some new and distinct contract for carrying the mails?—Yes; I think so.

2557. *Mr. Ayrton.*] Are you aware that the Postmaster General entered into a contract on the 27th of February, 1866, with the Peninsular and Oriental Company?—I am not aware that it has been communicated to the India Office.

2558. The India Office was not consulted upon that contract?—I am not aware that it was.

*E. D.
Bourdillon,
Esq.*

8 May 1866.

COLONEL RICHARD STRACHEY, Examined.

2559. *Chairman.*] You were Secretary of the Public Works Department in India for some time, were you not?—I was for the last three years that I was in India. I came back about a year ago.

2560. During the time that you were in India, 0.43.

was your attention called at all to the working of the telegraphic system?—The telegraph is not under the Public Works Department, and therefore I have, so to speak, no specific knowledge of the detailed working of it.

2561. Nor any official responsibility connected with

*Col.
R. Strachey.*

Col.
R. Strachey.
8 May 1866.

with it?—No official responsibility of any description; but from my general connection with, and my position as Secretary to, the Government of India, I understand the general system under which the telegraph was worked; and of course everybody has to deal with the telegraph in a practical way by using it, and one hears complaints, sees things, and forms opinions upon them.

2562. Are you prepared to give any opinion to the Committee as to the general results of the working of this Government system of telegraphs?—To begin with, I think that I may say that the deficiencies in the Government telegraph system are perfectly notorious, and that there is no dispute about that. It is a matter of fact that messages throughout India have been very greatly delayed, and have been very badly transmitted. At the same time, it should be equally admitted, on the other hand, that there have been great difficulties to contend with. But, irrespective of the causes on either side, whether bad management or inefficient administration, or the real difficulties of the case, the fact of the deficiencies cannot be questioned.

2563. Is it your opinion that the causes of this want of good conduct, so to speak, of the telegraphic system, are to be found in imperfectly constructed lines and inefficient establishments?—No doubt, on the face of it, that is the ostensible cause. The immediate cause is that the lines were originally ill-constructed, and that a great deal more work has been required of them, in the gradual development of the system which has taken place, than they were capable of getting through; and the same remark equally applies to the establishments.

2564. When you speak of the lines as being ill-constructed, are they to be considered as ill-constructed with reference to the state of science at the time when they were put up?—I should think so. It is my opinion that this was deliberately done; not accidentally, not from ignorance, but intentionally, and with this view, that the dominant idea in starting the telegraph in India was to get it constructed cheaply. The idea on the part of the people who had the management of it was, that the way to start it cheaply was to put up a thick iron wire on the top of a plain wooden post, without any insulations, and so to get it constructed at the cheapest possible rate; and having got the cheapest possible line, to get the cheapest possible establishment to work it, which they accordingly did. The salaries, no doubt, have been quite inadequate to secure what one may call properly efficient and qualified signallers and superior establishment. And I may say that this fact, as regards the insufficient salaries and the unsatisfactory position of the establishments, has practically been entirely admitted by the Government. Within the last six months, or about that time, shortly after the appointment of Colonel Robinson, who is the present Director General of the Telegraph in India, the whole system has been reorganised. On a report of his, considerable modifications were made, and the salaries were very sensibly increased; and no doubt the whole thing has been put on a much better footing. His proposals were virtually accepted by the Government, and the system, no doubt, has been sensibly improved.

2565. That system involves, I presume, the establishment of the telegraphic apparatus; that is to say, posts, wires, insulators, and all things

of that kind, upon a footing equal to the science of the present day?—There is no doubt that the intention of the Government is to do everything that is necessary to get a thoroughly efficient system of lines. Naturally, inasmuch as they have lines now, many of which were constructed ill, and in the cheapest way possible, that is to say without insulators, and to a great extent on bad posts, the reconstruction of those lines must be a question of time; but I presume that there is no doubt of the general desire of the Government to put things upon a proper and an efficient footing.

2566. Are you aware whether messages are forwarded upon the Government lines in any other than the English language?—They are exclusively in the English language.

2567. Then, of course, all the signallers must be practically acquainted with the English language?—Yes, they are to a certain extent.

2568. Does not that, of necessity, to some extent, limit the field of supply of signallers?—It does, there is no doubt.

2569. It was stated by a witness who had been employed in the Government telegraphic service in Bengal, that the signallers were almost entirely half-castes or Eurasians; and that no native Hindoos or Mussulmen were employed; can you assign any reason for that?—The signallers to a very great extent are half-castes; there is no question that, comparatively speaking, a small number of them only are natives of the country. I have a sort of recollection, now that you mention the thing, that I have heard that on Sir William O'Shaughnessy's original starting of the telegraph in India, he did accept the exclusion of natives as a general principle, but with the intention of getting the signallers to live together under one roof, so that they should be more accessible and amenable to discipline, and that they should be more readily kept on the spot to work the telegraph. Their prejudices of caste would have prevented most natives from living in the telegraph offices. I will not say that this really is the fact, but it is my impression that such was the case. I cannot conceive that the Government of India would, for an instant, have listened to any proposal to exclude natives of India, as such.

2570. You do not think that that exclusion of natives of India arose from any want of confidence in their trustworthiness and fidelity?—I do not in the least believe it; I do not think that such an idea would ever be conceived by the Government or accepted; it appears to me to be repugnant to common sense, and it is a sort of thing that nobody would listen to.

2571. Were you not consulting engineer to the Government of India, in the railway department?—I have been so.

2572. During that time had you any cognizance of the telegraph system, as it is worked on the East India Railway?—Not in detail; I know that the telegraph existed, and it was worked under certain restrictions. The law of India places the entire construction and the working of telegraphs in the hands of the Government exclusively, and no person, or company, can work a telegraph in India, excepting with the permission of the Government. That permission has been accorded to all the railway companies; and the railway companies, accordingly, do transmit messages for the public at rates which are identical with the rates of the Government, but still under certain restrictions.

2573. Are

Col.
R. Strachey.
8 May 1866.

2573. Are we to understand you to say that the law requires it?—Yea.

2574. Is there an enactment of the Government of India to that effect?—Yes; there is an Act of the Legislative Council of India, which gives the Government the exclusive powers to which I have referred, and lays down pains and penalties for various offences in connection with the working of telegraphs.

2575. Was it during the time that you were consulting engineer to the Government of India, in the railway department, that the Government had under its consideration the proposal which was sent to the Secretary of State here for the formation of a company which should work the telegraph wires upon the railways?—It came before the Government of India, when I was secretary to the Public Works Department. The Public Works Department manages all railway business, and that proposed did come before the Government in my time.

2576. It appears from the correspondence, that the matter having been remitted by the Secretary of State to the consideration of the Indian Government, and that the Secretary of State, upon the receipt of the reply of the Indian Government, declined to sanction the proposed arrangement?—So I have heard.

2577. The Secretary of State was asked by one of the railway companies to state his reasons for having done so, and he declined to furnish the railway company with any reason; from the circumstance of your having been at that time consulting engineer to the Government, are you aware of what the reason was?—I was not consulting engineer at the time, but secretary in the Public Works Department. I have not seen the papers for some little time, and therefore I may blunder in the details, but my impression is, that the Secretary of State stated the facts to the Government of India, and asked for a general opinion as to the merits of the proposal, but not whether they advised that the arrangement should be carried out. The question was put in such a way as virtually to preclude the Government of India from giving an opinion as to whether the proposal was in itself expedient or not. Whether that was the intention of the Secretary of State in sending it out to India, I cannot say, but that was the view that we took of it in India.

2578. In the papers which have been laid before the Committee, there is a letter addressed by the Government of India, dated, "Public Works Department, Simla, 18th June 1864," to the Secretary of State for India, in which the question is discussed, with regard to the working of the arrangements in the case of the East India Railway Company; are you aware of that letter?—Yes; that letter was drafted by me.

2579. Is it a fact that, so far as your information goes, there was no disinclination on the part of the Government of India to allow the telegraph company to work the wires upon the railways, or that an objection was made by them to the specific terms which had been submitted for their consideration?—A reference to the letter will show that the objections of the Government of India were to the specific terms, and that the question of general policy was not discussed. I have no reason to think that, if the specific terms had been satisfactory, any objection would have been raised on general grounds to the establishment of a company to work a tele-

graph as proposed. I know that this question did arise in some form, but, as I said, the telegraph business was not in my department, and therefore I cannot speak positively; but I have heard, and have every reason to believe, that the Government did express an opinion that they would have no objection whatever to the formation of a private company to transmit commercial messages between Calcutta and Bombay. Some complaint was made that the Government lines did not transmit messages for the public satisfactorily; and the Government gave an opinion in some shape that they would be perfectly open to allow a private company to come in and do the business if they pleased.

2580. As far as you are aware, is there any unwillingness on the part of the Government of India to approve of this plan of working by means of a company, on the ground of the interference of the company with the receipts upon the Government system of telegraphs?—If the answer to that question must be, yes or no, I should say no, in a general way; but the answer must be given with reference to some specific line. This is my apprehension of the facts of the case: that on those lines where the business on the whole is so large that the Government business and the business of the community cannot be carried on satisfactorily together, the Government would not object to their system being so far supplemented by lines erected and worked by a private company, but that, where the Government lines were capable of doing all the private business of the country in a reasonable and satisfactory way, the Government would object to a private company coming in, because, where the Government business is limited in its amount, it is a great advantage to the Government to get the private business to assist in paying for the working of the lines.

2581. That is to say, the Government would not like the competition between themselves and a private company?—Not on those lines where a competition would virtually interfere with their getting back some of the cost of working the line which otherwise they must maintain.

2582. Do you think that there is any feeling of a political nature in the mind of the Government of India; do you think that they are unwilling to part with the power which the sole authority over the telegraph system places in their hands from the same motives probably as in all the Continental States of Europe the telegraphs are in the hands of the Governments?—I should say yes decidedly, and I think that the Government would not be in the least disposed to repeal their Telegraph Act, and that any company which was started to work in India would have to work under that Act, and with a license from the Government.

2583. You think that it may not have been the knowledge of that being the real reason why the proposition is not entertained in India that led Sir Charles Wood to send a despatch, assigning his reasons for not entertaining the proposal?—No, I do not believe that at all; I can say positively, in this case, that there was no such feeling in India.

2584. Do you think that, as a matter simply of administration, the Government are of opinion that as they have the Post Office entirely in their hands, so it might be desirable to have the telegraph entirely at their command?—What I should say, as regards that, is something of this sort.

Col.
R. Strachey.
8 May 1866.

sort. I look upon it that the telegraph is a political necessity for the Government; that virtually the Government must maintain a large portion of the telegraphs in India, for this reason, that no private company could work them with advantage. I mean, that a private company could not work them for the Government with advantage. For instance, in the case of the telegraph to Peshawur there would, one may say, be no private messages at all; and if a private company were to attempt to work a line for the Government they would charge the Government a great deal more than the Government would have to pay if the Government managed it themselves, because a private company would not merely charge the actual working expenses, but they would charge a handsome amount of profit. The same remark applies to a very large proportion of the lines in India; and so far, therefore, I consider that the Government is of necessity, and will be for an indefinite period of time, forced to keep up a large telegraph establishment of its own.

2585. Speaking for yourself, as an officer of very large experience in India, are you of opinion that it would not be desirable to allow the railway companies the power to lease to a company the power of using the wires upon their lines, or to allow such a company the power of taking the whole of the telegraph service over from the railway companies, managing their private business for them, that is to say, transmitting all their service messages, do you think that would be a desirable or an undesirable thing in the public interest?—I am not prepared to say that I see any particular objection to it.

2586. It appears from the accounts before the Committee, which come down to the end of the year 1864, that the whole of the capital expended in the construction of the Government telegraph lines in India, after taking credit for receipts by the sale of unserviceable stores and so forth, amounts to the large sum, in round numbers, of 1,150,000 £.; and in like manner the capital expended by railway companies in the construction of their lines, amounts to about 411,924 £.; it appears also, that the annual charge of the working and maintenance of those lines, upon the average of the last two years in the series, was 268,000 £. on the Government telegraph lines, and 83,000 £. upon the railway telegraph lines; that the whole of the receipts on the Government lines were 165,000 £., and on the railway lines 21,000 £., and that there is consequently an average loss of 51,000 £. per annum upon the Government lines, and 30,000 £. upon the railway lines, not taking into account the interest upon capital expended; does it not appear to you to be a wasteful expenditure, that those two systems of communication should be kept up, the one as it were against the other, without any attempt being made to bring them into harmonious working, so as to save expense and to procure the greatest amount of accommodation and service to the public?—My first remark, as regards that question, would be this, that I am not at all satisfied that the railway and Government telegraph lines are working in any sense in opposition to one another, and if that be an admitted fact, then it seems to me that the whole case falls to the ground.

2587. Taking the case of the communications between Calcutta and Delhi, I presume that there is a Government line between those two cities; we know that there are four wires along the railways, and it is manifest that those two

systems are competing one with the other?—How far they are competing will depend on circumstances: supposing we had two wires, one belonging to the East India Railway Company, and one belonging to the Government, if each of those wires is only doing one-third of the work that it can do, if you maintain them both and work them both, I admit that there is competition, and foolish competition; but, supposing that both of those wires are doing as much as they can reasonably be expected to do, I do not see that there is any competition.

2587*. Do you think that that supposition can hold good when it appears that there is a considerable loss upon both?—I do, for I think that any amount of loss is perfectly compatible with exceeding bad management.

2588. You have suggested that there has been bad management upon the Government lines; do you think that there is any bad management in the Telegraph department of the Railway Companies?—I have no reason in particular to suppose so; I believe that the railway telegraph lines have been well-constructed, and there is every reason to suppose that they are properly worked; I know no reason for supposing that they are not properly worked.

2589. In like manner, on the completion of the system of railways between Bombay and Calcutta, the same thing will occur; there will be a Government line of telegraph, and there will be a system belonging to the East Indian and the Great Indian Peninsular Railway Companies; would it not be a very great saving if the Government line between those two great capitals was withdrawn, and the business left to the railway companies to carry on, or a company working through them?—I think it quite possible that it might be.

2590. In fact, wherever there is a railway, in that case it might be desirable to withdraw the Government service, provided the Government have sufficient guarantees?—Yes; that is to say, whenever there is in the nature of things a telegraph line established which must be maintained, the Government retaining its power to put an embargo upon the line if, for political purposes, it is necessary. In such a case, I am not prepared to say that there would be any particular reason why such a line should not be left in the hands of a private company, and, as you say, the Government service entirely withdrawn from it.

2591. The Government line from Bombay to Calcutta follows, I suppose, no particular line through the country; it takes the shortest way where it can; it does not follow the course of the high roads, but it goes over the hills and mountains, and through jungles, in a tolerably direct course between any two points which it does join together?—No, I think not.

2592. Can you tell us how it is laid out?—There are several lines which communicate between Calcutta and Bombay; you can telegraph in various directions, and the fact is, that this practically occurs.

2593. I did not mean to say that the line was direct, as between Bombay and Calcutta, but as between any two towns that it takes in its course, it pursues a direct course?—In a general way the telegraph follows the main roads.

2594. In the case of the railway, the telegraph follows the course of the railway?—Quite so.

2595. Does not that imply very great facilities for the purpose of inspection, and still greater facilities

facilities for the purposes of repair, as compared with the lines through the ordinary country?—There is no question that a telegraph line constructed along a line of railway is infinitely better under control in every respect, and can be worked much more cheaply.

2596. And therefore much more economically as compared with the Government lines?—Quite so.

2597. Does not that afford an additional reason why, in the case which I have before stated of towns being connected by a railway, the Government system should be withdrawn in favour of the lines upon the railroads?—It is a reason, but I am not prepared to say that it would be a conclusive reason. It is a reason which can be given, or one of the reasons which can be given, in favour of the Government dropping the working of their lines under such circumstances. But then something may be said on the other side. Before accepting any reason or reasons conclusive, it is necessary to balance all the reasons on one side, and all the reasons on the other.

2598. Limiting it to a simple comparison of the two systems of communication between towns united by a railway, and upon which the railway company have telegraphic communication, would you not in that case consider it nearly a conclusive reason?—I should say, considering the sort of position in which the principal railways in India are placed with regard to the Government, and that virtually the Government is interested in the profits of the railway, there is no particular objection to that sort of arrangement being carried out as regards the railway lines.

2599. The Government has a direct interest, have they not, in utilising the expenditure upon the railways?—Yes; I mean that the Government has a direct pecuniary interest in the thoroughly economical working of the railway in every department, and therefore that the financial question, as between the Government maintaining or abandoning a particular portion of a telegraph line, does not so much apply there, because if it loses in one direction, it will certainly gain in another; if the Government gave up its business, the Railway Telegraph Company would get it. But as regards other lines, it appears to me that this is questionable; the Government must look upon its telegraph business, so long as it maintains it, as a whole; you require a certain superior agency to direct the whole, and you will have a certain amount of fixed charge, whatever lines you work; so that in proportion as the Government retains in its own hands the lucrative lines, which will be lines which are worked for commercial purposes, it will in reality reduce the strain upon the finances, which is brought about by those lines which are unproductive.

2600. It appears that at the end of the year 1864 there were of Government telegraph lines in India 11,736 miles; does that mean miles of wire or miles of line?—Generally speaking, the Government line is a single wire, in some few cases there would be two or even more wires. I should suppose that the length named will be the aggregate of all the working lines; if you draw on the map a series of lines to show where there is telegraphic communication the aggregate length of these lines, irrespective of whether they have one or two wires, will be the number of miles stated.

2601. *Chairman.*] Looking at the great extent
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of many of the districts from Bombay to Calcutta, and from Madras to Lahore, and so forth, do you think that 11,736 miles of telegraph implies a very great amount of telegraphic communication within the country?—That is rather a difficult question to answer, involving as it does the adoption of some standard by which to test what is great in amount.

2602. Do you think that although 11,736 miles have been constructed, yet there is room for a considerable increase, as far as the public wants are concerned?—Yes, I entirely concur in that view.

2603. If you were to withdraw the Government wires from the line between Calcutta and Delhi, and Calcutta and Bombay, you would release about 2,000 or 3,000 miles of wire on the spot which would be serviceable for the purpose of constructing such new lines as might be required?—That is perfectly true; but, at the same time you will release so much income which would go out of the pockets of the Government into the pockets of the East Indian and great Indian Peninsula Companies.

2604. In which the Government have a direct interest, inasmuch as they guarantee 5 per cent. upon their expenditure, and, subject to their approval, one-half of the surplus over 5 per cent. upon the railway making it?—Precisely so.

2605. *Sir Charles Bright.*] I think your argument is, that where Government telegraphs are capable of doing the private business, there, and there only, the Government would object to any competition?—I would not say that; but it is rather this, that the Government must view their system as a whole; that if, by cutting away those portions of the system which private companies would be ready to work, they virtually have the whole burthen of the working of the telegraphs in the unremunerative parts of the country thrown upon their hands, then, I think, the Government would be perfectly justified in declining to give up the remunerative part and simply have the unremunerative part forced upon them.

2606. I was not speaking of giving up, I was speaking of competition only; I understood you to say, that where the Government are capable of doing the private business, in your opinion, they ought in such cases to object to any competition?—Quite so.

2607. Is it your opinion that between Bombay and Kurrachee, between Bombay and Calcutta, and between Bombay and Madras, the Government are at present capable of doing the private telegraphic business efficiently?—I think they are perfectly capable of doing it if they are pleased to do so. That they have not pleased to do so is a totally different affair. The Government, for reasons which might be explained, have constructed their telegraph lines, and have worked them on a very inefficient basis; and so long as the Government persists in doing that, I think that everybody certainly has a perfect right to say that they should not be allowed to continue to work the telegraph lines; but to say that there is any abstract reason why the Government should not construct and work telegraph lines efficiently is another affair, and my own belief is, that they are just as capable of working telegraph lines in India well, and in fact more capable, than any private company conducted in England.

2608. *Mr. Stansfeld.*] You stated that there
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Colonel
R. Strachey.
8 May 1866.

Colonel
R. Strachey.
8 May 1866.

had been great changes in the internal management of the telegraph, did that occur about the date of the appointment of Colonel Robinson?—What I said was that great changes had been made in the organisation of the department; but naturally it will take some little time before this will develop itself in the improved working of the lines.

2609. A considerable reconstruction of the lines is going on, is there not?—Yes, and it has been going on for some years past.

2610. But, especially of late, has it been going on within your knowledge?—Yes; and perhaps the best way of explaining the whole truth as regards that is just to explain how the telegraph came into existence. It was started comparatively on a small scale, and the original lines were single wires, put up, as everybody knows, on posts without any insulators. So long as the quantity of work to be done was very small it answered the purpose very well, but as soon as business began to press it became necessary to transmit the messages much quicker, and a better class of signallers, and lines better insulated, were found to be requisites; in proportion as the business has increased, the difficulties and the inefficiency of the Government telegraph system have become more apparent. These defects, in my opinion, at bottom spring from the want of proper system in the Government administration. Practically speaking, up to the present time, this has kept the progress of the department altogether in arrear. If a pressure comes upon the Indian Telegraph, the public and everybody concerned, and when I say the public I mean everybody who has used the telegraph, whether it has been a government officer or anybody else, finds its working inefficient and unsatisfactory. At last, after various struggles, there has been this amount of reform made of which I speak; but still, I confess to thinking that the system under which the Government administration is carried on is radically bad and wrong, and that the working of the telegraph is likely to continue to be inefficient until a change of system is adopted.

2611. You do not think now that it is simply a question of the time necessary to effect alterations in the organization which have been determined upon; you think that there are defects in the organization which has been recently agreed to?—I think that in a Government institution, such as the Indian Telegraph, the efficiency of its operations will essentially depend upon the manner in which the Government authority is exercised; and I think that the present system is in some essential respects defective, and that, although a certain amount of alteration and improvement has been made now, precisely the same causes which have led to the Government telegraph lines falling into arrear in the supply of the wants of the country in past years, will continue to act in the future, unless the defects which give rise to them are removed.

2612. What are those causes which have not been removed?—Those causes are, as it seems to me, the wrong system in the superior Government administration, which could be put into half-a-dozen words by saying, that there is no specific responsibility in any member of the Government to see that this sort of business is properly carried out. To this I attribute the whole of those defects, and I believe that this want of specific responsibility is an infinitely more important thing than the want of insulators,

or the want of signallers paid 40 rupees a month instead of 20.

2613. Is there not the responsibility of the Director General of Telegraphs?—But I go higher than that. The executive machinery of the department has been inefficient, but I will suppose that all that is put right, and that you have a thoroughly competent executive staff to manage the department. Still there will be no proper security for real efficiency, if it be true that the way in which the Government control is exercised is defective; when you come actually to get to the bottom of the thing all hinges on this. When anything is wanted, a report is made to the Government of India, and the whole matter is in the hands of the Government of India.

2614. Perhaps the best question to put to you, would be what change in the organisation would you recommend?—I would say that I look upon the telegraph administration in India as virtually a part of the Public Works administration. The telegraph is in reality a public work, and it requires the same sort of knowledge, the same sort of organization, and the same sort of system, to work it, as any other public work, such as a railway, or a road, or a canal, or what not. For some reasons, which it is unnecessary to go into, the Telegraph Department is not under the Public Works Department in India, although it is in the India Office in England. Practically speaking, both the Public Works Department and the Telegraph Department have been left entirely in the hands of members of the Government who have no specific knowledge of those subjects, and precisely the same defects have arisen in the Telegraph Department, as have arisen in the Public Works Department. The defects in the Telegraph Department have been somewhat more flagrant, perhaps, than those that have arisen in the Public Works Department, but still they are quite of the same character. The Public Works Department has been able to correct its defects somewhat better and earlier, because the officers who compose its establishments have, as a whole, been possessed of higher professional qualifications, have been more numerous, and a better class of men. Therefore we, in the Public Works Department, have been better able to force upon the Government, and I say it deliberately, to force upon the Government many important improvements.

2615. If I get at the real pith of your idea, it would be this, that the Telegraph Department should be made a sub-department of the Public Works, and that you should increase the responsibility and discretion of the head of the Public Works Department?—I would put it rather in this way. Within the last 10 years there has been a great change in the way in which the Government of India has been managed; the business has vastly increased in quantity when compared to what it was before 10 years ago; when Lord Dalhousie was Governor General, he used virtually to manage the whole business himself, and, in my opinion, almost every great improvement which has been made in these last 10 years has originated from something which Lord Dalhousie did; the business since then has so largely increased, that it has become absolutely impossible for any single man to cope with it; Lord Dalhousie himself saw that this was coming, and, to my knowledge, he said that he did not know how his successor would ever get through the

the work. The result has been that during the last few years the business of the different branches of the Government has been much more broken up, and separated, and placed in the hands of individual members of the Council, than was formerly the custom. The current business of the Government is now distributed among the members of the Governor General's Council, and only the most important matters become subjects of common consideration. In some of the departments members of the Council are appointed by the Secretary of State, who are specifically and personally responsible for the conduct of those branches of the public business. The business of the Military Department is in the hands of a selected military officer. The business of the Financial Department is in the hands of a gentleman specially selected on account of his capabilities and qualifications in that respect; and the same is the case with regard to the Legislative business of the Government. And now the step which in my opinion should be taken, is to deal in this manner with the large class of interests which are called Public Works, and to put them in the hands of a member of the Council, who should be selected as the best man that could be got, and made specially responsible that the business of this Department of the Government of India should be properly carried out.

2616. Through which member of the Council do the papers of the Public Works Department pass now?—It is a matter of accident. I can tell you my own experience. I became Secretary in the Public Works Department just at the time that Lord Elgin became Governor General. I do not wish in what I am saying to pass any reflections upon anybody. I am merely saying what is my honest belief, and what I understand to be the actual facts of the case. When I first became Secretary to the Public Works Department, Lord

Elgin took the papers himself, and dispatched the current Public Works business as long as he remained at Calcutta, which was for one year. Then he went to Simla, on which the business was divided between himself and another member of the Council, Sir Charles Trevelyan. Lord Elgin, with whom I went, took one half of the duty, and Sir Charles Trevelyan, the member of Council in Calcutta, took another. There was very little connection or sympathy, and hardly any communication between them; each settled his own share of the Public Works business. On Lord Elgin's death the Government was again reunited at Calcutta; Sir Charles Trevelyan then gave up the Public Works business, and it went into the hands of another member of the Council, who kept charge of the department for three months. Then a change in the constitution of the Council occurred, and it was put into the hands of another gentleman, who kept it for six months; he only had an acting or temporary appointment in the Council, and at the end of six months he left it, and then the Public Works business came back again to the member of the Council who before had charge of it, and he kept it again for three months. Then there was another change, and the Public Works business once more went out of his hands into those of somebody else. Consequently, I say, there is no specific or fixed responsibility, at least nothing which deserves the name of specific responsibility for the management of this sort of business.

2617. There is no continuity?—No; there is no continuity. The necessary result is, that the business is transacted as a routine business, and the only strength in the Public Works Department is the secretary. I mean that he is the only man who gives continuity of principle to the administration.

Colonel.
R. Strachey.
8 May 1866.

Tuesday, 15th May 1866.

MEMBERS PRESENT:

Mr. Ayrton.
Sir Charles Bright.
Mr. Brooks.
Mr. Crawford.
Mr. Marsh.
Mr. Moffat.

Sir Henry Rawlinson.
Admiral Seymour.
Mr. Stansfeld.
Mr. Turner.
Mr. Weguelin.

ROBERT WIGRAM CRAWFORD, Esq., IN THE CHAIR.

Mr. JOHN DORNING, called; and Examined.

Mr.
J. Dorning.
—
15 May
1866.

2618. *Chairman.*] You are an Accountant, I believe, in the office of the East Indian Railway Company?—Yes.

2619. Have you prepared a summary of the disbursements and receipts on account of the telegraphs in India from the papers which have been laid before this Committee?—Yes (*delivering in the same*).

2620. What is the whole amount expended by the Government in this country and in India in the construction of their telegraph system?—£. 1,146,861 14 s. 3 d.

2621. What is the whole amount expended in a similar manner by the railway companies?—£. 411,924 12 s. 8 d., the two together making the sum of 1,558,786 l. 6 s. 11 d.

2622. What was the amount received last

year by the Government for the conveyance of messages?—On account of private messages 77,644 l. 10 s. 9 d., and of service messages 12,457 l. 15 s.

2623. And how much was received by the railway companies?—On account of private messages only (service messages not being charged), 13,489 l. 6 s. 3 d.

2624. What was the amount expended in the maintenance and the working of the Government lines?—£. 933,463 12 s. 8 d.

2625. And by the railway companies, how much?—£. 41,888 18 s. 5 d.

2626. Have you any observation to make to the Committee upon those returns?—No; I have appended notes in all cases where any explanation appeared to be required.

Colonel RICHARD STRACHEY; further Examined.

Colonel
R. Strachey
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2627. Mr. *Stansfeld.*] DID you in your former examination state to the Committee how you obtained your knowledge of the working of the telegraph in India, and up to what time it dates?—I stated that as my experience in India had been in the Public Works Department, and as the Public Works Department has not the charge of the telegraph, therefore, I did not affect to have any specific knowledge of the working of the Telegraph Department.

2628. At what time did you leave India?—I left India at the end of March 1865.

2629. When the Committee last met, you gave your notion of some of the causes of the unsatisfactory management of the telegraphs in India, based upon the construction of the Public Department, upon the non-representation ultimately in the Council of the Public Works, including the telegraphs, by some competent person; there is another remedy, if one may so call it, which would be the substitution of the action of private companies instead of Governmental action; you entertain opinions, I think, upon that question?—Yes, I do. As regards the action of private companies in matters of this sort, it seems to me that it is altogether wrong to assume that because, in any particular portion of the administration, the action of the Government becomes unsatisfactory, therefore the proper remedy is to

introduce a private company to carry out the duty. There is no doubt, however, that there is a sort of vague impression that this in many cases is the proper way to dispose of difficulties; and it is assumed generally that Government is incapable of managing that sort of business, which commonly is carried out by a private company. This seems to me an altogether erroneous idea, and an erroneous way of looking at the general question. What I should say is, that the proper limit for the action of Government in administrative matters is that the Government, which is in reality the executive of the State as a whole, should merely concern itself with those matters which are of general interest, as distinguished from those which are of individual or local interest; and that when personal and local interests are found to be no more than portions or elements of what in fact is some large and general interest, it becomes not only the right but the duty of the central administrative body, the Government, to intervene in the management of the interest, whatever it may be. Therefore, in considering whether the proper remedy for the defective management of such a matter as the telegraph in India is intrusting it to a private company, or a system of private companies, I should first ask, is this a thing which in itself should be, or may be, properly carried out by the Government or not?

not? My own impression, as regards the telegraphs in India, is that the utility of them is so general and so widely diffused that they constitute what is essentially a public interest, and an interest which is better in the hands of the Government than of a private company. Virtually, the spring of action of a private company is private gain; the spring of action, on the part of the Government, is public spirit, or the desire to serve the public convenience; and, where the object in view is essentially and directly the public convenience, I think that the end will be better attained by Government action than by the action of private persons. Of course, in saying this I assume that the Government will take those steps which are best suited for carrying out the object. Where a Government, from whatever cause, virtually cuts itself off from adopting that which is obviously the proper course in managing such business, its position becomes untenable, and then undoubtedly the proper thing is to get the action of such a body as will, under those circumstances, be the best for carrying out the object.

2630. You would liken the telegraph system to the post office system, would you not very much, as regards the Government management?—Yes, to a great extent. As to the detailed system of management, of course that is a different thing; but, as to the scope of the duties to be performed, it seems to me that just in the same way as the post office is intended for the despatch and delivery of letters for every individual of the community, so a telegraph system, on a comprehensive basis, would be intended for the receipt, the despatch, and the delivery of telegraph messages for the whole community, in a manner precisely analogous. I really see no reason at all why the management of the one is at all more incompatible with the proper functions of the Government than the management of the other.

2631. Do you suppose that the formation of a private company to undertake a telegraph system in India would be possible, first, without a guarantee, and, secondly, without a considerable amount of Government interference?—I entirely disbelieve it; I feel perfectly satisfied from the whole course of my experience, which has been tolerably long in India, that so far from there being any tendency to the development of private companies working without Government assistance, it is exactly the reverse; and every day that we live, it becomes more difficult to accomplish that. Formerly there was some sort of an attempt made to get up companies for objects such as these, without Government assistance, but now nobody will even look at them on such a basis. Nobody knows better than the Honourable Member himself the sort of position in which the construction of great public works in India now stands, and that the great difficulty is to find the money. On the one hand, the Government finds a difficulty in providing the money; and, on the other hand, it is acknowledged that it is not merely a difficulty, but an impossibility to get private individuals to subscribe their money on the chance of obtaining sufficiently remunerative returns, from objects to be carried out under a paid agency at the other end of the world.

2632. Therefore the operation and management of such a company would still be very much dependent upon the executive management on the part of the Government?—I am entirely of that opinion; I think that, to begin with all

the preliminary negotiations which would be necessary to determine the precise amount of the financial assistance which the Government was to give to the company, would require special care, special knowledge, and special talent, on the part of the Government, in arranging the matter properly. I can say that, in every single case which has arisen in which any company has come forward proposing to do anything in the shape of a public work in India, there has always been the greatest difficulty in arriving at a conclusion on these matters; and I feel quite satisfied that at the bottom of that difficulty has been what I have spoken of already, namely, the want of any tangible and specific head, the want of a point to which the promoters of such schemes can go to get a practical and definite expression of what is really the intention and the policy of the Government.

2633. With regard to actual executive local management, would a company have any, and what, advantages over the Government?—I should say that, so far from having advantages, they would have disadvantages. It seems to me that a company established in England to work such an affair as a telegraph in India must obviously depend for everything that it did precisely on the same class of agents that the Government would depend upon; that is to say, paid agents. The paid agents of a company are in no respect taken from a better class of men than the paid agents of the Government, and in many respects the Government has greater facilities in getting able and capable men for its work than a company. There are many advantages on the side of the Government, such as permanence of service, pensions, and various other things. Further, as regards the supervision of the administration, provided of course that there be a satisfactory and efficient Government system, the check upon the agency would be much more close if maintained by the Government in India than if maintained by a Board of Directors from England.

2634. And you yourself see no practical impossibility in arrangements which should result in a perfectly efficient Government management?—What I should say is, that I see no reason whatever for supposing that, under a proper system, the Government management should be anything else than better than the management of a private company. I am not one of those who think that the management of private companies is commonly very efficient. I think if we look to the actual facts of the management of the great companies which now exist in India for the carrying out of public works, that nobody would say that their management has been particularly brilliant. It has, considering the whole of the circumstances, been fair; for they have worked under very great difficulties, of which some of the greatest have arisen from the very conditions of their existence. On the whole, indeed, making due allowance for the position of these companies, and looking at the powers and capacities of human beings, as they are in fact, I daresay that the management has been as good as might have been expected from them.

2635. *Chairman.*] Does your objection go to the length of prohibiting a concurrent action on the part of the railway companies with the Government in the transmission of messages for the public?—Not at all. I do not wish to be misunderstood to the extent of saying that I am at

Colonel
R. Strachey.

15 May
1866.

Colonel
R. Strachey.

15 May
1866.

all opposed to the action of private companies in India; I think that under many circumstances the action of private companies in these sort of matters would be exceedingly useful.

2636. Are the Committee to understand you to say that, reasoning from your experience in analogous cases, the capital could not be provided for any enterprise of this kind in India without the assistance of Government in the form of a subsidy or guarantee of some kind?—I think that it almost amounts to that; at least, I do not know of any way in which the Government assistance could be given which would induce capital to go to India except as a definite subsidy or a definite guarantee.

2637. You are not of opinion, I presume, that the capital for the purpose would be found in India?—No, it is notorious that it would not be.

2638. You are aware, are you not, that in the case of the Indian railways, not more than one or two per cent. of the whole capital has been found by the Indian public?—Yes, I am quite aware of that.

2639. You say that the public convenience which the Government recognises in all these things is superior in its operation to the private interest of individuals, or of any company, looking to gain as the result; is that your view?—Yes, I said something of that sort.

2640. Do not you think that private energy is likely to accomplish a great deal that a governmental department, which is restricted by forms and various other things, is not likely to accomplish?—My reply to that would be, that I do not see why individual personal energy should not exist and operate as well under a government as under a company.

2641. Is there any stronger motive than private interests for the accomplishment of such ends as the telegraph service implies?—Of course there is; and no doubt the motives of persons who originate a company to carry out any public object may be quite as public spirited as the motives of the members of a government who initiate a like object. I admit entirely that in the starting of any operation, whatever it be, public spirit may play an important part in the working of a company, but I exceedingly doubt whether those public spirited motives practically continue to animate any company, for any length of time, and I feel certain, that before long, they become very secondary in their power.

2642. If the motives are not public spirited they are private spirited, and would have as good an effect in promoting a good and efficient service, would they not?—To a certain extent I suppose it is true that the inducements of private interest will continue to stimulate a company to look after their own affairs, as completely as the operation of public spirit will stimulate the members of a Government to look after the affairs of the community. Practically, however, any such company will have a complete monopoly, and the check on their proceedings, derived from the fear of competition, will be quite absent, especially if they work under a Government guarantee in any shape. But I would also say, as regards this point, that I cannot admit or understand that there is any more reason why the Government, when it is once thoroughly awakened to the necessity of any particular course of action, should be suspected, either of intentionally or accidentally neglecting such interests as those which are involved in the construction and maintenance of a telegraph, any more than they should

be suspected of neglecting the administration of justice or the defence of the country. I can see absolutely no distinction between these cases, so far as concerns the security which the community has that the Government will properly perform its duty. In all matters of public interest, whatever their nature, it is what we call public spirit which induces the members of a Government to continue their action, and it can be their only motive.

2643. You rather set public spirit, in that sense, above the motive of private interest?—Where the object in view is essentially one in which the public as a whole is more strongly interested than the individuals, or any section of individuals, I think that what I have called public spirit is a motive better likely to produce good results than private interest.

2644. Supposing a company to be formed with a sufficient command of money, do you not think that that company would have a stronger motive in laying the money out to advantage in serving the public convenience to the utmost of its powers, as compared with the Government which is restricted by forms and by the necessity of going on every occasion to a higher authority for the sanction of expenditure, and so forth?—I do not think that the advantage which you refer to, arising from the greater freedom of action in a company, can be fairly claimed, and for this reason. You refer to the action of a company, which is independent, which is a self-constituted body, which, if it requires money, raises money itself, which spends money on its own authority, and is the final judge of all its own actions; while you virtually limit me by your comparison to a government which is debarred from raising money, and which is debarred from doing many of these sort of things which in the very nature of the case are done, and done as a matter of course, by a company. If you *de facto* cut off from a government the power (never mind how the power arises, or how that cutting off of the power arises) of raising needful money, and of spending it as it is required, I admit that a government, under those circumstances, is entirely unfit for such enterprises as those of which we are speaking. If in the nature of things a government is so constituted, and must be so constituted, that it will not act in the way you suppose the company will act, that is to say, will not allow money to be spent when it should be spent, then I admit that such a government is not fit to carry out these sort of works.

2645. Do you think that the analogy of the Post Office is an analogy good for the present discussion?—I merely mean that the Post Office is an analogy as regards the class of interest which a Government can properly and successfully manage, not as regards the system of administration, which is a totally different thing.

2646. Take, for instance, the delivery of messages from a telegraph office as compared with the delivery of letters by the post, which are sent out at certain stated intervals. The whole of the value of a message consists in its immediate delivery, in nine cases out of ten, in giving the receiver of the message the priority of intelligence; do you think that there would be that constant attention on the part of a Government department to the sending out of messages the moment they are received which you would find in the case of a private company?—I should say that there is quite as much reason for supposing that a Government department would do the whole

Colonel
R. Strachey.15 May
1866.

whole of the telegraph business as well, under proper management, as any private company. I appeal to the actual working of our Post Office here in England, to show the wonderful way in which a most exceedingly large variety of private interests is regarded and attended to by a Government management. The requirements of the Post Office service in respect to punctuality, promptitude, and good order, seem to me fully as great as, if not greater and more difficult to meet than, the like requirements of a telegraph service.

2647. Mr. Marsh.] How is it that these telegraphs in India do not repay the Government the expense which they laid out upon them; how is it that, if it is merely good management that is desired, they will not pay as well as they do in a thinly peopled country like Australia?—The reason why they have not repaid themselves is, that the charges that the Government have made have been a great deal too low; and one of the obvious defects of the working of the system has been, that the Government from time to time has not taken the necessary steps to see that the charges for messages were commensurate with the actual expenses of the working.

2648. Mr. Ayrton.] You mentioned that in the first establishment of telegraphs in India, they were laid down upon an economical system; are you aware whether the officer of the Government deliberately set himself against the experience of the telegraphy in Europe, and laid down the telegraph in the most unsatisfactory and insufficient manner?—I believe the fact rather was that when the telegraphs were first started in India, there was a general ignorance on the subject of how telegraph lines should be put up; Sir William O'Shaughnessy had his own ideas upon the subject, and his ideas were that the thing might be done very simply, and economically, and it was on that basis that the lines were actually carried out.

2649. Was not it the fact that he set up the general ignorance of himself and other people in India against the general knowledge which existed in England, and that in consequence of that the whole thing miscarried?—I am not in a position to say anything about that.

2650. Still it was set up in a manner in defiance of the scientific and intelligent opinion of England, and of Europe, was it not?—You can put it that way if you please.

2651. Practically it was so; it was not in accordance with the then existing scientific knowledge and experience of England and of Europe?—I will admit that Sir William O'Shaughnessy did not accept the authority of the scientific people in England.

2652. That is to say, he set up his own opinion, and the Government allowed him to do it; did not the Government also depart from the recognised lines of communication, in setting up their telegraphs, so that when the railways would be completed, instead of the telegraphs being on the lines of railway, the great highways of communication, they would be on different lines of communication?—I fancy that all that is to be said regarding that is, that the Government wanted the telegraph at once, and that it was quite certain that the railways would take many years to complete; and in some instances the railways were laid out in such a manner that it would not have been useful for Government purposes to have followed the lines of railway in laying out the telegraph lines. On the whole, I have no reason to suppose that the original telegraph lines

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were laid out otherwise than was proper under the circumstances then existing.

2653. But still, at the time they were laid down, were not the general or main lines of railway communication pretty well indicated and settled?—I cannot answer that question.

2654. Are you aware that the telegraphs in India are not laid by the side of the highways as in this country, but that they are laid off the highways, and in the jungle in many places?—In some places this occurs, in order to cut off angles; but certainly it is not the case as a rule.

2655. Do not you think that there is a great difference between a company undertaking a project for the purposes of profit, and a Government undertaking it without any view of profit, and that that difference of principle interferes very much with the general conduct of an undertaking; or do you consider that the Government undertakes a project like the telegraphs in India for the purposes of profit or loss, or with some idea or sense of public interest?—As far as I understand the meaning of the word Government, it is the executive body which looks after the interests of the State, or the community as a whole; and I see no reason why a Government shall not be able to conduct business connected with a system of telegraphs, as well as that which relates to any other public want or interest. The primary object of the Government, no doubt, in starting the telegraphs in India was their own political advantage; but of course they were aware that, if a telegraph system was established, private interests also would be benefited.

2656-7. Is not the difference between a company undertaking a project of that sort and the Government, that the company undertakes it with a reference to the profit or loss of that particular project, whereas the Government have no such object in view?—Quite so; that is one of the important differences.

2658. Is not that a difference which pervades and permeates the whole administration of a system, whether you are looking at the profit and loss of a particular project, or whether you are carrying it on with some general ideas of the public convenience?—My answer to that would be, that supposing there was only one fraction of telegraph line to be made, as between Bombay and some important place, we will say 20 miles off, then I think the probability is, that the people actually personally interested in that particular portion of the telegraph would manage it better than the Government would manage it; but that when you come to extend the system of telegraphs over the whole face of the country the case is quite changed. Virtually, in the very nature of things, the interests of the whole body politic are involved in the proper working of the whole system of telegraphs, and the separate interests of the several isolated localities become merged in, and subordinate to, the common interest of the whole country; and under those circumstances, when the general interests begin to predominate, then it becomes proper for the Government to intervene and to act. It would be impossible to work a general system of telegraphs over a country, such as India, in a satisfactory way, without thorough co-ordination of all the parts of it. It is a very difficult question, no doubt, to draw the line at the precise point where the private interests cease, and the public interests commence to predominate; I quite admit that. But it is by no means difficult to say, at any given time, that in this particular respect the public interests

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Colonel *R. Strachey.* now prevail over the separate private interests, and that the time for Government action has therefore arrived.

15 May
1866.

2659. Do you not think that the Government undertaking the telegraphs with what you have described as political motives, they consider that the political interest is that of their own convenience as members of the Government carrying on public affairs and correspondence, and that that is their measure of political interest?—I presume that that was the thing which originally induced them to adopt the construction of telegraphs.

2660. Does not that tend to exclude the consideration of the interests of individuals, the sum of which constituted what may be called the commercial interest?—As I have already endeavoured to point out, so long as you do not take security that the Government shall view the whole of the public interests properly, and regard the whole of them properly, then, I will admit fully that there is danger that the Government is taking up a duty which it should not take up; but if that security be taken, which I believe can easily be taken, by properly organising the administration, then there is absolutely no reason why the Government should not look after those general interests, or if you please to call them commercial interests, involved in the efficient working of the telegraph system, just as well as it looks after those general and commercial interests which are involved in the administration of justice, in the proper regulation of police, in the defence of the country, or in the proper arrangement of finances, and so forth, in respect to which every one is perfectly ready to trust to a Government.

2661. If the Government only exists for the benefit of individuals of the community, ought not the interest of individuals of the community, which we will call the commercial interest, to take precedence of that of the Government, and the interest of the Government to be only ancillary to the general interests of the people?—That comes simply to inquiring, when the two interests are conflicting, which for the moment is the most important; and that is a question which must depend upon the particular facts at the particular time.

2662. Is not the advantage therefore of a company this, that a company applies itself immediately and directly to the sources of profit, namely, the interests of each individual member of the community, to make the undertaking subservient to that, and to get the largest amount of profit; is not that one of the great advantages of a company?—No doubt that is the advantage of a company.

2663. Is not that an advantage which we lose when the Government proceeds upon what it calls its political interests, namely, the interest in carrying on its own correspondence amongst its own members?—If you compare the working of a telegraph business by a government simply actuated by what you call its political interests, that is the dispatch of its own personal business, with the action of a company actuated by a purely mercantile spirit, I will admit that the probability, so far as the general convenience of the community is concerned, is that the company will manage matters better; but then I entirely repudiate as my standard of what is good, a government actuated solely by such motives as the question in fact assumes. A government is a very poor thing if it does not quite as zealously endeavour to attend to all the

public interests, as to its conceptions of what is convenient merely for its own management of business. In India, moreover, where the very existence of the commercial community, even for a day together, depends so entirely on the thorough efficiency of the Government administration, it seems to me that it is quite impossible to view this efficiency otherwise than as the foundation or source of all possible commercial prosperity.

2664. Do you not think that it is an error into which the Government of India, perhaps more than any other government, falls by being in the hands of a particular class, and those foreigners, as compared with the natives of India, that they do give themselves up to what I will call the political interest, and that they shut their eyes to a large extent to the individual commercial interest in the conduct of affairs; is not that peculiarly the vice or error of the Government of India?—I do not agree with that in the slightest degree.

2665. Do you not know that the railway companies have had a perpetual struggle against that feeling on the part of the Government?—Certainly not.

2666. Do you not know, for instance, that the Government, because they carry treasure about, has enforced upon the companies an unremunerative rate for carrying treasure, and that because they grow opium they have enforced upon the railway companies an exceptional mode of carrying opium?—I know that they do neither of those things.

2667. *Mr. Marsh.*] Do they enforce any particular price at all for carrying opium and treasure?—They do not.

2668. *Mr. Ayrton.*] Do you think that the telegraph lines in India have been in point of fact laid out with a view to commercial communication, that is to say, to individual and private communication?—I think that probably they have not been so laid out, and I began by saying that my belief was that, under the present organisation of the Government, you could not expect what I consider to be a proper system of administration.

2669. When you speak of having a separate member of Council, charged with the affairs of the public works, am I to understand you to include in that the affairs of commerce and agriculture, which is, I think, without any special department in India, or would you include that in the Public Works Department?—When I came here to speak upon this subject I was not prepared to discuss the precise details of the best way of carrying out such a suggestion as I have made, and I do not think there would be any particular value in my expressing my personal opinion upon such matters.

2670. I want to know whether, in your idea, the Public Works Department in India would combine not merely the supervision and execution of public works undertaken by the Government, or whether you also intended to combine all those questions which relate to industry, and which are embraced, for instance, in the French administration, under the idea, not merely of the *Ponts et Chaussées* Department, but of the Department of Commerce and Agriculture, or whether you would keep them as two separate departments?—I should say that the general form which the administration of all civilised countries has taken rather tends in that direction, and I think that it is highly probable that the administration would be vastly improved if there were something

thing of that sort adopted in India also. There is no question in my own mind that it is a grievous defect in the administration in India, that there is no branch of the Government which takes cognisance of those important interests which you speak of.

2671. There is no department, is there, which merely accumulates and registers information and experience for the benefit of the public in matters relating to the agriculture and commerce in India?—None whatever, and there is almost absolute ignorance upon these subjects in consequence.

2672. And is it not the result of that, that the efforts, I may say, of one man who takes up the question are not registered and preserved for the benefit of others who follow him; but they generally die away with the individual, and the thing often has to be begun again?—To a great extent that is the case. I should say, however, that a certain feeble attempt has been made of late years to develop something in the shape of a register of the statistics of commerce in India in the Financial Department.

2673. But with regard to the enterprise of the interior, and of industry in matters of commerce and agriculture, has anything been done to keep alive the experience of the part or the efforts of the part?—I think very little indeed is known on these subjects.

2674. For instance, on the subject of growing cotton, all those efforts and inquiries which have been made are buried now in papers, are they not?—To a very great extent they are.

2675. Mr. *Weguelin*.] Have you been a frequent traveller by the Peninsular and Oriental Company's boats?—Yes; I have gone backwards and forwards several times.

2676. It has been stated by a witness that there were no second-class passengers by those boats; are you aware whether, on any of your voyages, there were any second-class passengers?—The principle of the Peninsular and Oriental Company is to carry first-class passengers on the other side

of Suez. At the same time they do not absolutely refuse to carry second-class passengers; and the last time that I came from Calcutta there were a good many gentlemen who did come from Calcutta as second-class passengers; but the understanding was that it was done rather in an irregular way, and perhaps the agent in Calcutta would have got into a scrape if it had been known.

2677. Do you know whether they were satisfied with their accommodation as second-class passengers?—They got their food, and they slept on the deck, as a great many first-class passengers did, and they had a place in which they could dress, very much the same as the first-class passengers. I know that they associated with the first-class passengers to any extent they pleased. They were not allowed to come upon the quarter-deck; but they were admitted on the fore-castle, perhaps the most comfortable part of the ship.

2678. Did they make any complaint as to their accommodation?—Not that I ever heard. Of course sometimes the ships carry a great many more passengers than they are constructed to carry conveniently, and under those circumstances everybody is a little apt to complain; it is very hot, and there is every inducement to complain.

2679. But there are certain berths reserved for second-class passengers, are there not?—Yes, I think in all ships there are.

2680. Mr. *Brooks*.] The cases that you mentioned, of second-class passengers, are exceptions to the general rule, are they not?—I think there is always a certain proportion of second-class passengers. For example, engine drivers, and people connected with railways, are sent out second-class from this country, and servants so go out, and people in that class of life, generally speaking; I cannot say what the ordinary number is, but no doubt the Peninsular and Oriental Company's officers here would mention what it is; but there is always a sensible proportion of second-class passengers.

Colonel
R. Strachey.

15 May
1866.

WILLIAM THOMAS THORNTON, Esq., called in; and Examined.

2681. Mr. *Stansfeld*.] You are the Secretary of the Public Works Department in the India Office, are you not?—Yes.

2682. Have you any documents to put in, in addition to those which you have already furnished to the Committee?—I have a report by Major Champain on the recent working of the Turkish portion of the telegraph, which I should like very much to put in; it is very recent, and gives very important information (*delivering in the same*.)

2683. Have you any new documents which you propose to put in?—I think the only one is this report of Major Champain's; but there are also some papers which I shall have occasion to refer to. The Chairman asked me to see if I could get a statement made of the cost of the Persian Gulf cable. I have certain returns, but I should scarcely like to put them in, because they would be imperfect, but perhaps I may be allowed to refer to them in the course of my evidence, and then it can be settled whether they shall be put in or not.

2684. What is the date of Major Champain's report?—This is dated April the 12th, and I have two or three private letters from him which

contain little bits of information which are not here; but this is the official report from Constantinople, dated the 12th of April, and addressed to the Under Secretary of State for India; it gives a report of the recent working of the Turkish branch of the Indo-European telegraph. Major Champain was sent out to Constantinople with the intention of his going along the line, and reporting upon it, but he found that such an improvement had taken place during the last two or three months that he has not thought it necessary to do so.

2685. *Chairman*.] Has that improvement taken place since it was known that an inquiry was to take place upon the subject by this Committee?—I think that the improvement commenced before that, as far as I can recollect. Lord Lyons had put great pressure upon the Turkish Government, and I think they had begun to improve, if my memory does not fail me, before there was any intimation of an intention to hold this Committee. I do not think that the Turkish government knew anything of it; in fact, I am sure of it; because Major Champain did not know when he left England that there was to be this Committee.

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15 May
1866.

2686. A letter has been sent to this Committee from the Foreign Office, enclosing a copy of a despatch addressed by Aali, on the 11th of April 1866, to the Turkish ambassador here; have you a copy of that?—We have a copy of it at the office; the Foreign Office sent it to us.

2687. In which letter it is stated, is it not, that the Turkish telegraph system is almost free from blame?—It is so, but the statement is scarcely in accordance with our information. For instance, the letter says that, since the Turkish line was opened, there has been no such delay upon it of from three to five days, as the "Times" speaks of. But I have a paper here which makes out that the *average* time occupied by a message on the Turkish branch of the Indo-European telegraph was, throughout last year, nearly six days and eleven hours.

2688. Mr. *Stansfeld*.] Will you turn to the examination of Mr. Grimston at Question No. 582, where you will find that his evidence was to this effect, that he wrote a letter to the Indian Government in 1862, and he did not get an answer till the 9th of June 1864; and that that answer, when he got it, was, "That Sir Charles Wood is not as yet in a position to come to a decision on your suggestion." Can you explain the cause of that long delay?—The explanation is this: when Mr. Grimston's first letter came in, it came naturally to me; I showed it to Colonel Stewart, and he undertook to speak to Mr. Grimston about it. Then, after a conversation with Mr. Grimston, he told me that Mr. Grimston understood that we were not in a position to give him an answer, and that, therefore, the letter should remain unanswered. Two years afterwards Mr. Grimston wrote again.

2689. The letter remained unanswered in consequence of the verbal understanding with Mr. Grimston?—Yes; it was quite understood that Mr. Grimston did not expect an answer; it was understood that we were not in a position to answer it, but that the time might come when we should, and then he would get an answer. Two years afterwards he writes to much the same effect, and he gets an answer that we were still not in a position to give him an answer.

2690. The answer referring to the former letter, as well as to the more recent one?—Yes, it was an answer to both. But the reason why he got that sort of answer was this. What Mr. Grimston wanted the India Office to do was, to use its influence with the continental Governments to induce them to set apart one wire exclusively for the use of the Indo-European telegraph. It was felt that the India Office could not make such a proposition to foreign governments without engaging that a great proportion of the messages should be sent that way. Of course they would not have listened to the proposition unless we could have said that if they did set apart one wire for those messages, the messages should be sent, and we were not in a position to make such a pledge; but at the same time all the arrangements with respect to the Indo-European telegraph were then in so immature a condition that no one could foresee what arrangements would at some future period be made. There was some idea of our having a traffic manager in London for the purpose of the Indo-European telegraph, and it was thought possible that, at some future time, we might be in a position to make such an engagement, but the only answer we could then make was, that we could not answer then. And if the question were put now, we should be obliged to

give the same answer, or now we might give perhaps a more decided answer, because we know now that the messages will not be sent by the India Office, or anybody connected with the India Office, but by the telegraph companies, and it is for them, if they wish it, to make arrangements with foreign governments. They might make the pledge which the foreign governments would require, and which we could not possibly do.

2691. Have you any information as to the present state of the Russo-Persian line?—Among these letters from Major Champain, there is something which he says about that which I should like to read. I have here a letter dated the 10th of April, in which, speaking of the Turkish lines, he says, "the Turkish lines are still working surprisingly well; I see the daily report, and am greatly pleased and astonished at the late improvement in working. It was quite correct for Courtenay to write three minutes between this and Kurrachee. The land wire and cable were joined, and a message passed instantaneously. During the last few weeks, ordinary despatches have been received in Constantinople, both from India and London of the day's date. Little or no stoppage now takes place in the Pera office, and I expect the average for the beginning of April will be under two days. The last average I can make out for 'all through' messages is from the 1st to the 12th of February. 405 went from London to India *via* Turkey, of which the slowest took six days; the quickest, 2½ hours; and the average was 1 day 19 hours 40 minutes." Then there is the part about Russia. "By Russia, during the same period, 128 passed, of which the slowest took 20 days 15 hours, the quickest 16 days, and the mean 17 days 8 hours 3 minutes." And he goes on to say, "The fault does not lie on Russia altogether, but in great measure on our Persian line. The snow this winter has been fearful, burying poles and all."

2692. Sir *Henry Rawlinson*.] Up to what date is that report?—The letter is dated the 10th of April, and the latest report is up to the 12th of February.

2693. Mr. *Stansfeld*.] Will you turn to Question 570 in Mr. Grimston's evidence, where he expresses the opinion that the delays are as great in the Indian as in the Turkish system; that the delay is half-and-half between the Indian and Turkish administrations; do you think that that charge is borne out by evidence?—I think that Mr. Grimston is rather hard upon the Indian administration. I think that will be shown by the papers which I put in on the first day the Committee met, at page 75 and the following pages. Those pages show that in the year 1861 the Government of India, in consequence of complaints which had reached it of the mismanagement of the telegraphed address, a set of queries to the Chambers of Commerce in the three Presidencies, inviting any complaints, and also inviting any suggestions with reference to remedial measures, and here are the replies from the three chambers. It will be seen that they are not at all uniformly condemnatory. The Chamber of Commerce of Madras says, that its opinion of the general efficiency of the electric telegraph, for commercial purposes, is, on the whole, favourable. Then the Chamber of Commerce of Bombay says, that it has communicated the Government letter to the members of the Chamber, and has received replies from 25 firms, giving the following results, that out of 298 messages 274 had been received with reasonable punctuality and correctness, and

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only 24 with either important errors, or delays, or unintelligible, or so delayed as to be rendered useless. The Chamber of Commerce of Bengal is much more severe in its language, but fortunately it does not merely give its own opinion; it also gives as vouchers upon which that opinion is founded, the replies from the different firms to whom it had written. Those replies will be found, some of them to be unfavourable and some to be favourable; but there is something rather curious about the variety. When any firm confines itself to general language, it is then simply denunciatory, but when it becomes circumstantial, then there is a good deal said in favour of as well as against the Government administration. Here is one saying, "We make constant use of the wires," and "on the whole we are satisfied with their general accuracy;" and, except that I should detain the Committee, I might point to several things of the same kind. But the Government of India, in a very fair summing up of the reports that it gets from the different chambers of commerce, uses this language: "On the whole, the Governor General in Council thinks it must be admitted by the chamber," that is, the Bengal Chamber, "that considering the disadvantages under which the Indian telegraph labours, its general efficiency, as the Madras Chamber of Commerce observes, is favourable; out of 240,451 messages conveyed in 1860-61, only 139 were complained of as erroneous, a proportion which is .0575 per cent., or little more than one-half per 1,000; while of the commercial messages delivered in Bombay during April and May last, 92 per cent. were received with reasonable punctuality and correctness, 5½ per cent. with important errors or delays, and only 2½ per cent. so delayed or mutilated as to be useless." When it is recollected that the delays on the Indo-European Telegraph at certain periods were for weeks together; more than once, I think, we have been without any message at all for two or three weeks; and when it is found that only two or three or five per cent. is the average of delays in India, it is a little hard to say that the Indian administration is as bad as the Turkish. At the same time, as regards the Turkish administration, its deficiencies, I think, have been a little exaggerated. At some of those periods at which we were without any intelligence from India by the Indo-European Telegraph, we were also without any intelligence for days together from Constantinople, showing that the delay was between Constantinople and England, and showing that the continental administrations are anything but faultless.

2694. *Chairman.*] The correspondence to which you have referred bears date, I think, in 1861?—Yes.

2695. And that had reference, had it not, in a chief degree to complaints which had been made in India of the irregular manner in which the service between Point de Galle and the Indian Presidences, was carried on?—I think it was rather of general application.

2696. Have not the complaints, which led in a great degree to the assembling of this Committee, taken place since the opening of the Indo-European line to Kurrachee, and have they not been made chiefly with regard to the irregular and imperfect manner in which messages have been forwarded to and from Kurrachee, in India?—That certainly is the case; but at the same time the Government of India has, during the last two years, been doing every-

thing possible to improve the line, and more particularly the line between Bombay and Kurrachee.

2697. *Mr. Stansfeld.*] A great deal has been done lately within your knowledge in your department, has there not?—A very great deal. I think I can show that a great deal has been done. For instance, the Government not merely asked the Chambers of Commerce what they had to say against the management, but they also asked what suggestions they had to offer, with regard to its improvement, and it would appear from the correspondence, that the three great defects were considered to be want of insulation, want of English *employés*, and want of proper signallers. With regard to the first, I have a statement here of the quantity of insulators, brackets, wire, and all sorts of articles which the Government have indented for during the last year, and it amounts to just 86,500 £ worth. During the last year the Government of India made requisitions to the extent of 86,000 £ for the still further improvement of the line.

2698. Which requisitions have been complied with, have they not?—They have either been complied with or are in process of being complied with.

2699. And very rapidly, I believe?—There has been a good deal of delay. This statement, which I have in my hand, was made out in the store department, and there is this remark in it: "The bulk of these stores have been ordered some time. Owing to the novel construction of the insulators there has been delay in their delivery, and not more than half have been shipped. From the rigorous nature of the tests for wire only one contractor has been found to meet them. Much time has been unavoidably lost in endeavouring to get supplied from other quarters. About three-fourths, however, of the quantity demanded have been shipped or are in course of shipment. The other stores have also been shipped, or are about to be so."

2700. There has been no delay, therefore, as far as time is concerned, for the great loss of time has been by the contractors?—There has not, excepting in one particular. Together with the indents from India, came requisitions for wire for Persia, and as the wants of Persia, whether rightly or not, were believed to be the more urgent of the two, a larger portion of the wire from time to time supplied was at first set apart for Persia.

2701. You have the evidence before you, I think, of Mr. Walton, given on the 27th of April; have you any remarks to make upon that evidence?—It seemed to me, on going through it, that although it, no doubt, correctly conveys Mr. Walton's impressions, the impressions which he received two or three years ago, would no longer be correct. I mean that the defects which he found existing three years ago have either been remedied since, or are in process of being remedied. For instance, at Question 2064, where he is speaking of the number of resignations that had taken place among signallers, he says that he considers that they resigned because they were not sufficiently paid in most cases, and that they disliked being over-worked, and then he gives some examples of what he considers under-pay. I have nothing to say about this. I have no doubt that it was perfectly true when he said it; at least, I have nothing to say to the contrary; but, as I said, the Indian Government have

W. T.
Thornton,
Esq.

15 May
1866.

W T.
Thornton,
Esq.

15 May
1866.

been doing everything they could during the last two years to improve the management; and, among other things, they have increased the number of signallers from about 800 to 1,020. They have also authorised the formation of schools for the training of the signallers, and they have increased their pay, so that the lowest pay now of an indifferent signaller, a boy most likely of 12 or 14 years of age, is 36*l.* a year, and it may, if he is a superior boy, be 72*l.*; and the highest pay which a signaller gets, is 228*l.* a year. That being the case, it is to be presumed that there is no longer the extraordinary deficiency which he speaks of at Deesa, where he says there was only one clerk to attend to three different instruments at a time. Then, with regard to the use of the Morse instrument, at 2068, he says that they only employ a sounding instrument, that is to say, an instrument where the tape is not employed; I believe that is perfectly true. The Secretary of State, a very short time ago, suggested to the Government of India that they should employ the Morse apparatus in its complete form; but the Government replied that they were doubtful whether it would be a desirable thing, and it is still under consideration whether they shall employ the Morse instrument in its complete form or not.

2702. That you consider a moot point?—Yes, it is under consideration at this moment. Then, Mr. Walton, at Question 2074, speaks of the great imperfection of the lines in India, and he says, “the new insulators which have been introduced lately on Hamilton’s poles, are found to be very faulty;” and, in answer to the next question, he says, “I have heard them called Douglas’s insulators; I think they were an improvement by Colonel Douglas on Sir William Brooks’s insulators.” The fact is, that about this time last year, Colonel Douglas, who was then Director-General of Telegraphs in India, did send home Captain Mallock, an officer of the department, for the express purpose of devising some form of insulator which would be particularly suitable to India; and a very considerable number of insulators, upon a plan first of all suggested by Colonel Douglas, and matured, so to speak, by Captain Mallock, have been sent out; but they could not have been in India when Mr. Walton was there; they really had not arrived, so that I do not understand what he could mean by saying that they had failed. There really were no insulators in India before, except Sir William Brooks’s. What I have heard of Colonel Douglas’s insulators is, that their only fault is their being expensive; they are exceedingly good.

2703. The Douglas insulators must have reached India at a later date; have we had any complaint about them?—No, that insulator was not devised in India, but by Captain Mallock, with the help of the best electricians in England. Then, at Question 2080, Mr. Walton says, that sometimes a message takes two or sometimes three weeks to go from Bombay to Calcutta. At page 152 of the papers which I have handed in, there is a statement of the actual times occupied by messages between Calcutta and Agra, and Agra and Bombay, for the three years from 1862 to 1864 inclusive. There are the maxima times and there are the minima times. On one occasion a message did occupy 214 hours, that is the greatest time that it ever occupied in those three years. It took 214 hours once to go from Calcutta to Bombay; but if you take the average of all those years, it will be found that

49 hours is the average. So that there is really no proof at all that it ever took more than nine days. The average appears for 1864 to be 49 hours. Then in Question 2082, speaking of the centralisation, he says that a station-master can do nothing, but is obliged to send to Calcutta for blotting-paper, pens, sealing-wax, and things of that kind, I believe all that was perfectly true when he was in India, but it is one of those things which have been remedied. One of the suggestions to the Government by Colonel Robinson, the present Director General, was, that store depôts should be formed at different places, and that the Government has agreed to. Colonel Robinson objected quite as much as Mr. Walton to that extreme centralization. I mention all this to show that the Government are quite as much alive as Mr. Walton is to the defect of the administration, and have been doing everything that has been possible during the last two years to improve it.

2704. *Chairman.*] Still Mr. Walton’s allegations, according to his experience, were not without foundation?—I have not the least doubt that they were once in the main correct, although occasionally exaggerated; for instance, when he says that a message takes three weeks, when, as far as I can make out, no message ever took more than nine days. In another place he says, that there was a regulation as to the prohibition of the employment of natives in the department. There certainly never was any such prohibition. I believe that natives, as distinguished from Eurasians, have scarcely ever been employed in Bengal, but they have been employed always in Bombay and Madras. It is really very important that it should not go out to the world that the Indian Government have forbidden the employment of natives. Eurasians are preferred in the telegraph department; but I have figures here which will show that there could not have been less than 100 or 200 natives employed as signallers in Bombay and Madras, and the proof of it is this: we get from India every year a statement of the persons employed in the telegraph department, and the last statement that we have shows that the number of Europeans was 293, the number of Eurasians 613, and the number of natives about 1,400. We know that of the Europeans, 120 were signallers; but supposing that all the Eurasians were employed as signallers, and, in no other capacity whatever, they then would not make up the number of signallers who were actually employed. Those two, the Europeans and Eurasians, together, would only make 733, whereas at that time there were 820 signallers, so that, supposing every Eurasian were a signaller, it would still have been necessary that there should be some natives.

2705. Are you able to state whether there is or is not any prejudice against the employment of natives; that is to say, Hindoos or Mussulmen, as signallers in the department?—I have no knowledge upon the subject myself, except what I have received from reading or conversation; but what I have been told by officers or the department is this: that in Bengal they prefer Eurasians, because they understand English better; that is the only reason for preferring them. They do not employ Eurasians as distinguished from natives in Bengal, but merely because they can get a sufficient number of Eurasians.

2706. To go back to the question of insulators, I see

I see a despatch written by Colonel Robinson to the Secretary to the Government of India, of the 23d of December last, in which he says that "Mr. Bailey has certainly earned the approbation of Government for the great improvements that have been effected during the last few months in the working of the Bombay lines; but, although much has been done, there is still an immense deal more to do ere these lines can approach that perfect state in which it is our object, not only for the interest of Government and the public, but also for the credit of the department to bring them to." Then he goes on to state: "The non-arrival of insulators and telegraphic stores from England is delaying the completion of the work of repairs, reconstruction and insulation, all over India, as well as in Bombay, to a serious extent; instead of these stores reaching India by the close of the rains, they appear never to arrive until the working season (October to April) is drawing to a close. I regret to say that, in the present instance, the Indian Department is almost wholly to blame." What department is that?—He means the department in India; he is exonerating the department at home; if you observe in the next words he says, "The indents for stores were sent in sufficiently early, and Captain Mallock was in England to expedite them, but the specifications which were to define the characters of those stores, and which my predecessor stated it was his intention to submit very shortly after the indents, were never sent in until after Captain Mallock had returned to India." So that we had not in England the materials requisite to comply with the requisitions. That is merely one isolated case, Captain Mallock came to England, and the documents which ought to have followed him did not follow him in sufficient time; that is one of the reasons why those requisitions have not been complied with.

2707. Mr. Ayrton.] He sent an indent for the stores, but did not send a specification with that indent?—He did not send the specification.

2708. How many months afterwards was it sent?—It is said that they were not sent until after Captain Mallock had returned to India; Colonel Douglas, the last Director-General, sent Captain Mallock to England with a requisition for stores, and he did not, from what cause I cannot undertake to explain, but from some cause he did not send in sufficient time the specifications which were required to enable Captain Mallock to get the stores which he was sent for. It was Colonel Robinson who succeeded Colonel Douglas, who says that when Captain Mallock returned to India he "brought this most vexatious matter to my notice."

2709. In fact, the department did really forget all about it till somebody came from England to remind them of it; forgetting that they had indented for stores, they forgot to describe what it was until somebody came from England, to tell them that they had forgotten it?—Instead of saying "them," I would say "him."

2710. The whole department; everybody was responsible, I should think?—I cannot say that everybody was responsible; I do not think that would be fair. It was Colonel Douglas that had sent Captain Mallock.

2711. The officer did not send the indent himself; it did not go through the Governor General in Council. Are they not all responsible for this mal-administration?—In this particular case

the Supreme Government gave Colonel Robinson authority to send an indent, and he did send it by telegraph, in the first instance.

2712. Chairman.] Will you turn to pages 4 and 5 of the Correspondence. Does the letter from the Government of India to the Secretary of State, written on the 10th of June 1864, disclose the whole of the reasons why the Secretary of State was advised not to sanction the transfer of the telegraph wires upon the railways to a public company?—We never had anything from the Government of India except that, and that was what we proceeded upon. We wrote to the Government of India, asking their opinion; and this was the opinion which we received from them; and it was upon this, and no other document, that the reply to the company was founded.

2713. The objection appears to be founded upon economical considerations connected with the terms which had been proposed by the Oriental Company?—Reading that letter, I should have said that the Government of India had little objection to the acceptance of the proposal of the telegraph company.

2714. You are not aware whether any objection is entertained in India to the employment of a public company in the manner proposed, upon any grounds of political expediency, or otherwise?—Certainly not. I should say, from the general tenor of the Government documents on the subject, they are rather in favour of the trial of a private company. I have no doubt that you yourself will recollect that, somewhere or other in this correspondence, they propose to put up a new line, or rather to allow any company to put up a new line, between two places, in order to try the experiment of private or joint stock management.

2715. The East Indian Railway Company was informed, in answer to an inquiry which they made of the Indian Office, for the reasons why the arrangements proposed could not be carried out, that it would be contrary to the usage of the Office to give any reasons. Can you inform the Committee why, the reason being so very obvious, it was not communicated to the company; because it would have enabled the company, in communication with the projected telegraph company, to have proposed other terms?—I do not myself, upon the face of it, think that the objection seems to be an economical one. Certainly, reading the letter from the Government of India, I should have said that they were rather in favour of a trial than otherwise.

2716. Let me read this to you. The Secretary of State, by the hand of Mr. Merivale, informed the secretary of the East Indian Railway Company, on the 1st of September 1864, that he has "come to the conclusion that it is not desirable that the railway company's public telegraph business be transferred to a separate company." On the 11th of January following, the secretary to the company, by order of his board, requests the "favour of being furnished with a copy of the report in question, or with any reasons which may have influenced the Government of India in drawing up the report." The reply to which was, "I am directed to acknowledge receipt of your letter of the 11th instant, and, in reply to the request therein made, to state that to furnish the directors of the East Indian Railway Company with a copy of the despatch received from the Government of India on the subject of certain proposals of the Oriental Telegraph Company, would

W. T.
Thornton,
Esq.

15 May
1866.

W. T.
Thornson,
Esq.

15 May
1866.

would be contrary to the usage of this Office?"—That is contrary to the usage of the Office, certainly.

2717. Is it contrary to the usage of the Office to furnish railway companies with copies of despatches from the Government of India?—It has been done frequently, but some time ago Sir Charles Wood said that it ought not be done, and he insisted that, in future, we should always give the substance of the despatches and not the despatches themselves. It is perfectly true that it was done till a very recent period, till a year or two ago; but Sir Charles Wood directed that it should not be done in future.

2718. Mr. Ayrton.] You are not asked merely to furnish a copy, but to furnish an intelligible reason. Is it contrary to the usage of the Office to supply an intelligible motive as well as to supply copies of documents?—The Chairman merely asked me to explain what is said here, and here the Office does not refuse to give reasons; what it does refuse to do is to give copies of a despatch containing the reasons.

2719. You will observe it is asked in the alternative to supply an intelligible explanation of what it is doing, and it seems to be silent upon that point; therefore anybody receiving that answer would assume that it was equally contrary to the usage of the Office to supply an intelligible motive for what it does?—It would be really rather more charitable to suppose that if the reason for not giving reasons was that it was contrary to the usage of the Office, that reason would have been given, but nothing of the kind is said.

2720. Chairman.] The last letter from the India Office concluded with these words, "It was not merely on anything stated in that despatch, that Sir Charles Wood came to the conclusion that it would be undesirable to transfer the railway company's telegraphic business to a separate company." If it was not on anything stated in that despatch, that Sir Charles Wood came to that conclusion, can you inform the Committee on what other considerations the refusal was founded?—I am utterly unable to state them; I myself thought it was a very great pity that it was not done. It struck me that nothing would have been more conducive to the improvement of the Government telegraphs than that the railway telegraphs should have been transferred to a private company; but I do not profess to explain this; I do not at all know what Sir Charles Wood had in his mind. This is what he says, but I never heard his reasons.

2721. As the matter now stands, the railway companies and the proposed telegraph company were left entirely in ignorance of the views both of the Government of India and of Sir Charles Wood upon the subject, until the publication of this letter of the 26th of January 1865, in these papers the other day?—So it appears.

2722. Mr. Ayrton.] You do not think that that is a mode which tends to facilitate and develop the industry and enterprise of India, do you?—I do not see how it can.

2723. Do you think that the real motive for not giving a reason was an indisposition on the part of the Government to expose to any public criticism the reasoning of that despatch from India?—If that were my opinion, I do not think it would be becoming in me to say so.

2724. How can the Government advance any

public objects by proceeding in this dark manner?—I cannot conceive how they can do it.

2725. Chairman.] Have you any later report than those papers which you put in on the first day of the meeting of the Committee, containing the working of the Persian Gulf part of the Indo-European line?—I have this report from Major Champain, which, however, relates chiefly to the Turkish part of it; and I have two or three private letters, speaking of the rapidity with which messages have been transmitted. I have already read part of those letters showing that in three minutes they got an answer from Kurrachee. I myself thought that it must be a mistake, and I wrote to Major Champain at Constantinople, telling him that I could not help thinking that the three minutes was a mistake for three hours, and he wrote back to say that it was no mistake at all, but a fact.

2726. According to your advices the line continues working in a thoroughly satisfactory manner, does it not?—If you will allow me I should like to read from these letters; they are very short, and they contain one or two things which are not in the report. I have three letters here of the 26th of February, the 27th of March, and the 10th of April. Perhaps I need not read the first, but I may be allowed to read the next; it is from Constantinople, dated 27th March. "February was a capital month; I saw the averages from the 1st to the 12th, showing times occupied by over 400 messages from England to India. The longest time was six days, the shortest 2½ hours, and the average a little over two days. Since then we have been working at least as well, and to-day Fao was passing despatches straight through to Adrianople, and *vice versa* of to-day's date, both from India and England. Still, a number of messages are sent, *via* Russia, which are greatly delayed *en route*, and for which we shall get the blame. I cannot believe that the London offices direct them that way, but I fancy they must be diverted on the Continent. It behoves the companies to see to this, and I have been advising Agathon Effendi to-day to send round a circular to the various administrations. The Persian lines have been breaking down lamentably of late, simply and solely because there are no line guards. The Persians will not pay the comparatively small sum that is absolutely necessary, and the result is that for more than two months the telegraph has been useless, or worse." With regard to what he says, that there are messages going to Russia; very recently Lord de Grey permitted a letter to be sent to the Foreign Office requesting that the attention of Her Majesty's representatives, at Frankfort and Berlin, should be called to the question. We inquired of the companies in London, and we found that the Electric and International Company sent all their messages *via* Constantinople and Belgrade, and that the Submarine Company also sent the greater proportion of them that way, and they suggested that in all probability they were diverted either at Frankfort or Berlin, and therefore we wrote to the Foreign Office, requesting that the Queen's representatives at those places should represent the question to the telegraph departments, and insist that the messages which were sent from England marked to go by a particular route, should go by that route. Two days ago, we received a letter from the Foreign Office, enclosing one

186
W. T.
Thornton,
Esq.
15 May
1866.

one from Sir Alexander Malet, at Frankfort, saying that he had spoken to the proper authorities upon the subject, who explained that without having the dates and other particulars of messages, they could not give an answer with regard to any particular one, but that they would take care that in future all messages should go as they were labelled. There is one other letter, which I need not read, dated the 10th of April, from Constantinople also. It is the one which I referred to before, in which Major Champain speaks of a message going to Kurrachee in three minutes. I think that all the other information will be found in the official report. There is, however, one letter, which came from Major Champain, dated the 30th of April, in which he says, "In continuation of Appendices A. and B. attached to my Letter 279 of the 12th instant, I have the honour to state that, during January 1866, 1,216 messages passed from Kurrachee to Constantinople by Indo-European telegraph, and 790 from Constantinople to Kurrachee. Of the 1,216, the slowest occupied 9 days 12 hours in transmission; the quickest came direct, and the mean time was 2 days 13 hours. Of the 790, the slowest took seven days; the quickest went direct, and the average was 2 days 6 hours. These results show a material improvement compared to those of the preceding month; but since January the route has been far better still.

2727. Have the India Office taken any steps with a view of bringing any influence to bear upon the Turkish administration?—I think that all the improvements have taken place in consequence of the pressure which the India Office has brought to bear through the Foreign Office. Lord Lyons has made the strongest representations at the instance of the India Office, and all that has been done has been in consequence of Lord Lyon's interposition.

2728. Do you know whether any steps have been taken for the purpose of putting the proper force of English signallers upon the lines in Turkey?—I think that whatever improvements have taken place are described in this report of Major Champain's.

2729. Have you a copy of the account of the cost of the construction of the Persian Gulf line?—I have had it made out, but it is very imperfect, as far as the cost of the construction goes. I have a better account of the receipts. What I have got here is a statement of the payments made in England on account of the Indo-European telegraph, up to the 28th of April 1865; but we have merely got the expenditure in England, but not that in India; we know nothing of the cost of maintenance.

2730. Have you an account of the number of messages carried each way since the opening of the telegraph?—Yes, I have it here for one year. I have a return showing the number of telegrams from the United Kingdom to India, and the amount due to the Persian Gulf Line for the same during the year 1865; it makes out that the number of telegrams was 11,070, and the amount due to the department 32,998 *l.* That is from the United Kingdom to India. Then there is another return, showing the number of telegrams from the Continent of Europe to India, which is 1,467, and the amount due to the department 4,843 *l.* Then there is a third return, showing the number of telegrams from India to the United Kingdom, and the amount due to the Persian Gulf Line for the same dur-

0.43.

ing the year 1865; the number is 8,403, and the amount 28,352 *l.* And then there is a similar return of the number of telegrams from India to the Continent of Europe; that number is 1,043, and the amount is 3,576 *l.* for the year 1865.

2731. That is from the beginning of March last to the end of December?—In February there appear to have been no messages, nor in January; January is a blank throughout, and February is almost a blank; in February there were less than 100 messages.

2732. Are those receipts a proportion of the sum of 2 *l.* 19 *s.*, which, we were informed by a former witness, is paid to the Indian Government out of the 5 *l.* 1 *s.* received here for an ordinary message to India?—I think that is the amount.

2733. What proportion of that 2 *l.* 19 *s.* do you credit to the Persian Gulf Line, and what proportion to the internal system of India?—I make it out 10 *s.* 6 *d.* to the internal administration, and the rest to the Persian Gulf; but there is a little discrepancy in the statement. I rather think that they charge one shilling less in India than is charged here; we make out the total sum to be 5 *l.* 1 *s.* for a message to India, but Colonel Robinson tells me they only charge 5 *l.* from India, so that would make a difference. If 5 *l.* 1 *s.* is charged, then the amount which goes to the internal administration is 10 *s.* 6 *d.*, and the remainder goes to the Persian Gulf Line.

2734. Have you any account of the working expenses of the line?—We have not any information at all about that.

2735. Have you any information in the India Office as to the sums disbursed monthly on account of the establishment?—Not a syllable.

2736. Where would that account be?—It is all under the Bombay Government, and they have the accounts.

2737. Sir Charles Bright.] You gave the Committee the average of the time occupied by a message from India to England lately, as being a little over two days; was that from Kurrachee?—It was in one of Major Champain's letters of the 27th of March, in which he says, "February was a capital month. I saw the averages from the 1st to the 12th, showing times occupied by over 400 messages from England to India. The longest time was six days; the shortest was 2½ hours; and the average a little over two days."

2738. That will probably be to Kurrachee?—Yes, it must be so, no doubt.

2739. We have had it in evidence that in the month of March the line between Kurrachee and Bombay was still working in a wretchedly inefficient manner; and that is taken from the daily reports supplied by the Indian telegraphic department of the maximum and minimum delivery between those places, from February the 1st to February the 14th the maximum is stated to be 4 days 3 hours 31 minutes, and the minimum 4 hours. That would give a mean of little more than 51 hours, or something more than two days; therefore Mr. Grimston's statement, that the delay in India was about equal to the delay in Turkey, would not be so very much over the mark as applied to a message from London to Bombay, seeing that there is two days' delay in Turkey, and two days' delay between Kurrachee and Bombay?—At any rate, he would make out

W. T.
Thornton,
Esq.

15 May
1866.

out that we were equally to blame, whereas only one-third of the blame is due to us. I have a statement also showing the time occupied on the Turkish line, and it makes it out to be rather more than six days for the whole year, and two days is only one-third of six, and not one-half.

2740. I am speaking about the same period that you are speaking of, about the early part of this year, and it appeared then that according to your average it is about two days on this side, and according to the statement in India, it is about two days even on so short a line as that between Kurrachee and Bombay?—This very great improvement has taken place in Turkey within the last few months, and it is perfectly possible, in fact, I think it is almost certain, that a corresponding improvement has not taken place between Bombay and Kurrachee. That has been always acknowledged to be the worst part of the Indian lines, and it is not likely that it could have been improved in nearly the same proportion as the Turkish portion, because the defect of the Kurrachee and Bombay line is partly a defect of construction. It requires better insulation, and the department cannot improve the insulation until they get their stores. On the Turkish lines the defect was the want of proper signallers and inspectors.

2741. Are the Committee to understand you that the improvements which are being carried out by the Government have not yet had time to show their results?—It is not possible that they should. Very considerable improvement has taken place on that line; but still it is acknowledged to be in a very defective condition.

2742. The report which you referred to as giving the mean of the messages between Calcutta and Agra shows also the mean between Calcutta and Bombay. I have taken that out, and, adding the two together, I find that the mean time is about two days between Calcutta and Bombay, so that there would be also a delay of two days between Calcutta and Bombay?—I make it out to be 49 hours. That statement shows the maximum times and the minimum times, and it also gives the maximum averages and the minimum averages for the last three months; and if you add those two together according to my calculation it would be 49 hours.

2743. Therefore there is a delay in India between Kurrachee and Bombay of about a couple of days on the average, and there is also a delay between Bombay and Calcutta of about a couple of days?—That was in 1864.

2744. In the same evidence it is stated that the working of the Bombay and Calcutta line was very unsatisfactory at the time the witness, Mr. Knight, left India, which was not very long ago, so that Mr. Grimston was not so very far wrong in saying that there was as much delay in India as on this side?—I never had the smallest idea of concealing the defects of the Indian system; they are acknowledged, everybody acknowledges them; but I think, considering that it is so bad, that there is no occasion to make it out worse; if it is only one-half as bad as the Turkish administration there is no occasion to say that it is quite as bad. Nobody defends the Indian administration; everybody says that it requires great improvement, and it is receiving very great improvement.

2745. I understand you that those improvements which Colonel Robinson has introduced under his new administration, have not yet had time to show their full results?—They can

scarcely be said to be carried out; eventually that will be the case, as the Government approve of them all, but it takes some time to get them into operation; for instance, the mere increasing of the signallers from 820 to 1,020 takes some time; they would not be fit for their work immediately; they would require some training, and the first step would be to put them into the training schools. All I have contended for is, that for the last 18 months the Government of India, being alive to the defects of its management, have been doing every thing it was possible that a Government could do to remedy them.

2746. They have discovered that for the last seven or eight years things have been very badly managed, and they have taken steps to improve them?—Great improvements have taken place during the last 18 months; and I say that it is during that time that the Government have set themselves heartily to work to improve matters.

2747. Sir Henry Rawlinson.] You stated, I think, that in Major Champain's Report we shall find all the details of the improvements in the working of the Turkish line?—You will get all the information that is to be had upon the subject.

2748. But are we to understand that that refers both to the question of signallers and of improved insulators, and any alteration in the management of the line; are all those details given?—I am speaking merely of the Turkish portion. I read the report a day or two ago, but I should not like, without looking at it again, to say whether those details are here or not. As far as I recollect, the construction did not require any improvement; I believe it is in a very fair state; what was wanted was, an improvement in the *personnel*.

2749. It was stated to the Committee, in evidence by Mr. Greener, that there was not only a great defect in respect of the signallers, but also in the employment of porcelain insulators and in the direction of the line; and that all those points require rectification before the line can be considered in working order. Have those points been taken into consideration?—I do not think that much attention has been drawn to those points; I think it is chiefly in the management of the line that improvement has taken place.

2750. With regard to the pressure which you state to be put upon the Porte by Lord Lyons, is there any official correspondence upon the subject which can be put in before the Committee?—I think it is scarcely of a character to be made public.

2751. Are you of opinion that the provisions of the Convention with the Turkish Government are at present fairly carried out?—At this moment they are fairly carried out; but even now there is considerable room for improvement.

2752. Still you think that they are fairly carried out?—I do not think that there is anything of which we have much right to complain. I question whether the Turkish is not as well conducted just now as the Austrian administration is generally.

2753. Is there any black mail at present paid upon the line to the Arab tribes?—I think there is, but I am not quite sure; I think Mr. Greener gives evidence upon that point.

2754. The line from Bagdad to Fao was laid down by British officers, was it not?—Yes.

2755. And the material was supplied by the British Government?—Just so.

2756. Has

2756. Has the British Government ever been reimbursed by the Porte for that outlay, either by a money payment or by carrying the value of the messages to account?—The Protocol of 20 October 1863, provides that re-imbursement shall be made according to a special arrangement to be established subsequently. I am not aware that any such arrangement has yet been made; but if not, it is now quite time that something should be settled.

2757. At present, are you aware whether Colonel Kemball, the Consul General and British Agent at Bagdad, is authorised to exercise any general superintendence over that portion of the line; he superintended the execution of it, but I mean with regard to the maintenance of it?—He certainly does exercise a sort of superintendence, but whether it is merely his influence with the Pasha which enables him to do so I cannot say. We could give him no authority to do it; it could merely be by his personal influence with the Pasha.

2758. Admitting that he does, through his position with the Pasha, exercise a general superintendence over that portion of the line, it would be interesting, would it not, to test the relative working of the two portions; that is to say, the portion between Bagdad and Fao, over which a European officer has the general superintendence with the portion, between Bagdad and Constantinople, over which no such superintendence exists?—I should think so.

2759. Are you able to give the Committee any information with regard to the relative working of the two portions?—I should think that one or two of the witnesses who have been examined could do so. I should think Mr. Greener could. Of course we have not had reports with regard to the working of specific portions of the line. We are only told how long a message takes in coming the whole distance.

2760-1. Has the question ever been considered of supplementing the convention, according to the express provision in the convention, by the introduction of some more stringent provisions with regard to the employment of British signallers?—It certainly has been considered, but I do not recollect, for the moment, the precise terms of the convention that provide for its being supplemented in that way. When the Turkish line was so very badly managed, we had proposals, which originated with Colonel Stewart, and were afterwards taken up by Major Champain, which contemplated the transfer of the Turkish line either to the British Government, or to British officers, or to a British company; and Major Champain sent in a proposal to the India Office, recommending that something of the kind should be considered; but before any steps were taken, it was suggested by the Foreign Office that Major Champain should go out to Turkey to see how the lines really were and what they required; and he has accordingly been sent out for the purpose of getting reports from him as to the working of the lines. When he got to Constantinople, however, he found that such an improvement had taken place that there was little to inquire about. Things are going on well enough if the improvement will only last."

2762. The question before us is especially that of permanence, is it not?—Precisely; and Major Champain certainly has very great misgivings as to its permanence. Everything depends upon who happens to be at the head of the Telegraph Department, and on what in-

043.

fluence he has with the Secretary for Foreign Affairs, and so on, so that, there can be no certainty about the matter.

2763. The provision to which I refer is part of the 16th Article, which says, "Nevertheless the high contracting parties may introduce into it" (that is, into the convention), "according as necessity may require, such modifications as may be considered by common agreement to be useful and indispensable." Are the Committee to understand that no such modifications have been introduced?—No. Mutual agreement is required; we cannot insist upon anything of the kind; it must be by mutual consent. The feeling here, both in our Office and the Foreign Office, was that pressure might be brought to bear upon the Turkish Government if it were necessary, but that, of course, it would be better to settle the thing *à l'amiable* if possible.

2764. With regard to the Turko-Russian line, you have stated that a certain number of messages are still sent through Russia by the Russo-Persian line?—I do not think that any have been sent lately; they were some time ago, when Major Champain's report was made.

2765. Are you aware that any messages are sent the other way from India and Persia, that is, from Teheran by the Russian line instead of by the Turkish line?—I think it is not all improbable that some have been sent lately; because I saw, a short time ago, a letter from Mr. Walton, the director of the Mekran line, speaking of what was then the still continued mismanagement of the Turkish line, and saying that it was an extraordinary thing that messages were not sent by the Russian line, and asking for authority from the Bombay Government to send them that way.

2766. Would it not be in the discretion of the officer at Teheran to send a message through the Russian line, without having express orders to that effect from India?—I should think not. I should think that messages are labelled in India, as they are here, to go by particular routes; but I am not certain upon that point.

2767. We are talking now of the Persian line. Messages would run up to Teheran, under any circumstances, because there the lines diverge; they would go by Tabriz to Russia, or they would go by Bagdad to Constantinople?—Yes.

2768. Is it competent to the officer in charge of the office at Teheran to direct messages by that line or the other, according as he may think best?—He could only do it upon his own responsibility, acting for the best, if he did so. It would be rather for the officer at Fao or Bushire to determine by which route a message should go, whether by the Turkish branch or the Persian branch. But, of course, officers must, in the present state of the line, take a great deal upon themselves; and if one line were blocked up they would not hesitate to send by the other.

2769. With regard to the European line, you are aware, are you not, that there is an international convention between all the Continental powers with regard to telegraphic messages from Brussels, I believe, to the Turkish frontier?—Just so.

2770. And that the British Government is no party to that convention?—So I understand.

2771. That is because the telegraph lines are not in the hands of the British Government, but merely in the hands of private companies; but do you not think that it would be both possible and desirable that the British Government, acting for the companies, should be a party to that convention;

W. T.
Thornton,
Esq.

15 May
1866.

W. T.
Thornton,
Esq.

15 May
1866.

tion; would it not improve the position of the telegraph companies in their communications with the Foreign Governments?—That is the opinion of the Government of India. In some very recent correspondence which we have received from the Government of India, they say that it would be very desirable that some such common understanding should be come to; at present they are out of the pale of that convention; but they do think it very desirable that some general arrangement should be made which should comprehend them.

2772. Mr. *Marsh*.] I think you stated that the pay given to those boys in India is from 30*l.* to 70*l.* a-year; are they natives or Europeans?—They are arranged in three classes; good, inferior, and indifferent.

2773-4. But are they natives or Europeans?—They may be one or the other. A certain number of them are Eurasians, a certain number are natives, and a certain number are Europeans; I think 120 are Europeans.

2775. Are all the messages sent in English through India?—Entirely, I believe.

2776. Does not that prevent native messages going, to a certain extent; and would it not be better to send them in Hindostanee?—One would think so if it were possible; but perhaps they would not go so correctly.

2777. Do not you think that there would be more traffic upon the lines, and that the telegraph would be more used if it was used in the language of the country rather than in a foreign language?—I am not able to say how the native merchants keep their books, or what language they use in their correspondence.

2778. How can you account for some of the messages from Bombay to Calcutta being as long as nine days, and on the average two days; what can be the mismanagement which should make them so long in going?—It is very bad unquestionably; there can be no dispute about that.

2779. Is it from mere general wickedness?—I have already explained that I have never been in India, and that my knowledge is entirely derived from correspondence and conversation, and I therefore cannot answer such a question as that. I have no personal knowledge of the subject.

2780. Mr. *Ayrton*.] Would you put it in this way, that probably the natives would use the telegraph a good deal more if their own messages were received in the native language, which has nothing to do with the mode in which they would be transmitted by the wire?—I do not know whether it would be safe for them to allow the telegraph clerks to translate them.

2781. Supposing a private company were undertaking the work for the convenience of the public, is it not probable that they would undertake to receive messages in the native language and transmit them in any way which was most desirable, and would not that meet a great want on the part of the natives?—I should imagine that a telegraph company would do what it thought was most conducive to its own interest; but it might not judge rightly, or its own interest and the public interest might not prove identical.

2782. You mentioned that you thought that the proceedings of the Government to improve the telegraph had not been influenced by the appointment of this Committee on account of Major Champain having proceeded to Turkey before the Committee was appointed. Are you aware that Major Champain was present at a discussion at the Society of Engineers, at which

the proceedings of the Government were condemned, and an intimation was given that this Committee would be appointed and the defects of the whole of the telegraph system pointed out?—I recollect the meeting, and that Major Champain was there. I do not recollect that what you alluded to was mentioned, but if so, I was wrong in what I stated. Major Champain must in that case have known that the Committee was going to meet, but at the same time I am perfectly convinced that it was not any fear of this Committee which influenced the Turkish Government. I am quite sure that it was the pressure brought to bear upon them by our ambassador at the instance of the India office.

2783. Have you considered what public advantage would ensue if the main lines of telegraph in India were brought into harmony with the main lines of railway communication?—I have not a doubt that it would be a very great improvement.

2784. Do not you think that ultimately all the arrangements and organisation both of trade and of Government, must settle down in India upon the main lines of railway communication?—I cannot doubt that along every line of railway there will be a line of telegraph.

2785. If all the communications, both commercial and official, proceed upon the basis of the main lines of railway, must it not be of immense benefit if the telegraph system were placed upon the same basis?—I have not the smallest doubt that wherever there is a railway there will be a telegraph, but there may be telegraphs where there are no railways.

2786. Would it not be of great importance that those parts of the country which are not immediately upon a telegraph line should be brought into communication with the railway line by telegraphs from the nearest stations, rather than by an independent system of telegraph as at present?—If I understand the question, I believe that it would be desirable to connect the telegraphs and the railway lines.

2787. Would it not be desirable to have the main lines of telegraph on the railway lines, and have other telegraphic communications subscribing to those main lines?—I do not think it necessarily follows that a line which may be the best for a railway, would always be the best for a telegraph. In the case of a telegraph, what is desirable, is that you should have the shortest line between two places, whereas in the case of a railway it may be desirable to diverge very much from the straightest line in order to take in places of commercial importance.

2788. Considering that time is scarcely to be counted in telegraph messages, is it of any importance that the telegraph line should be the shortest in point of length?—Very little, certainly.

2789. Is it not therefore of much greater importance that the general line of telegraph should follow the most used line of communication for all other matters?—I do not think there can be a doubt that the telegraphs should be, as far as possible, coincident with the railways; if it were merely for the convenience of repairs, that would be a sufficient reason.

2790. It would, in the first instance, secure the great main lines of communication being always efficient?—It would tend to do so.

2791. Having a basis of efficient lines, would it not also be desirable that all the rest of telegraphic communication in India should be by branches from the main lines of communication, rather

rather than by an independent system?—Supposing that the system of railways were sufficiently complete, it might be so; but it would not at all follow that the main system of telegraphs should be confined to so imperfect a system as the present system of Indian railways.

2792. Considering that they will be the main trunks of communication, would it not be far better that branch telegraph lines should go from the railway stations, so as to follow that which will become the general channel of communication in the country?—So far as it is possible.

2793. Take, for example, the telegraph from Bombay to Indore; you observe that at present it is a direct line following the railway, and considering that the whole of the traffic from Indore will come down upon the railway, would it not be an immense public advantage that the telegraphic communication to Indore should be by a branch from the nearest station on the railway to Indore?—I should think so, supposing that the telegraph stopped at Indore.

2794. Supposing that you pursued the Agra road for 200 miles, considering that your communication with Bombay would still be through Indore upon the railway, would it not be equally advantageous that the line of telegraph should pursue that line of communication, and still be brought in connection with the railway in the Nerbudda valley?—In that case you would be severed from the line of railway.

2795. Would it be an advantage that the general mode of communicating with the district north of Indore should still be through Indore and the railway?—I do not quite understand how that could possibly be, because there is no railway from Indore to Bombay; you would have a telegraph from the nearest point of the railway to Indore for the purposes of Indore, but it does not follow that it would be desirable to continue the telegraph from Indore either to Agra or anywhere else. It seems to me much better to take our Great Indian Peninsular Railway, as far as it goes.

2796. Would it not be a great public advantage that a country which is not immediately on a railway should be connected by telegraph with the nearest railway station, and so with the general system, rather than by any other means, inasmuch as all those persons who live in that district will practically communicate with the rest of India through the nearest railway station?—That would be a reason, I think, for connecting places on either side of the railway with the railway line of telegraph; but it does not at all follow that it would be desirable to continue the branch lines of telegraph further than the places which in the first instance they touched.

2797. Would it not be, on the same principle, desirable to extend the lines of telegraph as far as the lines of communication extend in connection with the railway stations; supposing, for instance, you take a place 300 miles on the Agra road, north of Indore, would not any person in that station wishing to come to Bombay, or wishing to go to Calcutta, or to go to any part of India, either go up to Agra, or come down that railway below Indore; would not that be the line of communication both for passengers and for all merchandise?—In all probability it would.

2798. Is it not, therefore, desirable that the line of telegraph should follow the general line of communication, and that it should go there-

fore to the Agra station, or to a station on the Great Junction Peninsular Railway?—I do not think that follows as a matter of course: for the very same reason for which it is desirable to have a line of telegraph from the nearest point of the Great Indian Peninsular line to Indore, it would be desirable to make a line of telegraph from the nearest point of the railway to the town that you are speaking of, 300 miles north of Indore, instead of continuing the line from Indore to that place. Supposing the place were only 100 miles from the railway, it would be much better to make a branch from the railway to that particular place than to make a line 300 miles long from Indore to that place.

2799. Would it not be better, even at the expense of a considerable increase of the length of the telegraph lines, that India should be supplied with telegraphs by branch lines from the main trunk lines of railway communication than by any other means, having regard to the convenience of the general public, seeing that the general public will communicate through the railways?—It being admitted that the most desirable thing is that the main lines of railway shall be coincident with the main lines of telegraph, it would appear to be desirable that in order to connect any place off the main line with the main telegraph line, you should make a branch line from the nearest point of the main line.

2800. Therefore, the Government of India having chosen to lay out the greater part of their telegraph system, or nearly the whole of it, wholly irrespective of the railways, would appear to have laid it out in disregard to the public interests?—I do not think that the premises would be admitted; because if you look at the map you will see that, to a very great extent, the lines of telegraph are coincident with the lines of railway.

2801. Is that the case, except in the Valley of the Ganges?—Certainly, that was my impression when I looked at the map.

2802. Is there any line of telegraph coincident with the railways?—I am very much mistaken if the line between Calcutta and Delhi is not for a considerable distance coincident with the railway.

2803. Is it coincident with the railway, or is it on a different route?—My impression is that it is coincident, but I do not like to speak without having the map before me; still, that is my impression, from my recollection of the map.

2804. Do you think that it was a provident thing on the part of the Government, having regard to the fact that you must touch at Bombay, or rather that the direct line of postal communication between India and England must be from Bombay, to make no line of telegraph between Bombay and Calcutta?—There is a line between Bombay and Calcutta.

2805. Of a direct character?—That depends altogether upon circumstances. Supposing that there was, as there is, a line of railway all the way from Calcutta to Agra, and that the probability was that there would be no direct line of railway to Bombay for 10 or 15 years, it might be well worth the while of the Government of India to make a temporary line along the railway to serve during the interim.

2806. Would not it have been better for the Government to have laid out the line of telegraph along the proposed line of railway from Bombay to Calcutta, so that it could be adapted to the railway system as soon as the railway was made, instead

W. T.
Thornton,
Esq.

15 May
1866.

W. T.
Thornton,
Esq.
15 May
1866.

instead of their having taken a course which, in order to make their telegraph system efficient, would involve the pulling down and reconstruction of nearly the whole of the telegraph system of India?—I think it is quite a matter of calculation. To show what I mean, I would take the parallel case of railways; and I might ask whether it would be wise in a Government to make at once that sort of durable and solid railway which would be required 20 years hence, or whether it might not be preferable to make that sort of cheap American railway which would suffice till traffic was fully developed, and then at the end of 15 or 20 years to have a substantial railway. It is quite an open question, and it is just the same with regard to telegraphs. It might or it might not have been better for the Government in the first instance to have taken that line which would eventually be the right one, instead of taking that one which for the moment, would be more convenient.

2807. Do you think that that is a sound analogy considering that the American system was one which was devised upon the basis of the natural product of timber which existed upon the very line of railway in lieu of laying down a telegraph line in which you had to resort entirely to materials to be brought from England, and everything being of an exotic character?—The only analogy which I pointed out as existing between them was in the comparative advantages of a permanent arrangement and temporary expediency; that was all, and that is really a matter of calculation which depends upon circumstances; sometimes one plan will be cheaper in the end, sometimes the other.

2808. Can it be said then to be a temporary expedient, considering that it has been so exceedingly expensive; has it not been, on the contrary, as regards expense, a system which ought to have been permanent, but which, as regards incapacity, has been a system of a very temporary character?—I do not myself see the connection between expense and temporariness.

2809. There is nothing in their expenditure to justify the idea that there has been anything of a temporary expedient?—Yes, there has, in this manner. They have taken a line to Bombay which does not go along the line which will hereafter be traversed by the railway, and it is exceedingly probable that when the railway is finished throughout, they will then make a line of telegraph along that railway and that that future line will supersede the existing one, and in so far the present line may be called a temporary one.

2810. In coming to the conclusion that it is desirable to have telegraphy upon the basis of the main lines of communication, and that that telegraphy would be both of a railway and commercial, as well as of a Governmental character, and that the two former elements would greatly surpass in magnitude and importance the latter; do you not think it would be desirable to place the telegraphs in the hands of a separate Telegraph Company?—I think it would certainly be desirable to place the railway telegraphs in the hands of a telegraph company.

2811. Do not you think that, considering the difficulty which we have to surmount in India of the enormous expense of European supervision, it is extremely desirable to concentrate our efforts, and to obtain efficiency by bringing together the three elements of the Government, the railway companies, and the general public, into one line of communication?—If the meaning of that ques-

tion is, whether it would be desirable to place the Government telegraphs, as well as the railway telegraphs, in the hands of a private company, I should say that it was exceedingly doubtful whether that would be an advisable measure.

2812. Having regard to economy and permanent efficiency, and to the fact that the Government use of the line of telegraph is not sufficient to maintain it in a state of high working efficiency, do not you think that it is desirable to concentrate the whole into one united effort?—I think, on the contrary, it would be very desirable to have in India a competition between a Government telegraph system and a private company's telegraph system. I think it is exceedingly probable that the existence of two different systems of management, side by side, would produce an emulation between them, put them both upon their mettle, would compel each to do as well as it could, and deprive either of any excuse for not doing as well as the other, and in that manner it seems to me exceedingly probable that both would work infinitely better than if all the telegraphs were in the hands of one company. A private company in India, removed by some thousands of miles from its board of management, and having a monopoly, would, in my opinion, possess no superiority over Government agency, and would be more likely to do worse than better.

2813. Do you think that any advantage is gained from competition where the subject-matter competed for is not sufficient to sustain the competing parties?—Unquestionably if there is not traffic enough for two systems of management it would not be desirable that there should be two.

2814. But considering that, at present, the railway companies and the Government are equally sustaining a great loss; is there any reason for supposing that there would be enough telegraphy in India for many years to come to sustain two competing systems?—It is very possible that though they are both sustaining a great loss, and there is no doubt that the Government are sustaining a great loss, though it is also receiving a very large revenue, yet I think it is quite open to question whether the reason why so few messages, comparatively, are sent by the telegraph is, not because the management is so indifferent. If it were greatly improved it is quite possible that the traffic might be increased very largely, and much more than in proportion. It is quite possible that if there were two systems of telegraphs in India, and that they were administered well, and worked well, there would be traffic enough to give a profit to both parties.

2815. At present, it would seem to be in this condition, that the Government are guaranteeing two competing parties out of the public revenue, paying the loss that each occasions to the other?—I am not at all defending the present system; I think it has hitherto been very bad; and I think it very desirable that one of the systems of telegraphy should be transferred to a private company.

2816. Still, a private company, exposed to the competition of the Government, would be in a very difficult position, would it not, especially when the Government were quite content to go on with a system which entailed upon it a loss of 100,000*l.* a year?—I think it rather an assumption to suppose that the Government would be so content. My impression is, that if by the side of the Government line a line were worked by private

private enterprise, the Government would not be content with any inferiority to that private management, but would feel bound to do at least as well.

2817. Do you think that it would be possible for any private company exposed to the competition of the Government to exist, if it went upon the basis of profit and loss?—That depends upon whether the Government acts regardlessly of profit and loss. Though its main object may not be to make a profit, it does not follow that it would recklessly charge any fares whatever.

2818. If it has not prescribed for it, by the exigency of the position, the inevitable results of profit and loss, how could it be on a par with a private company with which it enters into competition?—I do not know why the Government should be supposed to be indifferent to gain. I think, in all probability, the Government would be very well pleased if the telegraph were a subject of profit to them.

2819. Still, as a matter of fact, the Government does disregard all the results of profit and loss; and do not we find that its ideas or hopes of profit easily slide into the consideration of loss, without creating any disturbance to the mind of anybody?—Judging from my own official experience, I should certainly say not. I find the Government of India complaining bitterly that some of their irrigation works do not pay, because they have charged too low water-rates; they are lamenting bitterly that they made a mistake in not charging sufficient rates in the first instance. I have not the smallest doubt that the Government of India are sorry that the telegraphs do not pay.

2820. Do you happen to know that in the administration of the Great Indian Peninsular Company, the Government nearly ruined that undertaking by enforcing upon it unprofitable

rates, and that it has been with the greatest possible difficulty that the directors have induced the Government to recognise commercial principles in carrying it on?—I think it very probable that the Government have made many mistakes in their control of the proceedings of the railway companies; but I did not know that the Government had nearly ruined the Great Indian Peninsular Railway; on the contrary, I thought that it was on the point of more than 5 per cent.

2821. That is in consequence, is it not, of the railway company having at last induced the Government to reverse its proceedings and policy?—I rather believe that one chief cause why that particular railway did not at first pay better than it did was because there were not proper arrangements for the conveyance of traffic. I recollect that you yourself, when you did me the honour to call upon me, after your return from India, pointed out some very great defects in the management of the company.

2822. *Chairman.* Is any cognizance taken in the India Office of the line between Diarbekir and Alexandria?—None at all. We know of its existence, and we know that the Turks are not in a condition to work it, and that they regret that any messages should have been sent to be forwarded by it. I find in some of my papers that Agathon Effendi represented either to Mr. Courtenay or to Major Champain that they were not in a condition to guarantee the efficiency of that line. If I recollect rightly, it is a Turkish government line.

2823. Have you got with you a copy of the Act of the government of India regulating the telegraphs?—Yes, this is the Act of 1860, for regulating the establishment and management of electric telegraphs in India. (*Producing the same*).

Colonel DANIEL GEORGE ROBINSON, Examined.

2824. *Mr. Stansfeld.* You are at present Director General of the Indian Telegraph Department, are you not?—Yes.

2825. How long have you been at the head of that department?—Since last July.

2826. Great dissatisfaction has been expressed with the working of the department in the time previously to your taking charge of it?—Yes.

2827. To what do you ascribe the defects in the working of the system?—Partly to a weak establishment, weak from false economy, *i.e.* underpaid, and too few in number. Partly to the peculiarities of India, and partly to being dependent on lines erected with great rapidity. During the mutinies, the telegraph system of Northern India was greatly injured; at the same time, its enormous value, as an instrument for political and military purposes was demonstrated. The result was the establishment of electric communication as rapidly as possible, on any kind of support, the perfecting of the lines being left to follow. This reconstruction has since been pushed on without stint; but it has had much to contend against. Skilled labour and materials cannot be commanded in India, and much of the material sent out from England, though well suited to the climate of this country, has proved quite unfit for the tropics; *e.g.* the beech tops and porcelain insulators, which were succeeded by the Brook insulator, are to be replaced by

something better. I must, however, observe that I found that the complaints of the public press against the Indian telegraph, exaggerated; indeed the opinions of the press in India cannot be accepted without reserve. The Government of India is almost despotic; the press of India, therefore, represents the opposition, and the acts of Government are the pabulum on which it feeds; and Government servants are not allowed to reply to personal attacks; it follows that the press, practically uncontradicted and irresponsible, is not always so correct nor careful in its accusations as it ought to be.

2828. With regard to the pay of those employed in your department, of all classes, do you consider that the pay is now arranged on a satisfactory basis?—Yes, I think it is, the old hands who have left the department are applying to return, those who are there express themselves very well pleased; all good evidence that the salaries are sufficient.

2829. Are you able to get efficient and reliable persons for the pay that you offer?—I think we shall do so; we are at present in want of recruits; but from the fact of those who have left the department wishing to return, I think we shall get men without difficulty.

2830. In speaking of the actual present condition of the telegraphic system of India, what results should you say are already obtained?—

The

W. T.
Thornton,
Esq.

15 May
1866.

Col. D. G.
Robinson.

Col. D. G.
Robinson.

15 May
1866.

The administrative staff have now their hearts in their work; the offices are fully manned; the signallers are not overworked; consequently, messages whilst transmitted with greater speed, are now fairer, free from mistakes. The merchants of Calcutta tell me they have little to complain of, provided their cypher messages are not interfered with. These messages cannot be thought about, consequently cannot be corrected, consequently come with more accuracy than those transmitted in English by signallers not well acquainted with the English language. I fully expect to see the Indian lines, before June 1867, equal to any in the world, excepting where the physical difficulties of the country impose peculiar obstacles.

2831. Do you refer to the system of telegraphs in India as a system existing mainly for the use and benefit of the Government, or for the use and benefit of the public at large?—I think it was constructed, in the first instance, for the Government; the first idea was to make a more speedy communication between the different military stations.

2832. And it was those considerations which determined the line which the telegraph took?—Undoubtedly.

2833. But now a wider view is recognised?—I think that the Government and the public, as well as the telegraph administration, consider the telegraph department an institution like the Post Office, *pro bono publico*.

2834. What does the public in India say to this?—They recognise this view, and are very angry if precedence is granted to anybody, even to the Government, except in urgent cases.

2835. If they think they have cause of complaint, they do not hesitate to complain?—They do not hesitate to complain.

2836. Is there any limit or check to the transmission of Government messages?—Yes, a very strong check; the check on the purse. Every message must be prepaid, even if sent by the Governor General. Every service message is also examined by a special branch of my office; and if not, apparently on *bonâ fide* Government service, and of such urgency as to justify resort to the telegraph, it is submitted to Government, who call on the sender either to pay or afford a satisfactory explanation. The result of this censorship is the reduction of the telegraph receipts for service messages from 22,000*l.* to 10,000*l.* per annum.

2837. That would operate, would it not, as a very practical check upon the discretion of the Government officer?—A very practical check indeed.

2838. With regard to the possible detention of messages in the various offices to suit the convenience of the clerks, do you think that that ever occurs?—I think it extremely improbable—impossible, as a rule. On a message being tendered to an office, the minute, hour, and date is returned at once on the message by the receiving clerk; the signaller who sends it is obliged to enter the time of despatch; the signaller who receives it into the first office into which it is received for repetition also enters time of receiving it; the signaller who sends it on gives his time, and so on, until it is sent out of the final office. Hence, when the copies of the messages are examined, any special delay is discovered and punished. Further, the date and time of its first despatch being telegraphed with the message, any extraordinary delay becomes

known to the receiver. I do not think it is possible for such a thing to occur without explanation.

2839. Do the Indo-European messages meet with any special preference on the Indian lines?—Yes; we have had a line almost constructed for their purposes, from Agra to Kurrachee, whenever there is any interruption upon the other lines, they get an alternative line granted to them without extra charge, and they have all their messages repeated without extra charge. We find very few mistakes in the Indo-European messages, that is to say, in the Indian portion; of course they come in with their mistakes from the other side.

2840. What machinery have you for examining the accuracy of telegraphic messages?—Every message is compared with the original, as sent by the sender. There is a special establishment for the purpose of examining and comparing each copy with the original message. When mistakes occur, the signallers in fault are fined. The number of errors within the last few months is very small.

2841. Have you either heard, or read the evidence which has been given before this Committee, upon the subject of telegraphic communication?—Yes; I think a great deal of it is antedated; it goes back three or four years; and there have been immense changes in the last three or four years. Great objection is made to the sounding instrument, but it is highly approved of in America, and they like it in India, they say that with the tape they cannot get good messages in bad weather, that in wet and bad weather the marks upon the tape are all blurred, and run into each other, and uncertain. I do not quite share that opinion myself, I think that we might have both the sounder and the tape on the same instrument, but the tape is almost universally objected to in India. The sounder is certainly better than the needle instrument which is used on the railways generally.

2842. What rule do you follow in the employment or non-employment of natives on the telegraph?—We have no special rules; we take native, Eurasian, or European indiscriminately; we have a few very able natives, but, as a rule, they have bad ears for the sounds, learn slowly, and cannot think in English. We want men to whom English comes naturally without having to translate it. A native reads and writes well, is careful, sober, and steady, but he is slow, and objects to moving; he does not like leaving the district he was born in.

2843. He objects to sudden removals?—He objects to all removals. If you want to move him from Madras to Bombay, he objects to going, which the other man never does. I observed it is mentioned that messages are constantly divulged in the Bazaar before they are received by the person to whom they are consigned. I do not believe a word of it; who is to divulge them? not the signallers, for they have no communication with the peons who take out the messages, and the station-masters of the principal offices are assistant superintendents; gentlemen who go out from here on very good salaries; they go out on 250*l.* a year to commence with; they would not divulge secrets; they are not signallers at all; they are clerks in charge of those officers *pro tem.*, till they get into a higher position. I think there has been some gross misunderstanding in the matter; I do

not

Col. D. G.
Robinson.
—
15 May
1866.

not know where people could have got the idea. Another thing is, that some of the signallers have risen to a very high position; one is receiving 1,260*l.* per annum. Surely, if such general bribery and corruption ever existed, some of these would have known and exposed it. Then, I feel sure that the times which messages are said to take to go from Calcutta to Kurrachee, and from Bombay to Kurrachee, have been rather exaggerated. We look upon 18 hours as an enormous time for a message from Calcutta to Kurrachee, which is 1,700 miles; the average is about 4½ hours, and sometimes they go in half an hour. I see it also mentioned in the evidence that a station-master gets no extra pay; whereas the fact is, that he gets from 4*l.* to 8*l.* a month in addition to his ordinary pay, free quarters, and a uniform.

2844. Have you any reason to suppose that the servants of a private company would be more accurate or less liable to be bribed than those of the Government?—Most assuredly so. It is notorious that private companies in India cannot command honest agents; were it otherwise we should see a great deal more English capital invested in commercial operations in India, operations that require only honest agency to ensure most handsome profits. The Government, on the contrary, has a great command of agents. Its service is permanent; it grants liberal pensions, and its servants have better position and better prospects of advancement. Moreover, sins of omission and commission against the Government are not so likely to escape detection as those against a company. It is hardly possible that all the corruption in the railway disposal of traffic which has lately been brought to light could have been unknown to the civil authorities all over India; they, uninvited, took no notice of them; but had the railway been a Government institution, it would have been their duty to have at once investigated the truth of the rumours and reported them to Government.

2845. Have you any knowledge of the working of the railway telegraphs?—They work very fairly, but they do not pay their signallers anything like as high as we do, nor do they expect the same amount of work from them; they work principally with the needle instrument. I know the superintendent of the East India Railway Telegraph very well; he frequently comes and has a conversation with me about telegraphic matters; he is my informant that they cannot afford to pay so well, and cannot obtain such good work, as the Government department; that they cannot afford to pay anything like what we pay for signallers.

2846. Do not you think that their service is done well?—They do it fairly, but they do not expect the same amount of work, and they have natives almost entirely.

2847. To what extent do the Government telegraph lines follow the lines of railway?—Where a railway is open, almost entirely. We can make no use of a line until it is open, especially in a hilly country, or where there are rivers; it is easier to travel on any country foot-path. One of my best measures was to alter the line from Benares to Allahabad, because the Jumana Bridge was opened; to have done so before would have been inexpedient. We take the best communication that we have, and when that communication ceases to be the best we take the new one; we open a new line and take down the old one, and utilise the materials

2848. And do you, wherever you can, bring the Government line of telegraphs into harmony with the line of railway communication?—Yes, before I left India I made a proposition to the Government to give two classes of licenses, the present license is limited; I proposed that one license should be for those companies who would not combine in a general system, and a first-class license for all those who were prepared to go into one general system for the whole of India; we do now work with the railways almost in every case. Many messages travel by the mixed line, of railway and Government.

2849. Are there any important telegraph lines near which there are neither railways nor roads?—Yes. The line to Arracan and Burniah is for many miles through an almost uninhabited forest; that from Kandy, in Ceylon, to India is almost as bad, so are the lines on the east and west coast of southern India; the lines in Assam, between Mooltan and Kurrachee are also badly off as regards roads for inspection. A principal mode of moving in those countries is by water. From Chittagong to Ateyab there is no post road.

2850. How would such a line as that be inspected and maintained?—The men have to cut their way with hatchets through the jungle and to travel upon elephants.

2851. It is necessarily very difficult and very expensive labour?—Yes, it is very difficult and very expensive, it is a very important line, it leads to the great rice ports, but the country through which it runs is terribly unhealthy, wild and unmanageable. Shortly before I left Calcutta, wild elephants had destroyed a mile and a half of line in one night; and at all times men are afraid to travel through the forest, so infested are they with wild animals. You cannot compare India with England, the terms are not commensurate.

2852. What is your opinion upon the subject of separating the management of the railway telegraph lines from the management of the railways?—It is hardly my province to speak about that. I should think it would be better carried on by the railways, the work would hardly pay two administrations.

2853. And would you have the railway telegraphs exist mainly for the use of the railway lines?—Undoubtedly there is a great advantage in the railway officials having the thorough command of their own telegraphs. The Railway companies possess peculiar facilities for transporting their stores and inspecting their lines. On the East Indian Railway, the wires are in some places carried on stone monoliths, weighing, I should say, roughly, 2½ tons each. No private company could afford to use such weighty materials, but the railway authorities avail themselves of empty trucks for their transport, and have other similar advantages.

2854. Just to come back to the question of the proper direction of the telegraph lines, as rapidly as you could affect the change, you would approve of the telegraph being laid down along the lines of railway, and connected with branch telegraph lines with places right and left?—No, I do not like telegraph branch lines, we like loop lines, so as to give an alternative in case of anything going wrong on one line.

2855. As a matter of fact, you are gradually bringing the Government telegraph system upon the lines of the great railway communication?—Yes, and we have been doing so for some years, and not only with regard to the railways, but where the Government are making a new trunk road,

Col. D. G.
Robinson.

15 May
1866.

road, and the telegraph runs three or four miles from it, we bring the telegraph on to the road.

2856. *Chairman.*] Do you know how many lines of wire the East India Railway Company has upon its posts?—It varies very much; in some parts there are two, in others four, and in some six or eight.

2857. How many wires have the Government upon the lines constructed upon the railways?—I think the Agra line has three wires.

2858. I suppose those monolith posts of the railway company would carry any amount of wires?—Yes, they would undoubtedly.

2859. How far do they extend?—I do not know exactly; they are not very numerous. I have seen very few of them. I should say that the greater portion of their wires are upon the old wooden posts.

2860. Do the Government pay the railway company anything?—The Government rent a wire from the Sind Railway, until their second wire between Kurrachee and Hyderabad is ready, they do not pay for putting their lines on the railway; they only just carry the telegraphs parallel to the railway, just inside the fence.

2861. Have the Government no offices within the railway stations?—None whatever.

2862. So far then as there are upon some portions of the railway lines the Government and the railway telegraph system there is a double service?—There is a double service, but they do not largely interfere with each other, the railway get all the traffic of short distances, *i.e.*, between places where there are no Government offices, Between Burdwan and Calcutta there are no Government offices, but many railway station offices.

2863. The railway telegraph does not connect with Calcutta, I believe?—No, it does not come into Calcutta.

2864. How does the Government wire come into Calcutta?—By a cable under the river, at Barrackpore, 14 miles above Calcutta.

2865. Where the Government line is transferred to the railway line the whole length of its course from Calcutta to Delhi, they would have for about 1,100 miles, two parallel systems competing with each other?—Yes.

2866. Would not that strike you to be, to a certain extent, a waste of money?—They do not fully compete with each other, because the railway stations are not in the towns. The railway station at Patna is pretty close to the town of Patna; but the Patna civil station, where the Government telegraph office is, is a mile and-a-half or two miles from the railway.

2867. In other words, to make the railway system as useful to the public, you would have to establish connections between the stations and the different towns?—Yes.

2868. For which no capital is guaranteed by the Government?—None whatever.

2869. You stated that you thought that some of the complaints which had been made of the working of the Government system were exaggerated?—I think so.

2870. And also that they are antedated?—There is no doubt that two years since messages were very slow, but when I took charge in July last, I was surprised to find that the great mass of messages were not near so long in transit as I had understood them to have been. I particularly remember noticing that if messages went all the way to England at the same rate as to Kurrachee, the time would be only 2½ days.

2871. Was not it about that time that the

public had been complaining bitterly of the delay in the transmission of their messages from Kurrachee to India?—Yes.

2872. To what cause was that dissatisfaction due?—I imagine that a good deal arose from the line not being in good order, from the want of insulation and the enormous distances between the stations, which were perhaps 150 miles apart; hence, when an interruption occurred, a man had sometimes to travel 70 or 80 miles ere he reached the injured portion. When an interruption occurs the line rider of the office at each end of the interrupted portion immediately starts to travel along the line until he finds and repairs the part injured, or meets the other line rider; where there are railways they travel by rail, otherwise on elephant, camel, horse, or foot, according to the nature of the country. This, of course, involves a delay of many hours, sometimes days.

2873. Was there only one wire between Kurrachee and Bombay for messages both ways?—Yes, only one for messages both ways.

2874. So that you were obliged to clear occasionally all messages to be sent in one direction on the other wire?—Messages to and from occupy the wire alternately.

2875. And the line had no insulators upon it in some places?—There were no insulators upon the greater portion of it.

2876. That was the condition of the line, was it not, before the Persian Gulf line was opened?—I should rather say there were insulators upon all the lines; but they were such bad insulators that they were not of any use. They first tried the experiment of porcelain insulators, which is what is usually used in England; but they were not found to answer in India, on account of the great fall of rain, which is sure to find its way into every crack, flaw, or porous portion that can absorb moisture; then the electricity from thunderstorms charges the wire and splits the insulators.

2877. Is that of frequent occurrence?—Yes; I have known as many as 10 posts destroyed in half-an-hour by lightning.

2878. In what part of India?—In any part of India, the wooden tops of the iron Hamilton standards suffer in the same manner as the insulators from lightning.

2879. Do you recollect when the line was made between Kurrachee and Bombay?—No; it was opened long before I had anything to do with it.

2880. Whatever it was, no addition was made to it, and no particular provision was made for enabling it to receive and to convey the great amount of European traffic which was to be expected from the opening of the Persian Gulf line?—A special wire between Kurrachee and Hyderabad was rented from the Sind Railway Company, and no extra wire between Hyderabad and Bombay has been waiting for insulators for some months past, as many insulators as the manufacturers had turned out were sent overland last month, at an expense of nearly 2,000 £, at my urgent request.

2881. Where was the wire waiting?—On the ground, waiting for the insulators at different places, ready to be put up the moment the insulators arrived.

2882. Where are the insulators at this moment?—I think that they are probably being put up at this present moment; I passed them at Alexandria in the middle of April.

2883. Then within a reasonably short time there will be a double wire from Bombay to Kurrachee?—Yes, and I hope there will also be

be a double wire also from Kurrachee to Calcutta properly insulated.

2884. I see a long letter addressed by yourself as officiating Director General of Telegraphs to the Secretary to the Government of India, dated the 18th of October last, on the subject of re-organization; that, I suppose, embodies your views as to the measures which, in your judgment, ought to be taken for altering the system?—Merely for altering the administrative system.

2885. Have you made any other report?—On my way home from India I wrote a report upon the past three years, with recommendations as to what should be done to make the line thoroughly effective; the principle I advocate, is to be always in advance of requirements that may be thrust upon us, and to use the best material that European science has or may devise.

2886. Have you a copy of that report?—No; I have no copy of it. I sent it to India to be submitted to the Government. If I had known of this Committee, I should have brought it with me; I sent back an immense number of valuable documents and statistical returns showing the results of the working of the past three years, which would have been undeniable and conclusive evidence of the state of the Indian lines.

2887. I take it to be the general tenor of your evidence that the defects in the Government telegraphic system of India were due originally to the imperfect construction of the lines?—Partly to the imperfect construction of the lines, and partly to over economy in regard to the establishment; striving to save money.

2888. In both which respects you, since you have taken charge of the office of Director General, have pressed your views strongly upon the mind of the Government?—Yes, and the Government have given me every thing that I have asked for.

2889. Mr. Stansfeld.] Does your report, which has been put in, describe the system of superintendence and dividing the various lines into districts?—No, I have it in my pocket; it is only a working map, which I happen to have with me (*handing the same to the Honourable Member*).

2890. This map shows that you have subdivided the responsibility of management?—Yes, each superintendent is responsible for the working of that portion under one colour, as shown on the map; he is assisted by four assistants who have complete charge of the executive of the subdivisions, the object being to make every person take an interest in his work.

2891. So that every appeal is no longer to head quarters?—All appeals from the public come to head quarters.

2892. And are they then sent down to those superintendents?—No; we have the means at head quarters of investigating complaints; every message, original and copied, goes into a special department in the Calcutta Office for examination.

2893. And the business is managed in each of those districts by a superintendent?—Yes, the actual maintenance and working of the lines are.

2894. And the business of the whole is revised at the head office at Calcutta?—It is supervised by the Director General, whoever he may be. The Calcutta is a kind of audit office.

2895. How many such districts are there?—Fourteen.

2896. How many miles of telegraph commu-
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nication altogether are there in India?—About 14,500.

2897. That includes the Government lines only?—Entirely the Government lines; we have nothing to do with the railways, beyond requiring that they should work on the same system as we do; I mean the system of interchange; and this is solely for the convenience of the public.

2898. Do you at all know the amount of the gross revenue at present?—It was about 100,000 *l.* last year.

2899. When you speak of 14,500 miles, do you mean miles of wire?—No, the lines.

2900. What is the amount of the annual loss?—Setting aside the interest upon capital, it is about 40,000 *l.*; not more.

2901. That is the loss upon the working?—Yes, that is the loss upon the working; the whole interest upon capital you can hardly look upon as loss, because the wires were all destroyed in the Mutiny, and a great deal of money has been expended on military expeditions, such as Bhootan and Umbela, and so on, much of which is charged to capital.

2902. So that at any rate it would be perfectly unsound to charge the actual capital expended to the capital account?—That would be hardly fair.

2903. With reference to that loss of 40,000 *l.* a-year, to what do you attribute that?—India is a poor country; that is to say, though the aggregate wealth of India may be great, the masses are poor; there are comparatively few people who can afford to use the telegraph; the Government employes cannot do so largely, the number of produce merchants, the class who find it valuable, is limited; compared with the area the wealth of the inhabitants is not great.

2904. Would you propose to raise the fares?—I have raised them.

2905. And do you anticipate a reduction of that loss of 40,000 *l.* a-year?—Yes; I think in three or four years the telegraph in India will pay its working expenses, perhaps more.

2906. Chairman.] Do you assume it to be a probability that, as the railway lines are completed in India, the Government will put telegraph wires upon them?—They will shift their lines which are in the neighbourhood on to those railways.

2907. So as to bring, for instance, Bombay into communication with Jubbulpore direct, which is not the case at present?—No; Jubbulpore and Bombay are only two points on an unfinished railway which are not in direct communication.

2908. Is there no direct communication now between Bombay and Nagpore?—The rail from Bombay to Nagpore is not completed. There is a good mail road between Nagpore and Mirzapore by Jubbulpore; but no rail nor immediate prospect of a rail communication.

2909. You stated, did you not, that the number of Government messages had been very much reduced?—Very largely.

2910. Is that from an abuse beforehand in the sending of messages by the Government officials?—Not exactly; it was more carelessness and want of consideration; unless the message is really of such urgent importance that it ought to go by telegraph, it is not now permitted to go by telegraph.

2911. That is to say, you restrict the use of the telegraph for Government purposes as much
X as

Col. D. G.
Robinson.

15 May
1866.

Col. D. G.
Robinson.

15 May
1866.

as possible, in order that the public generally may have as much use of it as they can get?—Certainly; we endeavour to serve the public, and to obtain from them as much revenue as possible to cover our expenditure.

2912. Sir Charles Bright.] You state that great changes have been made, and immense improvements have taken place during the last three or four years; will you state the nature of them and the locality?—There has been a great improvement in the position of the establishment, the salaries have been gradually raised, the number of signallers has been largely increased, more pains has been taken to get a better class of men, and a check office has been established, which I explained just now; a creation of the last three years. Hamilton's standards have been very largely substituted for wooden posts; a new and excellent class of insulator is now being sent out; the lines have been strengthened and brought closer to the roads, and everything that could be thought of is being done to make them equal to any in the world. The insulators were ordered some time back, but there has been great delay in the manufacture; what the Indian lines require is time.

2913. The old system of insulation, till just before the time when Colonel Douglas left office, was altogether defective, was it not?—I think it was as bad a system of insulating as I have ever seen.

2914. How do you account for that, only having been discovered at so comparatively recent a date?—I think it was discovered when it was first sent out. I do not know why the Government permitted the use of Sir William O'Shaughnessy's insulators; but I fancy that he was their scientific adviser in England, and he thought it the best insulator of the time.

2915. Whereas nothing could be worse?—No, nothing could be worse.

2916. You say that the reason of many of the lines being deficient is, that they were run up in a hurry, as the original lines were destroyed by the Indian Mutiny?—Yes; and because their immense value was then first fully appreciated.

2917. That does not apply to the line between Bombay and Kurrachee, does it?—I do not know anything about the history of that line.

2918. The mutiny would not have affected that line?—I do not know that even the line existed then between Bombay and Kurrachee.

2919. That it was erected afterwards, is a fact I know, but are you acquainted with the route of the line between Bombay and Kurrachee?—Pretty well; I have never seen it, but I know its character very well.

2920. A great portion of it crosses the Runn of Cutch, does it not?—Yes; it is a very difficult route in every respect.

2921. But notwithstanding those improvements were being effected in various parts of India during the last three or four years, (I am speaking of a line prior to your taking office) it does not seem that anything was done to the Bombay and Kurrachee line, in order to improve it?—It has been gradually reconstructed, the whole of it. I think there is a letter of mine before the Committee from the then director of Bombay, in which he says that the whole line is nearly reconstructed, and that he is only waiting for insulators.

2922. We have it in evidence that as lately as the month of March last, messages were still

taking an average of upwards of two days between Bombay and Kurrachee?—I do not think that that can be correct.

2923. It is stated as having been taken from the daily returns by the telegraph department in Bombay?—My recollection is, that when in working order, a message rarely takes eight hours, which we consider far too long; about that time there was prolonged imperfect communication, due to a flaw in the wire, which was concealed by the rust, and only discovered by testing the whole length in small sections.

2924. Mr. Knight stated that there was a maximum and minimum of delivery with reference to the service between Kurrachee and Bombay, from February 1st to February the 12th, of four days, three hours, and 31 minutes, and that a single message came through in a minimum time of four hours. I make out the mean of those to be 51 hours and three quarters?—You cannot take maxima and minima as at all representing a mean, because one maximum will vitiate the whole of the calculation; the maxima are generally due to accidents or other abnormal causes; minima are far nearer the mean; neither can be accepted as more than indications of what can be done and what may happen.

2925. The same statement goes on to say, at Question 2425, "In the middle of January the Indian telegraph rates were considerably increased, and the public naturally looked for increased efficiency; but, instead of this, we believe that the lines throughout India were never in a worse condition than they have been since the increased tariff came into operation;" should you think that an exaggerated statement?—Certainly. I think I know that extract from a newspaper.

2926. Do you consider that the newspapers in India do not supply us with reliable information?—I can only answer for myself; since I have had charge of the telegraph I have found every notice in the newspaper incorrect. The first complaint I saw was of a mutilated message received into India precisely as it was issued, and repeated three times over at my special request ere it was issued. The next was a cypher message sent out to the wrong party, because the whole name of the firm was not given; in this case the real owner assured me it was quite correct, but entreated that I would not reply to the article, because it might seriously injure their firm if it became known that that telegram was addressed to them. We do not reply to attacks in the newspapers; but there is a special clerk, whose duty it is to bring to the notice of the Director General all paragraphs on the subject of telegraphy generally; complaints made either in newspapers or otherwise, are always investigated, and we are always thankful for any information that may enable us to correct faults, and improve the administration; but some time before the extract you read just now was published, I think the same, certainly a Bombay, paper, congratulated themselves that Providence, or someone else, had improved the telegraph to a marked extent; credit was withheld from the department.

2927. In speaking of divulging messages, you said that you did not think that there had been any cases of any importance of that kind?—There were some in Bombay, which were traced with great difficulty, and the parties were very severely punished; but I think it is quite an exceptional thing.

2928. Do you not remember a case to which considerable

considerable public attention was attracted, not more than twelve months since, of two native merchants being punished with imprisonment for bribing the officials?—Yes, this is the same case, I think, as well as I can remember, two signalers, no longer in Government employ, were bribed to cut the wire and take the messages.

2929. Did you ever see a memorial addressed from the merchants at Kurrachee to Mr. Mansfield, the Commissioner of Scinde, complaining of the very fact which was referred to in evidence, of messages being known in the bazaar before they were known at the merchants' offices to whom they were addressed?—No, I never saw it. A signaller is not allowed to leave the office when he is signalling.

2930. The Peons are, are they not?—Yes, the Peons are, but the signaller does not give the message to the Peon, but to the officer in charge, who is an assistant superintendent, or an officer in the department, who looks forward to rising to 1,500 rupees a month.

2931. I think, generally, your statement is to this effect, that considerable improvements are in course of being made, but we have not yet had time to see the effect of them upon the working of the telegraph system?—Hardly. They do show themselves. Whenever a message takes 18 hours between Calcutta and Kurrachee, we call for an explanation; but that is a very different thing from three weeks, as somebody said. I think it was Mr. Walton who said that it took from three days to three weeks between Bombay and Calcutta; I never heard of its being so bad as that at any time; whenever the telegraph is not so much per cent. quicker than the post, a refund is given.

2932. What do you consider a fair time for a message from Kurrachee to Calcutta, now?—Four or five hours; and it would be less if there were no local messages cutting in.

2933. In other words, you have not wires sufficient for your through traffic and your local traffic?—No, not yet; but they are being put up.

2934. When this second wire is through from Kurrachee to Calcutta, I suppose from half-an-hour to 40 minutes would be quite enough as an average?—Yes; we have sent direct to Kurrachee, *i. e.* instantaneously.

2935. Between Kurrachee and Bombay, what time should you suppose would be taken when the improvements are finished?—We should send directly.

2936. The average would be 10 minutes or a quarter of an hour, I suppose?—It would be merely the time to signal, nothing more.

2937. When will those improvements come into effect, do you suppose?—I hope before the end of July.

2938. You said that you thought that the management of the railway telegraph lines would be better left with the railway company; what is your reason for thinking so?—It is almost beyond my province to speak on this subject; I certainly consider it false policy to divide responsibility; why should the rail authorities hand over this part of their working to any one else? a single line of rail cannot be worked without a telegraph; if that administration fail, the rail must fail too; the rail is so completely dependent on the telegraph as to be at their mercy.

2939. You are probably aware that in this country the telegraphs along the railways are worked by the telegraph companies, and that

separate wires are reserved by them for the commercial work, and also for carrying railway messages and signalling railway trains?—Then in that case the Railway Telegraph Company becomes a part of the railway administration under a different name.

2940. Do you see any reason why, supposing a line of telegraph were complete along the railway between Bombay and Calcutta, that telegraph should not be worked by a separate telegraph company, the railway service being done as in this country by the telegraph company as well as the transmission of public messages?—Then you divide the responsibility; the railway people can do their own work, or certainly they ought to do it more satisfactorily than if they got some one else to do it for them.

2941. But a railway company is scarcely suitable, is it, for carrying public messages; it is a different trade, is it not?—You have a special and separate establishment, and can have special wires for the public; but to give the working of the railway telegraphs to a separate administration, is about as wise as to hand over the police, the working of the locomotives, or any other branch of their business; you may have special lines for the purpose.

2942. You think that the system which exists in this country of having wires upon the same poles along the railways for railway purposes and for telegraph purposes would not suit so well in India?—All the lines in England are double, or chiefly so; but where there is a single line of railway, then the whole of the safety of the line is in the telegraph; you cannot move without a telegraph.

2943. Is it not better, therefore, that the telegraph should be worked by persons specially trained to it, and that it should not be left to the care of railway porters?—It is not so; they have got a separate establishment, and a separate superintendent for telegraphy only.

2944. Supposing such a line of telegraph were finished between Bombay and Calcutta, do you see any objection to the working of it being in the hands of a private company?—None whatever, beyond what I have mentioned.

2945. Mr. Marsh.] You say that there is a line to Rangoon; is that fixed upon the trees or upon posts?—On posts, unfortunately; the elephant grass and creepers soon reach the wire and cause interruptions; and that, too, at the season of the year when those malarious tracts are deadly. Just as I left Calcutta, my deputy, Major Murray, started to inspect this line, and to endeavour to devise some means for ameliorating or removing those difficulties.

2946. Would there be any great difficulty in continuing that line to Singapore along the coast?—Enormous practical difficulty, from the wild nature of the country.

2947. Is there a line of telegraph by land being constructed at present between Kurrachee and the head of the Persian Gulf by Bushire?—It is under consideration. I met Colonel Goldsmid at Madras, and we had a talk upon the subject; he was there on his way to the Governor General to try and induce him to support a direct line from Kurrachee, avoiding the Gulf altogether.

2948. That would be very preferable, I suppose, and could be done?—It would always be liable; in other respects it would be preferable to a cable, to being injured by mischievous people among the wild tribes.

Col. D. G. Robinson.

15 May 1866.

Friday, 18th May 1866.

MEMBERS PRESENT :

Sir Charles Bright.
Mr. Brooks.
Mr. Childers.
Mr. Crawford.
Mr. Laird.
Mr. Marsh.

Mr. Moffatt.
Sir Henry Rawlinson.
Admiral Seymour.
Mr. Stansfeld.
Mr. Weguelin.

ROBERT WIGRAM CRAWFORD, Esq., IN THE CHAIR.

JOSEPH D'AGUILAR SAMUDA, Esq., a Member of the House ; Examined.

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Samuda,
Esq., M.P.

18 May
1866.

2949. *Chairman.*] THE Committee wish very much to have the benefit of your advice and information as to the effect produced upon the cost of working steamers by increasing the rate of speed. It appears that, according to the present contract between the Government and the Peninsular and Oriental Company, the company are bound to perform the voyage from Suez to Bombay in 312 hours. The distance being 2,972 miles, which gives an average speed of $9\frac{1}{2}$ knots an hour. If it were proposed to increase that speed to 11 knots an hour, what should you consider to be the proper equivalent to be paid to the company in consideration of the extra speed thus given by them to the public?—That would entail a consumption of 7,800 tons of coals, if the voyages were performed weekly, and a cost of about 27,000*l.* in money. I take it in this way: 11 knots would require 60 tons of coal per day, and the present consumption of coal, as it actually is taking place, I am informed, is 44 tons a day, to produce $9\frac{1}{2}$ knots. The difference by that calculation, taking into account the reduced days of voyage, would be 150 tons per voyage, and 150 tons per voyage, multiplied by 52 voyages, will give 7,800 tons a year; therefore, on the Indian side, you will have to increase the cost by 27,300*l.* for coal. I have also taken on the European side to increase the speed to 12 knots an hour, and running the same number of voyages, you will require to increase your consumption of coal 169 tons a voyage, or 8,800 tons in the year, or 15,800*l.*, that is between Marseilles to Alexandria. That would give a total of 43,000*l.* a year additional for coal, if you accelerated the speed from 10 knots, which is the present speed on the European side, to 12 knots, and from 9 or $9\frac{1}{2}$ knots, which is the present speed on the Indian side, to 11 knots; and a voyage weekly, each way, that is, 52 complete voyages out and home, or 104 trips. Then I have taken 36 tons per day as the quantity which they are burning on the European side, going at 10 knots an hour, which I am informed is their quantity. And I would call the attention of the Committee here to the reason why I have suggested a difference of a knot an hour in the two services, and so small a difference in the quantity of coal for the different speeds. It is a generally well known thing that coal deteriorates very much indeed in hot climates; it is difficult to keep it so useful and so good as in Europe; and I have made an al-

lowance that you must require one-fourth more coal to do the same quantity of work in India. The figures given to me by the Peninsular and Oriental Company, of what they actually find is the case, exceeds that one-fourth; but I think that one-fourth is a very fair allowance, and I think you must not attempt to get those differences quite exact, for this reason: that there is a very great difference between using Welsh coal, and using Newcastle coal; the difference is as much, probably, as 25 per cent. In the case of the vessels on their near home service, they no doubt are all supplied with Welsh coal, but I should imagine (I do not know it for a fact) that on the Indian station they, occasionally, are obliged to take ships with North country coal, and that may quite sufficiently account for the fact being, as given to me, that it now exceeds the allowance which I have made on the Indian station.

2950. *Mr. Marsh.*] Do you know that at Ceylon they have almost entirely north country coal?—I do not know what they use there. It would certainly be wiser if they could get it, to use all Welsh coal, but I can imagine that it is almost an impossibility; they are obliged to take ships from different parts, just as they are able to get them, because they want such a large quantity.

2951. *Chairman.*] You mean that if four tons of coal will do the service of four tons here, four tons of coal in the East will only do the service of three tons?—Exactly. I have looked at the matter in this way: What are the present speeds, and what could be obtained; and when I have suggested what could be obtained, what would be the means that would be necessary to call upon a company to provide to obtain those results, and the expense consequent upon it, of vessels and everything of the sort. I should propose, not only as a good service, but as the greatest that you could possibly recommend with the present amount of experience, that 12 knots might be fixed for the accelerated speed on the European side, and 11 on the Indian side. In order to do this, I should propose to put upon the Indian side vessels of 2,400 tons burden and 500-horse power, and those vessels would burn about 60 tons of coal per day; those vessels would have the power of carrying 350 tons of cargo, in addition to their stores, and 550 tons of coal; that is, nine days' coal. That would require the vessels to stop at Aden, and I should almost fancy that on the whole

whole it would be more advisable that they should stop at Aden; but if it were deemed so desirable that everything else should give way to their going the whole journey without stopping at all, they would require to carry 800 tons of coals; that is to say, they must carry about two days more than is necessary for the expected length of the voyage, and they would have to abandon that quantity of cargo. Therefore that would reduce their cargo to 100 tons. Practically, if you insisted upon the vessels making the journey without stopping at Aden, you would have to abandon the cargo.

2952. And reduce the earnings of the ship simply to mails and passengers?—Yes, you would only be able to take 100 tons of cargo instead of 350.

2953. *Sir Henry Rawlinson.*] There is the difference of being heavily laden?—That you would have to provide for again, but it would be no profit to you. That would be easily provided for by building vessels on the plan which we have adopted in some cases, viz., of building them with double bottoms, and when the vessel becomes too light from the consumption of coal, substituting water in between those double bottoms; ballasting the ship with water when the quantity of coal was nearly burnt out, would be a mere question for the comparative increase of subsidy owing to the decreased power of earning in the shape of cargo. The same vessels would be required in both cases.

2954. *Chairman.*] In the next place, judging by the experience which we have of the increase in the amount of the mails; 100 tons might in the course of a long contract be found to be no more than sufficient to accommodate the mails, especially if provision had to be made for a sorting room on board?—I do not know about 100 tons for mails, that seems a very large amount.

2955. We have had evidence of the mail sent to Australia in November last, amounting to 106 tons?—I was not aware of that; you will understand that I am alluding to dead weight, and you would have with those 100 tons a great amount of space for light things like mails; but you would not have the power of putting more than that weight with the displacement of the ship, which I have provided for, and the displacement of the ship regulates the quantity of coal that is burnt. Then on the European side I should also propose to use vessels of the same size, namely, 2,400 tons, and of the same power; they have a much easier task to perform, as their journey is only 1,500 miles. Therefore, there is no difficulty in carrying their coal. On the European side, going 12 knots an hour, the consumption of coal would be as nearly as possible the same as on the Indian side going 11 knots, the consumption of coal on the European side would be 58 tons a day. Reviewing the ship which the company possess for performing this service, it occurs to me, that for the Indian side the "Simla" is the only one that I should retain, and I think that the "Simla" with new boilers would be capable of taking her place as one of those ships. Then five new ships would have to be added, and the cost of those five ships with their engines would be 110,000 *l.* each, and that would involve 550,000 *l.* On the European side I should propose to use the "Ceylon" as she is. I should propose to put new engines in the "Golconda" and the "Moulton," with a cost of 33,000 *l.* in each case; and I should propose to

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lengthen the "Carnatic," and to put new engines into her at a cost of 63,000 *l.*; so that 130,000 *l.* would have to be spent on the European side, or a total of 680,000 *l.* Therefore, I make it that 680,000 *l.* will have to be spent to enable this increased velocity to be attained and to be maintained.

2956. Do you consider that six ships of that power would be sufficient to keep up a weekly communication with India?—I think they would; if six vessels were used, each vessel would have a 13 days stay at Bombay, and six days at Suez, and I think that is enough; seven vessels probably might be better.

2957. Do you mean six ships on the other side?—Yes.

2958. How many on this side?—Four on this side.

2959. *Mr. March.*] That is only from Marseilles?—Yes, that is only from Marseilles; I have not taken account of the Southampton line at all; and have left that out expressly, because I do not think it would pay to make the alterations, and to accelerate the speed upon the Southampton line.

2960. The speed is not so much required on that line?—I do not think it is; I consider that they have got the mail route marked out to go through France, and any advantage that may result from the ships carrying cargo on the Southampton route, would, in my opinion, be better than increasing the speed.

2961. *Chairman.*] What time do you suppose would be required to enable the Peninsular and Oriental Company, or any other company (provided always that money was in hand, and that no finance company was to be called to the aid) to provide those ships?—At the very least 18 months.

2962. And the additional time of putting the ships on the station in India?—Yes; I mean to provide them from the builders; if they gave the order for them to morrow they could not have them in a fit condition to go to sea for 18 months at the very least.

2963. You would consider it proper, would you not, that any company obtaining a contract under such conditions, should have the contract in the nature of a lease, with sometime to run?—Yes, no doubt; because those vessels, if they happened to be thrown upon their hands, would be even more difficult to make profitable employment of than their present vessels.

2964. What should you consider to be a fair time for such a contract, having regard to the large outlay which you have suggested?—Upon that point my opinion would not be perhaps so valuable as that of many Honourable Members on this Committee, but I should suppose about seven years.

2965. I mean with reference to the probability of repairs which such ships would have to undergo in the course of their service, and in that respect your experience would be useful to the Committee?—But I look upon it more in this way, that if those vessels were ever diverted from the service which you engage them for, and went about seeking employment, in all probability they could only obtain it by submitting to a very large amount of depreciation upon their original cost; and if they had had seven years employment on one service, the Company ought, I think, by prudent arrangements of commerce, to have laid by a sufficient sum to meet that depreciation, which would

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would enable them to do so, with a fair probability of avoiding loss. If you took those ships, and set them adrift 12 months after you have started them, it would in all probability result in a very great loss to the company before they could fall upon their legs, and find another employment for them.

2966. From your knowledge of the vessels which the Peninsular and Oriental Company are employing at the present moment in the Eastern seas, do you think that any of them could be used for the purposes of this Indian Mail from Suez to Bombay, at a rate of speed in excess of the present speed, but not so high as you have been contemplating?—I think that with some slight modifications and alterations, they could be employed in excess of their present speed.

2967. To what extent?—I should have thought a knot an hour.

2968. That would be $10\frac{1}{2}$ knots instead of $11\frac{1}{2}$?—I fancy myself that they only go 9 knots, instead of $9\frac{1}{2}$; but whatever it is, it might be a knot more, if you take the papers that have been given in, I will tell you what I refer to. In the papers of the Select Committee on Communication with India issued in April last, at page 16, the speed of the mails is given for the year 1865, and there I find that the average for the year is given between Marseilles and Alexandria at 10 knots; from Suez to Bombay at 9 knots; and from Suez to Calcutta at 10 knots.

2969. Under the contract, as it at present stands, and which was modified in the month of February last, the vessels are bound now to perform their service, not at a rate per hour, but to complete their voyage within a certain number of days. And the result of that which I stated in my first question to you was to bring the service between Suez and Bombay at $9\frac{1}{2}$ knots?—Yes. But then I find by another paper put in by Mr. Hill, that the service is stated in this way: the contract time of 10 knots, reduced for deviations from the straight line of half knot to, say $9\frac{1}{2}$ knots, would give 14 days 2 hours, and that the ships have performed the voyage in 13 days, 23 hours, and 53 minutes. They really have performed the voyage 7 hours less than the contract time; that makes it $9\frac{1}{2}$ knots; but still I fancy there is a further allowance in that which I do not see, because it does not work out 312 hours, the contract time, and 3,000 miles at $9\frac{1}{2}$ knots an hour, makes 13 days; but the time, as given by Mr. Hill, made 14 days, and that is a part of the case which puzzles me. But be that as it may, vessels, such as their new ships, the "Carnatic," the "Rangoon," the "Baroda," the "Delhi," and the "Golconda," are vessels which ought to have been able to have done at least 10 knots an hour.

2970. The Committee may consider it to be your opinion that, in the present state of nautical science, the contract speed of $9\frac{1}{2}$ knots an hour, on a great main line of communication, is hardly up to the standard of the present day?—I think not; I think that you ought to have the best service you can get, and this speed appears to me to be too low. But of course, in making that observation, I wish to call the attention of the Committee to the fact, that in getting the faster service, it involves a great deal beyond what has been done previously. I do not know that any contract has ever been given yet so high as 12 knots an hour. The contract speed obtained by the West India Mail Company is $10\frac{1}{2}$ knots; I do not know what their contract requires of

them, but they obtain $10\frac{1}{2}$ knots. The contract speed obtained by the Peninsular and Oriental Company on the European side I have known myself for a long time to have been about $10\frac{1}{2}$ knots, from the observations which I have taken of some of the vessels that they have running now, without going into the whole average. Therefore there could be no difficulty in that being maintained there.

2971. Are there any other elements which would enter into your calculation of the increased cost in consequence of the increased rate of speed?—There are other elements; but I have not taken them into my calculation because they do not come exactly within my own province. But there would be some slight additional cost in maintaining those large ships. The wear and tear, of course would be great, and the interest of money, and the depreciation that would follow would be with reference to the outlay made; but the principal additions are what I have stated to the Committee.

2972. The extra cost due to the item, coal, would not be the only additional expense?—No, not the only element; but then you would get, of course, a very considerable advantage by increasing the size of the ships, because it is comparatively easy; and I ought to call the attention of the Committee to that. It is comparatively easy to get the speeds we are talking of in smooth water and under favourable circumstances; but when you work in all weathers, in bad weather as well as in fine weather, and under all adverse circumstances, the engines and the ships not being up to the highest state of perfection, sometimes the bottoms of the ships being rather dirty, and necessarily so from not being able to get time to go into dock, and sometimes the boilers, not being in the very highest state of perfection, you must make in practice a very large allowance from that which the ship is capable of doing in smooth weather. And it is practically the case that the larger the ship the more nearly the general average will approach to the highest rate of speed that you can get out of the ships. With small ships the difference will become very much greater in bad weather than it would be with large ships.

2973. Which do you consider to be preferable, the screw or the paddle?—In this instance I should use a screw. The variation of the coal is so very great, and more especially if you at any time thought it necessary to insist upon a vessel going past Aden, that I think a screw on the whole would be better.

2974. Mr. Marsh.] The speed, I presume, is irrespective of the four months of the monsoon?—No, I make this average to include the four months of the monsoon.

2975. In other times of the year they would go more knots an hour?—Yes, they would have then to go faster.

2976. You state that the coal consumed by the greater speed is very much more, and the consequent expense is greater. Is not there some expense caused by the extra wear and tear of the machinery, or do not you calculate that?—No, I do not calculate that. I think that with vessels and with engines constructed originally to give out that speed, you ought not to have a greater wear and tear, because you ought to work those engines and the vessels within the power that they are capable of, and very considerable within it. For instance, to go 12 knots

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we should require to exert about 1,800 horse power, that is to say, 1,800 indicated horse power, and the engines ought to be capable of exerting 2,500 easily. And, therefore, they are so far within their power that you ought not by putting any excessive strain on them to produce any excessive amount of wear and tear.

2977. That might occur against the monsoon occasionally, might it not?—No, I do not think so. In the case of the monsoon you would have to reduce the speed of your ship, because you could not possibly navigate at such speed or exert such power as you would under the ordinary circumstances of moderate weather.

2978. She would be too wet, would she not?—Yes; you could not drive her; she would be too wet.

2979. You have stated to the Committee that you recommend vessels of 2,400 tons for the Indian line. Have you ever thought of the long stretch from Galle to Australia, of 3,300 miles?—The service that I have been speaking of is 3,000 miles.

2980. What ship would you recommend as the smallest ship that could be used?—That would depend upon what speed you wanted to go.

2981. At a speed, say of 10 knots?—Those same ships would be about the thing.

2982. To go nine-and-a-half knots you would not recommend anything under 2,000 tons?—No, certainly not.

2983. Are you aware that they go now with ships of 1,400 tons?—Then that is too small.

2984. You would recommend certainly not less than 2,000 tons for the safety of the cargo?—No; but my recommendation has reference to the convenience of passengers, not to the safety of the cargo.

2985. You know that for a vessel of 1,500 tons they must carry coals on deck?—I think they ought to be prohibited carrying coals on deck. What I am speaking of is with regard to getting good average speed; that is what you want; ships of 1,400 tons may be safe enough to carry coal for 3,300 miles, but I do not think you can profitably employ any ships which are much less than 2,400 tons or 2,000 tons if you want to go at anything like speed of the present day, 10 knots.

2986. If you employ a vessel of 1,400 tons, you must carry coal on deck?—I am not prepared to say that you could make a ship of 1,400 tons to go 3,300 miles, and to carry coal for that distance. With regard to the present speed, I was reading over the evidence which was put before the Committee, in which I noticed that it was proposed to use vessels of about 1,500 tons and 450 horse-power, and it was represented to the Committee that such a vessel could carry 200 tons of cargo, and 400 tons of coal, and that that would enable the ship to make the voyage between Suez and Bombay, without stopping at Aden, at the rate of 12½ knots an hour. I say that that is utterly impossible; and to satisfy the Committee how very incorrect it must be, I have taken out the actual results of a paddle-wheel vessel, which I built of the same beam, a 36-foot beam, but 300-feet in length instead of 245, and consequently giving her very considerable advantages of carrying power, and that vessel would only be able to carry five and three-quarter days' coal if she went at 12 knots an hour, or four and three-quarter days coal if she went at 12½ knots in India; and therefore it is impossible that you could have a vessel

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which was 55-feet shorter than this, with the same beam, carrying coal that really required to be 12 days' coal.

2987. To go, we will say, nine knots an hour, from Galle to King George's Sound which is 3,330 miles, could a vessel of less than 2,000 tons do that and carry passengers and a heavy mail, but not cargo?—I think that it might be done with a vessel of 1,600; indeed you may take it for certain it could be done at that speed.

2988. Without carrying coal on deck?—Yes, I do not consider that coal on the deck ought to be allowed under any circumstances.

2989. Sir Henry Rawlinson.] In the number that you have given of vessels that would be required, and the time for stopping at Bombay and Suez, do you allow any margin for accident; do you allow any extra vessel?—The time is the circumstance in which you get the allowance; but, as I stated to the Committee, I think that seven vessels would be better than six; but if you had six vessels you would have a stay at Bombay of 13 days, and a stay at Suez of six days; if you had seven vessels you would have a stay of 13 days at each place, and therefore you would have one vessel that could take the place of the others under all circumstances.

2990. Admiral Seymour.] In order to get an average of 12 knots an hour do you calculate that you must go 14 or 15 knots at the measured mile?—To get an average of 12 knots you ought to get very nearly 15 knots at the measured mile; 14 would do for all ordinary seas and all ordinary circumstances, but if you got 14 knots at the measured mile you ought to be extremely careful to have such an understanding that the moment the boilers got the least bit worn they should take them out and substitute others; because the way in which you fall off very much in your speed is this, vessels are tried at the measured mile with perfectly new boilers, and with a pressure of 25 pounds to the inch, a very fair and reasonable pressure with boilers in that state, and if they go 14 knots at the measured mile, they would very safely under similar circumstances insure you 12 knots at sea; but after they have been out at sea for some short time, and the boilers get worn and weak, they reduce the pressure on the safety-valve from 25 pounds to 14 pounds, and then you cannot, of course, keep up a corresponding speed.

2991. Mr. Marsh.] Are the boilers tried with salt water at the measured mile?—Yes, they are generally tried at Stokes Bay, that is salt water.

2992. Mr. Laird.] You stated that you think you could adapt the present vessels to go a knot faster, would that be by extensive alterations?—I fancy that the alterations would have principally reference to the boilers, and probably the engines. If they had new boilers they would bear a little more pressure, I think, and many of those vessels ought to go at a knot an hour faster.

2993. The only alteration would be in having new boilers of a larger size?—Yes, I think so; certainly that would be so in the case of those new vessels which I have referred to.

2994. That would involve an extra consumption of coal, would it not?—That would involve an extra consumption of about 14 tons a day.

2995. Mr. Stansfeld.] Do you happen to know what was the speed of the "Persia" at the measured mile?—I think it was 14 knots; I am not quite certain; I do not know that she was ever tried at the proper measured mile; they do not generally

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generally try them in Scotland at the measured mile.

2996. She made in 1861 12·9 knots in her voyages on the average of the year, as I understand?—I was not aware of that; that is a very high speed; she is a very large ship; indeed she is a vessel of 1,000 horse power, and I believe her consumption of coal is something like 140 tons a day; still I think there must be some in-

accuracy in the statement of her having averaged 12·9 knots through a whole year.

2997. Mr. Marsh.] The "Scotia" is still larger and still faster, is she not?—I think she is very nearly the same.

2998. What is the "Atrato"?—The "Atrato" is 800 horse power. I do not think she is quite as large as the "Persia." She is about 3,300 tons burthen, I think.

CHARLES WELLINGTON HOWELL, Esq., called in; and further Examined.

C. W.
Howell, Esq.

2999. *Chairman.*] You heard the evidence that was given the other day by Mr. Knight: do you wish to make any statement with regard to that evidence?—Yes, I would desire to make a statement upon several points connected with the evidence which I heard.

3000. The Committee would wish to limit the inquiry as much as possible now, and perhaps if you can confine yourself to the refutation of facts, and not go into matters of opinion, it would be very desirable?—For obvious reasons I desire as much as possible to state facts only, and to support those facts by vouchers when I can do so. The first point which I noticed in Mr. Knight's evidence was with regard to the speed upon our Suez line; there is still a certain conflict of evidence upon that point. The number of hours we are allowed between Suez and Bombay gives out the speed of nine and a half knots per hour. Mr. Knight says that we only do eight and a half knots; but a return put in by Mr. Frederick Hill, of the Post Office, of the actual average performance between Suez and Bombay during the years 1864 and 1865, shows that we did it in two hours and seven minutes under the contract time. The reason why there is some apparent discrepancy between nine and a half knots, which is the contract time, and the actual performance, is this: that in Mr. Hill's return account is taken for the allowance given to us during the five months of the south-west monsoon. If that return of Mr. Hill's were referred to, it would be seen that the average length of the voyage from Bombay to Suez, inclusive of the stoppage at Aden, was 13 days 22 hours; the average stoppage at Aden was eight hours 36 minutes; the average length of the voyage from Suez to Bombay, exclusive of the stoppage at Aden, was 13 days 13 hours and 24 minutes. The contract time of 10 knots an hour, reduced to an estimated equivalent of 9½ knots, by allowing for deviations from straight lines is in days and hours, exclusive of the stoppage at Aden, 13 days exactly, but then there is the allowance for the monsoon voyages which is brought into the general summary of the foregoing statements, and the general summary shows that we have, during the two years, which are comprised in this account, performed the work two hours and seven minutes on the average under the contract time.

3001. Under your present contract you are bound, are you not, to make the voyage in 312 hours?—That is so.

3002. In settling up with the Government in respect of that 312 hours, will you be allowed the benefit, so far as the average is concerned, of the additional time in making the voyage from Bombay to Aden in the monsoon?—In the monsoon months we shall get that benefit.

3003. How often do you make your settlement with the Post Office?—We have not yet made a

settlement with them under the agreement of February last; the returns are not yet received upon which a settlement can be made. The payments in respect of the mail contracts are made to us quarterly, namely, on the 31st of December, 31st March, and so on; but the returns are not yet received from the East, to enable us to adjust a premium and penalty account with the Post Office under the new arrangement.

3004. That is to say, each voyage is taken separately?—Yes, each voyage is taken separately in adjusting the premium and penalty account; and with regard to the suggestion that these things are rather comfortably managed between us, I may say that we find the Post Office exceedingly hard taskmasters in the matter. I could give cases if it were necessary; one of the very ships (the "Massilia") which the last witness referred to, left Southampton on the 4th of January immediately preceding the loss of the "London," as you are aware; she did not encounter the same gale, but she met with very severe weather, that kind of weather which made the attainment of regularity difficult—as between Southampton and Gibraltar. They had to stop four hours to repair the paddle-wheels, owing to the nature of the sea that she encountered. Between Gibraltar and Malta she had average weather, and she then exceeded the contract speed by a very considerable degree, showing that there was nothing wrong with the vessel. Between Malta and Alexandria she met with weather that reduced the speed of the vessel to four knots per hour, and notwithstanding her high capability, no more could be got out of her; in fact, it was not safe to drive her at a higher speed. All those circumstances combined caused us to be about 26 hours beyond the time allowed in the contract, four hours of which, as I have stated, were consumed in repairing the paddle-wheels; and yet the Government, to our surprise, fined us for 24 hours' delay, although we sent in vouchers for the condition of things which I have described.

3005. They exacted their pound of flesh?—Yes, they exacted their pound of flesh. We remonstrated, and sent in a second letter in which we pointed out that we had to stop to repair the paddle-wheels, and that when the ship was not affected by severe weather she performed her work well, but they have confirmed their first decision, and have imposed a penalty upon us. I cite this case simply as showing that there is no ground for the insinuation that there is anything like a comfortable adjustment of these matters between the company and the Post Office.

3006. In the event of your making a voyage with a very favourable wind the whole way, and keeping well within time, you do not make an offer of that to the Government on the other hand?—No, but we do not obtain a premium unless

203

unless we are 24 hours within our contract time; and to give you a case, the "Tanjore" left Southampton about three weeks after the "Masilia." In the Post Office returns, she is made to start from Southampton at 50 minutes after two o'clock. Our captain makes her to start 55 minutes after two o'clock; in the log book the consequence is, there is five minutes discrepancy between us, and curiously enough, upon that five minutes hangs the question whether or not we are entitled to a premium; we are admitted by the Post Office to have been 23 hours and 55 minutes under our time, but because there is a discrepancy of five minutes between us, they withhold the premium. I think these two cases will do away with the effect of the insinuation that we get favoured in these matters. I find a statement in Mr. Knight's evidence, that he believed I said that the Peninsular and Oriental Company did as well in point of speed as the Cunard steamers. I believe, on reference to my evidence, it will not be found that I said that, or anything approaching to it. I admit, of course, most freely, that we do not attain the rate of speed that they do in their best voyages; but there is another consideration with respect to the tables which have been put in; you will find a great variation between their best voyages and those which are not so good; and we say, that if you extend the same variation to our work, which is three or four times as long (I am not speaking now exactly as between Suez and Bombay), every difference between our best and worst is accounted for.

3007. One of your voyages embracing Japan and Australia, embraces a service, as we have been informed, of 16,000 or 17,000 miles?—Over 18,000 miles, and that is without including much which has an indirect bearing upon that performance; the attainment of regularity depends also upon other results; for instance, on the arrivals of ships outwards at their proper time and station, so that both directly, and indirectly, there is little less than 20,000 miles of navigation involved in a complete voyage. There was a return put in the last time the Committee met, of the performances of the "Persia." If I were to take particular vessels of ours, the "Simla," for example, which has been referred to this morning, I could show a very much higher rate of speed than the average performance of all our vessels. With regard to the statement that storms are unknown in the Indian seas, I could quote Mr. Knight's own paper over and over again, for cases in which we have been subjected to most violent storms. We also stated that in our various contracts, there have been no penalties; there are very many penalties, and some of them of a very severe nature. We are always under a very heavy penalty for not having a vessel ready to start upon her appointed day, and during the 25 years that we have worked the Government contracts, we have never incurred that penalty. Reference was made to a paper which showed an excess of premiums over penalties. I think the witness must have had before him a return made to Parliament relating to the Australian service, in which it was shown that we had obtained on that line premiums in excess of the penalties, but that of itself is inconsistent with the statement that we never incurred penalties, as if no penalties were inflicted there could have been no excess. Then the statements I put in with respect to the price of coal were impugned.

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The witness stated that he was under the impression that the price of coals at Bombay during the last five years would be from 20 to 22 rupees, or 40 to 44 shillings a ton. The returns I put in for the last five years, gave an average, I think, of 35s., so that I do not exactly see how my statement can be impugned; in fact, the witness has made it higher than the rate that I put in, showing this, that we have succeeded in laying in our coals at Bombay at a cheaper rate than the market price.

3008. Can you tell me what the quantity of your coal is annually delivered to you at Bombay?—No, I could not say at Bombay.

3009. The quantity is so large that you would not consider it safe to rely entirely upon the means of the Bombay market to supply you?—No, we should never think of relying upon supplies to be obtained in the local market. The coals which vessels take out are in great measure shipped as ballast. Vessels going out to bring home cotton take coals which they sell to the first comer in the market, and the local prices are affected by the abundance or scarcity of coals of that description. But we select all our coals at the pit's mouth. We keep an inspector at a sufficient salary (generally one of our retired captains), at each of the principal loading ports, and there is not a single ton of coals shipped for the use of our company which is not put on board under the inspection of our own servant.

3010. And have you reason to be satisfied with the result of that supervision?—We have found this, that although we have to pay a considerable salary to the officers so employed, it is an economical arrangement. We have had fewer occasions to go to the contractors with complaints of the quality of the coals they have shipped, since we have adopted the system of keeping our inspectors on the spot.

3011. Do you make your contracts with the shipowners generally for coal deliverable at Bombay at a price?—Yes, we do. I have here one of the very papers which are filled up at our Board, when we open tenders for a supply of coals. I take down the prices, and I will mention the names of the parties to whom we apply for tenders. Messieurs Austin Brothers, J. Allan & Sons, J. Burness, Gillespy & Scott, G. & A. Herring & Co., Hickie, Borman & Co., Higgin & Co., Jackson & Sons, J. M. Mackay & Co., Pirie & Co., Stringer, Pembroke & Co., and a number of others.

3012. Your object in reading that paper is to show that, in your own interest, you take every possible means of getting your coals cheap?—Yes, and to prove how successful those means have been in their results at Bombay, the price that Mr. Knight has put in as the price at that place goes to prove that the price at which we have laid our coals down at Bombay, for the average of five years, is lower than the rate of the local market, I do not dispute that perhaps 22 rupees, that is 44s. per ton, was the average market rate of coals to be bought alongside at Bombay; but I have in my hand, "The Times of India," of the latest date received, in which the price of coals alongside the ship is given at 42 to 44 rupees; that is 88s. per ton; and I have it from another source that business was done at 45 rupees, that is 90s. a ton. This is, of course, rather an exceptional condition of things; but, going back for the past six months, the price comes out at something very much in excess

C. W.
Howell, Esq.18 May
1866.

C. W.
Howell, Esq.

18 May
1866.

excess of the average of the five years which I have put in.

3013. *Admiral Seymour.*] Have any of your vessels, on their way out to China, ever taken any Labuan coal?—Yes, they have done so at Singapore whenever the Labuan Company have been able to supply us; I may mention, further, that when that company commenced operations we were promised to have coal at a very low rate, they expected to be able to supply us with coals at Singapore at about half the rates at which we were laying down coals from England; but what with the cost of labour at the mines, and the difficulty and expense of transport, they at last came to us, and begged as a favour, that we would take from them any coals they could supply us with, at the same rates as we were paying contractors for English coals, and we took all the coals that they could bring to us at those rates.

3014. Is the quality good?—The quality is good; it burns away, perhaps, somewhat fast, and, that remark applies to what I may call native coal, as distinguished from English coal, all all over the world.

3015. *Chairman.*] Do you use any Burdwan coal?—No, we used some very many years ago, but with the same result: if we were to fill up our ship with Burdwan coal we should find, before we had got to the end of our voyage, that we had exhausted the bunkers.

3016. *Mr. Marsh.*] You use Australian coal, do you not, on the Australian journey?—Yes, we use it from Sydney to Melbourne and King George's Sound; but we do not send Australian coal to King George's Sound for use on the long run between the Sound and Point de Galle.

3017. *Chairman.*] Do you send coal out to King George's Sound?—Yes, we supply King George's Sound entirely from England.

3018. *Mr. Marsh.*] The Sydney coal is much cheaper, is it not, than what you could send it for from England?—Yes.

3019. Do you get it in China at all?—No, not to any extent; we gave our agent at Sydney a discretionary power to send up Sydney coal at certain rates; those rates not to exceed the price we were paying direct to Shanghai, but he was not able to do business for us on those terms.

3020. Sydney coal raises steam very well, does it not?—Yes, it does.

3021. *Chairman.*] Have you anything else to say with regard to coal?—It was stated that there appears to be a discrepancy between the prices which I gave and the prices given by the Chairman in his speech at our proprietary meeting. The prices given by our Chairman included our rates on this side of Suez also. When he stated that our coals in a certain year cost 51s. 7d. all round, that embraced all that we took on board at Southampton, where, of course, they are laid in at a low rate—about 18s. a ton. Then a very grave statement was made by Mr. Knight, namely, that the accounts of the Company are made up to conceal our profits, and that in India the statements of the Company are not believed. Upon these points I must ask a little indulgence. There commenced in 1863 a series of articles in one of the Bombay papers, "The Times" of India, attacking the Company, and stating, among other things, that, "having a monopoly of the most valuable passenger traffic in the world, they maintain their charges at double and treble the rates of any other company in existence." The returns

which I have put in disprove that. It is also stated that taking the number of our ships and valuing them at 26 l. per ton, a result is arrived at which differs entirely from our capital. The writer says:—"The inference is irresistible that they have built these fleets and dockyards, and accumulated the vast wealth of which they stand possessed, by *concealing profits*" (that is put in italics), "and by annually dividing no more than a fraction of them." I do not desire to take up the time of the Committee by quoting other paragraphs of the same nature; but it is asserted, among other things, that our "Imperial Palace, in Leadenhall-street," which, no doubt, many of the Committee know, must be worth at least from 60,000l. to 100,000l. That is a sample of the statements that were made. I quote another, "We pass on to Singapore to find the Company owners of a dockyard with its usual conveniences and appurtenances that a third-rate power might be proud of." That is an absolute statement made, and one of the local papers pointed out that there certainly must be some mistake here, that it was not so, but the editor of the paper making that statement returned to it, and said that he maintained the statement that we do possess this dockyard; and he quoted as his authority poor Albert Smith's book, "To China and Back," in which he finds this passage, "Sunday, 15th August 1858.—To breakfast with Captain Marshall, at his bungalow Captain Marshall's bungalow is charmingly situated on a hill, overlooking the magnificent harbour and docks, now being built by the Peninsular and Oriental Company." Now, I have to inform the Committee that the Peninsular and Oriental Company never had at Singapore anything approaching a dock. They have there certain shore-frontage, about five miles away from the city, at what is called the "New Harbour"; and the shore being very steep, they were enabled to construct jetties, which permitted their vessels to lie alongside, and take their coal on board without employing barges; and we have, as at other places, coal sheds there to protect the coal, but we have not, and never had anything approaching what has been described in this newspaper. I give this as another specimen of the exaggeration pervading the statements made.

3022. *Mr. Laird.*] What is the value of the establishment that you allude to?—The amount that we have expended at Singapore is short of 6,000l. I may mention that that property is of no value excepting for our own purposes, or the purposes of some other company, which might have to carry on a similar business to ours in case we were off the line.

3023. *Chairman.*] Do the Messageries take in their coal at your wharves?—No, I do not think that they take in coal at Singapore; Saigon is their chief coaling station on their way to China. I would also refer to another point, upon which we have had three different statements: namely, the cost of the Bombay line. I stated in my first day's evidence that the cost of this line was 2s. 7d. per mile. It was stated in the papers, put in by the Post Office, that it was 80,000l. which will come out at 4s. 6d. per mile; and it was stated by Mr. Knight that, on examination, he found that it came out at 6s. 2d. per mile. Our Bombay contract was taken in 1854, the year following the general contract and under which we are now work-
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ing the postal communication with Calcutta and China, and the rate at which that was taken was 6 s. 2 d. per mile. The period of that contract has long since expired, but we are still working it, subject to a twelvemonth's notice to be given on either side; and the price has been reduced in several ways. On reference to this statement which I hold in my hand, which I had prepared for the Committee of 1860, I find it stated, "The Parliamentary Committee of 1851 had reported that this service" (that is between Bombay and Aden) "in point of economy, the comfort of the passengers, and the requirements of trade, would be performed to greater advantage by a private company than by the vessels of the Indian navy;" previous to that it had been carried on by vessels of the Indian navy, the Home Government contributing to the cost of the service an annual sum of 50,000 £, the Indian Government bearing the balance which varied from 55,000 £. to 70,000 £.; and in one year it came up to 130,000 £. This Company then took a contract for Bombay and Aden only at the same rate per mile as their main contract, namely, 6 s. 2 d. per mile. That contract was afterwards extended to Suez at a much lower rate per mile, and certain alterations in our Mediterranean lines were afterwards effected which produced the existing fortnightly service with Bombay, and this, I maintain, costs only 2 s. 7 d. per mile; I know that if you separate Bombay from the rest of the service, the Calcutta and China portion will come out at somewhat more than 4 s. 6 d.

3024. That is a very simple arithmetical question; you perform a certain number of miles, for which you receive a certain sum of money?—Yes, the average that was given the other day by Mr. Chetwynd from the Post Office, and the questions put to him, left the matter very much where I have put it that what you take away from the Bombay service is to be put on to the other parts of the service; yet, as an actual fact, that service was undertaken and has been carried on for a large number of years at the average of 2 s. 7 d., and on taking the quarterly account furnished by the company to the Post Office, it proves that they pay us at the rate of 2 s. 7 d. a mile, as our account audited shows it to be so. The existence of the line between Bombay and Galle, which is now so much disparaged, was one reason why we were able to take the Bombay service at so low a rate, because an alternative means of bringing on and carrying to China the valuable cargo which we have upon that line was created. When we tendered for the contract in 1853, the line between Bombay and Galle was not included in the invitation for the tender. We tendered for the whole service, and we offered to do that branch for nothing, knowing that it would prove a valuable link in our great system; and it was by having it combined with the system that we were able to take up the Bombay service at the very low rate at which it has been carried on ever since. Our total subsidy was described by Mr. Knight to be 400,000 £., the actual amount is 349,000 £. It was stated that a company subsidised at that rate could, of course, destroy all competition, but in other parts of the evidence of the same witness it was stated that many vessels unsupported by a contract were now running up and down the Red Sea. That is the case. With regard to those vessels carrying letters I do not know whether the Post Office avail themselves of their power to put them on

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board as ship letters, but I imagine not. There is also a conflict of evidence upon the point whether we do or do not carry second-class passengers; the book which I have before me, and which the Committee will see, is not made up for the purpose of this inquiry, is a book which is put before the Board every Tuesday and Friday, noting the arrival and departure of the ships, and the number of passengers that are on board. I open this book at random, and I find that the "Nyanza" arrived at Southampton from Bombay on the 12th of December 1864, with 41 first-class passengers and 24 second-class passengers. The "Nyanza" again arrived in February 1865, with 14 first-class passengers and 24 second-class, and the outward vessel which left in the same month, took 19 first-class passengers and 21 second-class; and I could multiply those cases to any length, if it were thought necessary. It was stated also by Mr. Knight that the commencement of the operations of the Collins line produced a reduction of the Cunard fares from 50 £. to the present rate of 25 guineas. I find that there never was such a rate as 50 £. upon the Cunard line; the highest amount that they ever charged was 39 guineas, and that is 18 or 20 years ago. At that time, the Peninsular and Oriental Company charged 140 £. to Calcutta for a gentleman, and 150 £. for a lady, and rates generally have undergone a very great reduction since that time. I think I may state that the opening of the Collins line had no effect whatever upon the Cunard rates.

3025. I presume that a great many of those second-class passengers that you refer to are servants?—They are; but you will see that when the number of second-class passengers exceeds the number of first-class there must be a great many other than servants. I may mention that, about a fortnight ago, a gentleman came to our office, and the clerk was rather surprised at a person of his appearance wanting a second-class passage, particularly as he was taking his wife with him. I was called into the outer office to see him, and I found that he was a military man, and evidently a gentleman. I asked him whether he was well aware of what he was doing, especially as he was taking his wife with him, and whether he knew that he would have to sign this guarantee form which has been put before the Committee, and which I will explain presently. He said, "Yes; but the fact is I have overstayed my time in England, and I have spent my money. I know what your second-class is. I have travelled often by your vessels, and I am not afraid to encounter your treatment of second-class passengers, not only for myself, but my wife." I know that in the vessel which Colonel Strachey travelled by the other day, there were three officers who travelled as second-class passengers; in fact, there is no difficulty about it. The reason why we take this guarantee is simply this: some five or six years ago one of the railway companies came to us to carry out a number of their artisans; they were a difficult class of people to deal with, and the railway company had no control over them after they embarked on board the vessels. We are sometimes in some uncertainty as to which particular vessel may be arriving up at Suez in conjunction with the vessel on this side. We may have accommodation for 50 second-class passengers in the vessel on this side; but the vessel which comes up on the other side may perhaps only have

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C. W.
Howell, Esq.
18 May
1866.

C. W.
Howell, Esq.
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18 May
1866.

have accommodation for half that number. This occurred on one occasion, two or three of the railway artisans, holding ordinary second-class tickets, took us into the court at Bombay and recovered damages, because they did not get a berth. Since that we require passengers to sign this guarantee form, and I can assure the Committee that there is not the slightest objection on the part of anybody to sign it; that is, any of those who know what it means. We receive constant application from the India Office to send out a number of people, and they say in ordering the passage, "Please send us guarantee forms." They ask for them as a matter of course, and since we have had those forms in use I have never seen or heard of a complaint from a second-class passenger.

3026. I suppose that you have no second-class accommodation for ladies?—No, we have not; and it is certainly not unreasonable. At many times of the year we can fill our ships, or nearly fill them with passengers, both perfectly willing and able to pay first-class fare, and it would scarcely be fair to our shareholders if we set aside a large portion of that vessel to be always available for second-class passengers; and then what we charge for second-class is not as is usual upon a railway, a small amount less than the first-class; it is only about one-half of it. When we reduced our fares generally to and from India, about two years ago, we did not reduce the second-class, so that the present second-class fare is somewhat in excess of one-half of the first-class fare.

3027. A second-class passage implies, does it not, the doing of that on the part of the passengers going second-class, which many of the first-class passengers do by choice, that is to say, sleeping on deck?—It is so to the extent that they may have to do it. The very gentleman to whom I have referred told me, "I have tried the second-class as well as the first, and the only difference is, that you do not give them wine," but we give them beer and spirits. It was stated by Mr. Knight, that the Peninsular and Oriental Company conduct its affairs with great waste and extravagance. I do not want to trouble the Committee with further extracts from this paper; but we there are accused of the cheese-paring system. There was a question put which is rather important, as to whether our coals were unprotected at Aden, and it may appear strange at first sight why the coals at Aden are unprotected; but at Aden there being no rain the coal does not suffer that amount of deterioration from exposure which occurs at those stations where we have both rain and heat. Where we have alternate rain and heat the coal undergoes what may be called a slacking process, like so much lime, and a large crust of coal becomes absolutely wasted and useless if unprotected. It was also stated that the system of supplying wines and spirits to passengers must lead to great waste and extravagance, and that it was the practice of some passengers to punish the company for what are called their extortionate fares by drinking as much as they could. It is hardly necessary, I presume, to notice, that if we take into consideration the immense number of passengers we carry this question of supplying wine and spirits dwindles into a mere nothing. I have no doubt that there is an impression that if we introduced the other system, of having a bar on board the vessels to

which the passenger who consumed could go and buy his wine, and the passenger who abstained could do the opposite, we could afford to make a very large reduction in the passage-money in favour of the non-consuming passengers. Since I was here last that matter has been most carefully gone into, and the amount per cent. is very much less than any one not knowing the facts would suppose. I will state at once, that all we could afford to do would be to reduce the passage money at the rate of five per cent.

3028. Admiral Seymour.] Have you ever heard that on the Collins line, when they issued wine and spirits, it was not an uncommon thing for young men to follow one another about with claret bottles, wasting the wine enormously?—I have never heard of that, but there would be one very great difficulty about it, because if we had a place on board where a passenger could go and buy his wine, he would claim a right to do it at all hours of the day, and he would buy a bottle of brandy, and carry it to his cabin. I may mention in further illustration of this point, that while the European and Australian Company were working the line between Sydney and this country, they introduced that bar system. They had one vessel of ours, the "Simla," under charter, and since I was here last I have spoken to the captain; he happens to be a senior captain in our service, Captain Cooper; and another captain in our service was the chief officer at the time. I have a letter here from each of them, and without reading them I may say that their verbal and written statement is to this effect, that they never saw so much which approached to intemperance on board any vessel; that it extended from the passengers to the crew, the officers having to interfere to prevent passengers taking liquors amongst the crew; and they both state as their positive opinion, and all our commanders would corroborate it, that the introduction of that system would be distasteful to a very large majority of the passengers on our line.

3029. Does the Messageries Imperiales adopt the bar system, or what you call the *ad libitum* system?—Their's is a mixed system, they supply wines of a certain quality. I think I am right in that, and I believe that if a passenger requires wine of a higher quality, he can have it by buying it. The system on board our vessels is assimilated as much as possible to what a private gentleman would adopt in his own house. We put good fare, and wine and spirits before the passengers at proper time, and they take what they please, and instances of intemperance are rare. I do not know whether it was understood that our coals are unprotected at other places than Aden. I was going to say that a gentleman who held the position of superintendent of the company at Aden for a great many years, was in the room the other day, and he told me he tried the experiment of covering some of the coals at Aden with mats, and as it is a constant practice there to test the temperature of the heaps of coals with the thermometer, to see that there is nothing like spontaneous combustion going on, or likely to take place, he found that the temperature of that part of the heap of coal which was covered was 10 degrees higher than that part of the heap which was uncovered; at other stations, at Point de Galle, Calcutta, &c., our coals are all under cover. With regard to the amount of imported specie to Bombay (and that is a matter which concerns us very closely), it was stated

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by Mr. Knight to be at the rate of 10,000,000*l.* per annum. I should be very glad, indeed, if it had been so, because we should have had the carriage of the greater amount of it. The actual amount of specie imported into Bombay for the last 10 years is at the rate of 6,367,000*l.* a year. It was stated that by reason of our going four days under our contract speed, which of course we do not admit, there was a loss of interest to the public of 30,000*l.* or 40,000*l.* per annum. The interest upon the real amount, presuming we were four days late, at 9 per cent., which is the interest of the port, would be 6,367*l.* a year.

3030. Mr. *Laird.*] That is, supposing the statement to be correct?—Yes, and taking the amount actually carried, and not the 10,000,000*l.*

3031. *Chairman.*] Have you anything further to state to the Committee?—If I may be permitted, there is one more statement to which I would wish to refer. It was insinuated that we went slowly in order to save our coals, and that it suited the company wilfully to go slowly, and to incur the penalty which was involved by a late arrival. An examination of the actual results proves this, that the economical voyage to us is the quick voyage. That may appear somewhat opposed to the theory which would be mentioned in professional evidence. But in a slow voyage, we are consuming a greater amount of coal than we are burning on a fast voyage, in order to overcome the weather to which we are subjected; and over and over again, for voyages both on the Calcutta and the Bombay lines, we consume, in practice, a larger amount of coal for a slow voyage than we do for a quick one.

3032. Mr. *Stansfeld.*] But under some conditions of weather you would not consume more coal by going at a slower speed?—Certainly not.

3033. The theory is, that by diminishing your speed, under similar circumstances, you save your coal; there can be no question as to the truth of the theory?—Each vessel that we employ has been tested to 12 knots an hour on the measured mile, when loaded to her deep load line. That has been for the attainment of 10 knots at sea. There would not be so much saving on diminishing the speed of such vessels as there would be on diminishing the speed of ships tested to 9 or 10 knots only.

3034. *Chairman.*] Did you hear the evidence which Mr. Samuda gave the Committee?—I did.

3035. Did you concur in the results which he communicated to the Committee?—I could hardly venture to follow him into particular, but generally I did. Mr. Samuda made certain statements with regard to existing vessels of the company which I cannot pretend to speak upon, but he knows our fleet, being the builder of some of our vessels, and he watches our proceedings, so that he is able to state that such-and-such things might be done with such-and-such vessels to produce certain results.

3036. Are you prepared to say anything upon the question of separating the Indian service from the China service altogether, and making a distinct line to Bombay wholly separate and independent of the China and Australian mails?—If a proposition of that kind came before the directors, they would give it full consideration looking at the circumstance which I have mentioned before, that anything that interferes with our means of carrying cargo upon the lines would have to be made up by subsidies. That very line between Bombay

and Point-de-Galle is an exemplification of the matter, although it is now considered of no value, either for local or Imperial interests, yet it is of great use to us, and the public have derived the advantage of it. It was stated that steamers other than ours are constantly running with opium between Bombay and China, but I do not think that that is going on now. Vessels have been running there, but the last I heard of them was that they were being sold. I think the house of Cama & Co. were taking them over, and I do not fancy that the parties who made that experiment have found it very well worth their while to continue it.

3037. Sir *Charles Bright.*] Were those vessels carrying passengers?—I do not think so; they run at irregular seasons when it suited them, just as we should run if we had not contracts.

3038. Were those vessels mainly employed in carrying opium?—Yes. I wish to mention that there seemed to be some difficulty the other day in accepting our statement that an addition of from 20 to 25 per cent. is necessary to the cost of the coal as delivered at a station in order to arrive at what its value is when put on board the vessel.

3039. *Chairman.*] I presume you have got a general coal account upon your books?—Yes, we have.

3040. And you credit that account, and debit the ships with the quantity of coal that they consume?—Yes.

3041. Is there any profit made upon the coal account?—Certainly not; the Government buy coals of us occasionally, and the French Company have bought coals of us, and we always make that charge of 20 per cent., but 20 per cent. does not cover it. I stated 25 per cent. the other day, and ventured to say that 20 per cent. was not enough. Since I was here that matter has been most carefully gone into, and it is found that it comes out exactly at 25 per cent., so that if anybody buys 200 or 300 tons of coal of us, and we only charge 20 per cent. in addition to the cost of laying down the coals at the port from which they take them; we are incurring some loss. We have at all times a sum of money locked up in coals of about 250,000*l.*, so that the interest upon that sum is a permanent charge, and forms one of the items which make up this 25 per cent., the cost of agencies, coal sheds, and all that sort of thing, fully makes up the rest.

3042. Mr. *Stansfeld.*] The addition of 25 per cent. makes your coal account balance?—It does upon the average of the year.

3043. *Chairman.*] All those are charges and contingencies which you think that any company must be prepared to meet, which proposes to undertake the service which you are engaged in?—It is only by making those charges that we have succeeded in maintaining ourselves in the position in which we are. The Committee are asked to believe that our position is something very different from what we make it in our accounts, but the directors have received a large sum of money in trust from the shareholders, and they feel bound to keep the whole concern in such a position as in case of having to stop, and having all the vessels sold, and those stocks of coal, &c., thrown upon their hands, they would be able to return them 20*s.* in the pound. We should think that we were in a very unsound condition if that were not so. Other companies who have been dazzled by large subsidies, for instance, the company that took up the contract with Australia six or seven years

C. W.
Howell, Esq.
18 May
1866.

C. W.
Howell, Esq.
—
18 May
1866.

years ago, in the course of about a year and a half paddled and screwed away into the ocean some 800,000 *l.* or 900,000 *l.*, and nobody was the better for it; and the Government, for a certain period, had to pay at the rate of 250,000 *l.* a year for the transport of mails between this country and Sydney, in order to provide against a gap in the service, they had to give a guarantee to the extent of 6,000 *l.* per voyage beyond the contract rate in order to induce the contracting company to go on with the work till other means for carrying it on could be found. A good deal has been said about our dividends not representing our profits. Our dividend is a modest one, and it has been on the average of the 25 years that we have been at work, exactly 8 per cent. We do not insure our vessels, but we keep a separate underwriting account, in which every individual shareholder in the company has an interest, and upon that account we have divided exactly one-half per cent.

3044. Mr. *Moffatt*.] Does not a considerable percentage arise from their becoming their own underwriters?—One and a half per cent. only has been divided upon the underwriting account. Some few years ago the same thing was said as is said now, as regards our profits, and we offered to open our books to the Government. They sent down auditors from the Transport Office, our books were laid before them, and they reported that we were only doing what was right in making the reserves we do for depreciation and other purposes, and that we were only paying a fair dividend upon our business.

3045. Mr. *Stansfeld*.] If I understand you rightly, your contract speed is 10 knots an hour?—Yes, the speed of the contract is 10 knots an hour.

3046. But you have an allowance during the period of the monsoon?—Yes, we have an allowance during the period of the monsoon, and we have what you may call a discount on the contract speed; the 10 knots is reduced to nine and a half knots in consideration of the circumstances that we rarely make a voyage as measured in a straight line from port to port, especially during the monsoon.

3047. On average measurement it is 10 knots?—Yes; we now work under what has been called the contract of February 1866, but this, in point of fact, is no contract, for it leaves our contracts of 1853 and 1854 as they stood, and the very last words specially providing that nothing in the agreement shall override any clauses of those contracts, except in the manner necessary to introduce the premium and penalty system upon the lines.

3048. What proportion of your voyages are unfavourably affected by the monsoon in the course of a year?—Perhaps 10 in a season. It was originally met in this way; during the monsoon months the date of the ship's departure from Bombay was put down, I think, four days earlier than the date at other seasons.

3049. They gave you an allowance of four days?—We started earlier, and arrived at Suez on the same day as usual.

3050. How many voyages are affected by the monsoon?—Ten voyages.

3051. Only the homeward voyage is unfavourably effected by the monsoon, I believe?—Precisely so.

3052. Have you no monsoon allowance upon the outward voyage?—Not on the Bombay service.

3053. Between Bombay and England you have a monsoon allowance upon five voyages home?—Yes, that is to say upon 10 voyages in five months; we come fortnightly, and the monsoon months are five.

3054. That is 10 voyages out of how many?—Ten out of 24.

3055. And the allowance is an allowance of four days, is it not?—Yes, of four days on those voyages; the usual course on leaving Bombay to make a track which would carry the vessel, I suppose, down to a latitude of 4° north, making a very roundabout course. In fact, a vessel goes over fully one-third, or perhaps one-half, a greater distance than she does during the other seasons.

3056. If you were to average that allowance over all the voyages in the year what would it give you?—It is averaged in that return which Mr. Hill has put in.

3057. It would add something like two days?—I suppose it would upon the whole; the result of the calculation is shown in the return of Mr. Hill's, which makes it so many days.

3058. That monsoon allowance would not increase your average length of voyage more than two days?—No, it will not, taking all the year round.

3059. How do you make out that you do the 10 knots an hour between England and Bombay?—I am not aware that we have stated that we have accomplished 10 knots an hour between England and Bombay, or between Suez and Bombay.

3060. What was your statement?—I do not think that I have put in any return upon that point; I know what we have done very nearly for the last year; and we are quite ready to admit that during the last year, or perhaps a year-and-a-half, we have not come up to our own expectations and wishes upon the Bombay line. Some vessels which were placed upon the line have not altogether fulfilled the expectations held out for them. We sought to produce a great improvement in the consumption of coal and also an increase of speed, but we have been to some extent disappointed in that; alterations in those vessels are however going on.

3061. I thought, I understood from you, that you have on the whole done better than your contract?—I base that statement upon Mr. Hill's report, and upon his average, in which he gives us credit for all the deductions as they are in the contracts, and it comes out that we have upon the average done our work for the years 1864 and 1865, two hours and seven minutes under the time allowed us.

3062. That is after making the monsoon allowance?—Yes, after making the monsoon allowance. We know quite well that when the papers are received home we shall incur some penalties in respect of late arrival on particular voyages.

3063. But if that be so, putting on one side the delays which you cannot avoid during the monsoon, you must be able to show a speed of 10 knots an hour upon the annual voyages?—Yes; in many we show higher speed; I could give you numberless voyages on which a much higher speed has been attained.

3064. In how many hours do you arrive at Marseilles?—In about 36 hours from London to Marseilles; the mails leave London Bridge at half-past eight o'clock on one evening and our vessel leaves Marseilles about half-past seven to eight

eight o'clock on the morning of the succeeding day but one.

3065. This calculation which has been placed before me gives to Marseilles 30 hours; and sea distance from Marseilles to Bombay, 4,460 miles at 10 knots an hour, is 446 hours, making 475 hours, and the 15 hours' journey through Egypt, 491 hours; that would be 20 days and 11 hours. If you were to add the monsoon allowance which averages throughout the year two days it would be 22 days 11 hours; but if this statement before me is correct, your average of the voyage outward to Bombay in 1865 was 24½ days, leaving, as you see, two days unaccounted for?—I should think that the transit through Egypt must be understated. I do not think we ever get away in 15 hours. No allowance appears to be made for stoppages in your paper.

3066. The question is whether 15 hours is a fair allowance?—Yes, but then you have the detention at Aden to calculate. We cannot get both the cargo and the passengers through Egypt in that time. It is a frequent source of small remonstrance between us and the Post Office; they get their mails through and on board the ship, and they want to hurry us away.

3067. *Chairman.*] If you had a weekly mail you would not have occasion to detain the mails for passengers or for cargoes; that is to say, the passengers would not mind, many of them, staying perhaps a week in Egypt?—I think the majority of the passengers would prefer to go through.

3068. *Mr. Stansfeld.*] Does the monsoon help you in the outward voyage?—Undoubtedly it assists us.

3069. With regard to coal, what kind of coal is imported into Bombay for the ordinary market?—I see the description of coal in the price-current which I hold in my hand is Welsh Hartley. I do not know what Welsh Hartley is, but Welsh Hartley alongside is quoted at 42 to 44 rupees a ton, and West Hartley the same price, 42 to 44 rupees—that is the last price-current.

3070. How much of the coal imported into Bombay is for steam purposes?—Nearly the whole of it. But the ships that load for Bombay in the ordinary way take coal where they can get it, and the owners do not take, perhaps, very much trouble to buy the best.

3071. But they would get their coal either in London or in Liverpool if they sailed from this country, would they not?—Yes.

3072. In any English port from which they would be likely to sail they would be sure to find either good north country steam coal or good Welsh steam coal?—I do not think I could admit that. In Liverpool the large steam companies have the control of all the best coal. We ourselves cannot get the best coal at Liverpool. Messrs. Cunard and the Pacific Company and others have got the command of all the best coal.

3073. Do you know the consumption of coal at Bombay?—No; it must be something very large now.

3074. Do you think it is 140,000 tons a year?—It is not so much.

3075. What is your consumption in round numbers?—I cannot state that; I suppose it would be 30,000 or 40,000 tons.

3076. What period of consumption does your stock represent; is it a year's consumption?—Not so much as a year's. We do not like to fall much below six months. At Bombay, knowing

that coals are always to be had, we are not so particular. We do now and then take advantage of the market. We give our agent authority to buy coals in the market if he can find them good.

3077. Your stock at Bombay is not so large proportionately as at other ports?—No; we do not require to keep so large a quantity there.

3078. If I were to ask you whether the average market price of steam coal at Bombay from 1861 to 1865 inclusive had been from 30s. to 37s. according to quality, would you be disposed to think that a correct statement?—I have it here exactly. In consequence of the evidence which I heard, and in order to check the cost at which we lay down coals I have obtained from a reliable price-current the cost of coals for the last four years.

3079. What price-current do you take that from?—That was one, I think, kept in Messrs. Smith and Fleming's office. The average price of coal in the Bombay market at per price-current quotations from January 1862 to March 1866, comprising four years and three months, taken from alongside, is slightly in excess of 21 rupees, that is 42s. per ton alongside the ship. I think in my evidence the other day I stated that the Company had supplied themselves on a five years' average at 35 s.

3080. I suppose 1866 has been rather a dear year?—1866 is a very dear year.

3081. The average I have is from 30 s. to 37 s., but that only includes 1865, I presume?—Precisely.

3082. You make your average 35 s. 6 d.?—35 s. or 35s. 6 d., I hardly know which without looking at my figures.

3083. To that 35 s. 6 d. you ought to add, ought you not, 25 per cent.?—I did so; I think if you refer to my first day's evidence, you will find that it is so. In this matter I am dealing with evidence which I thought came into conflict with the fact. I therefore take coals alongside in one case, and I take coals alongside in the other case.

3084. But now you credit your coal account, and you debit the voyage with coals at 35 s. 6 d., plus 25 per cent.; that would be 44 s. 6 d.?—Yes, but we do not do it exactly in that way on our books. We average it to some extent; one port does not require quite so much, and another will require more.

3085. But more or less you add that kind of per-centage to the figures which you have already given us?—We do.

3086. For the purpose of comparing what you call the cost price of your coal with the selling price at Bombay, that 25 per cent., or some per-centage of that kind, ought to be taken into account?—Decidedly.

3087. You do not make a profit upon the coal account?—No.

3088. Therefore, according to your calculations, if they are correct, you charge coal simply at cost price to the vessel?—Yes.

3089. But the coal in the Bombay market must be sold at cost price, plus the profit?—I think as a rule, they take coal as ballast. I do not think that coal is often taken out as an article to make a profit upon; coal is a convenient article to have on board in the hold; the amount of it depends very much upon the general character of the cargo of the vessel.

3090. It must depend upon the supply and demand,

C. W. Howell, Esq.
—
18 May 1866.

C. W.
Howell, Esq.
—
18 May
1866.

demand, and they make a profit if they can?—They doubtless make a profit if they can.

3091. They must make a profit when they can, and your rule is not to make a profit on that account?—That is so.

3092. When you gave the price of 35 s. 6 d., for what year was that?—35 s. 6 d. was the average of the last five years, I think, including the whole of the year 1865. I gave a much higher figure as the price of the last operation.

3093. One thousand eight hundred and sixty-six we are agreed is a dear year; but taking the average cost or price of coal from 1861 to 1865, you made yours 35 s. 6 d., plus, I will call it, 25 per cent. (it may be 20 per cent.), making your charge against the voyage, say 44 s. per ton?—Yes, certainly.

3094. The maximum average price for delivery in Bombay in the open market was 37 s.?—The price current I read made it 42 s.

3095. Your return includes the exceptional year, 1866. I am taking up to the end of 1865, which is the period for which you calculate that the cost of coal is 35 s. 6 d.?—Yes.

3096. Can you elucidate in any manner that apparent considerable difference. What strikes me is that during that period of five years the average selling price at Bombay of steam coal, of the best quality to be had there, was 37 s.; and the price which you charge on the voyage is 44 s.?—There is the addition of the 20 or 25 per cent. to account for the difference. I am afraid that I am hardly gathering what the Honourable Member desires to elucidate; I wish thoroughly to understand the question.

3097. Let us put it in a different way. The price at which you charge coal in your account of the voyages ought not to be more than the average price of the best coal in the open market at Bombay; and assuming that to be so, I find that the average price of the best steam coal in Bombay, in the open market, from 1862 to 1865, was 37 s. a ton, and that your charge is 44 s. a ton?—We laid in our coals at somewhat less than the average, which you give of 37 s.; we laid them in at 35 s. 6 d. and adding to that the per-centage of 25 per cent., it comes out at about 44 s.

3098. Then the question arises, whether that per centage is not too large a per centage; that results in your crediting the coal account to 44 s. per ton, whereas in the open market, you can buy it at 37 s.?—Yes, but then you buy coal alongside a ship in the open market; we cannot send our steamer alongside a ship which has coal to sell. The price which I have given here, as the average of the years from 1862 to 1866, is coal alongside; if we buy such we have to land and to store them. At Galle, when we are going on the Australian voyage, we know that fresh coal is essential to us, and we endeavour, if we can, to arrange to send our steamer alongside the coal vessels if the weather permits, to take coals from one to the other, and then we escape some of those charges that we have been speaking about; but taking the general average of our business, we do not escape them to any extent; anybody requiring to fill a steam vessel with coals, or those who made it their business to buy and store coals at Bombay, would incur all the expenses which we incur, and the coal merchant would sell those coals to the consumer at the enhanced rate at which we charge them to our vessels. It would be a most exceptional condition of things if you were able to send a

steamer alongside a vessel which had 300 or 400 tons of coals on board for sale, and take them and burn them in that way.

3099. Mr. Moffatt.] Is it not the fact, that with your judgment and experience in these matters, you find it necessary to keep as much coal at your various stations as comprises a capital of 250,000 l.—That is so; that is the actual average of the year.

3100. In point of fact, you cannot afford, can you, to run the risk of the chance of the arrival of coals at Bombay, or any other port, to coal a steamer when she comes in?—Certainly not.

3101. The consequence of that is, that the difference of 7 s. per ton goes to make up the interest on the 250,000 l. at 9 per cent.?—Yes; interest is one element of that charge, of 20 or 25 per cent., but we should not put it so high as 9 per cent.

3102. What is the total quantity of coal that you consume on the Indian stations?—I am afraid that I can hardly venture to give that without data; we have spent as much as 750,000 l. in one year alone upon coals.

3103. Chairman.] Have you any further document which you would wish to lay before the Committee?—Yes; I have here a paper with reference to dispatching the Indian mails upon a fixed day in the week, making the Australian mails start once a lunar month, instead of once a calendar month, as at present; and this paper is important, inasmuch as it shows that the plan would interfere most materially with the Australian line, so much so, in fact, that it cannot be worked at all; it brings about a constant alteration of the day of the month for the dispatch of the Australian mail from England, and a constant alteration of the date of the dispatch from Sydney; it also increases the course of post very much, and there is a constantly varying time for the detention of the steamers and of the interval between the arrival and dispatch of the mail in Sydney.

3104. But there would be no difficulty, would there, in the event of their having 13 mails a year to Australia?—The difficulty is that which arises from having 13 mails in the year to and from Australia, as compared with the present system of 12. This table illustrates the result of having 13 mails in the year instead of 12. I assume in the table that the system came under operation on the first Friday in January last, and the table works the system out through the present year (*delivering in the same*).

3105. Do you mean to say, then, that a service of 13 voyages in the year would be more inconvenient to the people in Australia than one of 12 voyages?—It would require four ships to do the work instead of three, as at present. The community in this country would have to look to see on what Friday of the month they would have to write the Australian letters, and the community in Australia the same.

3106. Mr. Marsh.] With the present speed, they would not be able to get an answer by the return post, if there were 13 voyages in a year?—On one occasion the interval between the arrival and dispatch of the steamer at Sydney is brought down to one day, so that that would not do for the country. I may mention that the Company have been very recently in correspondence with the Post Office with reference to an improved service on the Australian line, and we gave them to understand that if they would give us a contract for a sufficient number of years, we would

would build a set of ships specially suitable for the requirements of the line. In reply, they have stated that they are not able to entertain the proposition at the present time.

3107. *Chairman.*] Have you anything further to state to the Committee upon your communication with the Treasury, with regard to the service with Japan?—No; that matter at present stands in this way: we have been carrying on that service for two years, and have received nothing for it. The Government asked us for what amount we would undertake to continue it and we offered to do

it for the very low sum of 5,000*l.* a year. They have since asked us, but not officially, if we would do it once a month for less, leaving half the service to the French; and we have told them also, not officially, that we cannot make any abatement in the 5,000*l.* a year, whether this service be monthly or fortnightly.

3108-10. The Committee understand from you also, that your service with Mauritius is on the point of being brought to a close, upon the notice given by your company to the Government?—It is so; the last mail leaves on the 20th instant.

C. W.
Howell, Esq.
—
18 May
1866.

HUBERT IZAAK WALTON, Esq., Examined.

3111. *Chairman.*] You have been employed, have you not, in connection with the Persian Gulf Telegraph Line at Kurrachee?—I have.

3112. In what capacity?—As director of the line from Kurrachee to Fao.

3113. When did you arrive in London?—On Friday last.

3114. When did you leave Kurrachee?—I left Kurrachee on the 11th of April.

3115. In what condition did you leave the line?—I left it in an excellent condition.

3116. In what time were the messages, as a general rule, conveyed between Fao and Kurrachee either way?—Between Fao and Kurrachee the average has all along been under two hours.

3117. In fact, there has been no interruption to the regularity of the service, has there?—There has been no interruption to the regularity of the service, except for a very short time, when the cable broke soon after it was laid.

3118. As long as the cable was in good condition you were able to send your messages from Fao, and receive your messages at Kurrachee from Fao, in something like two hours?—Yes, on the average.

3119. Is it your name that we have seen appended to some representations addressed last year to Mr. Mansfield, the Commissioner in Scinde?—Yes.

3120. At that time the service from Kurrachee into the interior of India was very defective, was it not?—It was very defective indeed.

3121. Is it at all better now?—When I left Kurrachee it had improved considerably. Since December last I think it had improved very much.

3122. What is the improvement the consequence of?—I do not think that the improvement is permanent yet, although it will be within the next three or four months, when the contemplated alterations have taken place in laying down a double line, and putting a new line through the Runn of Cutch. I think the route adopted, perhaps, might be changed.

3123. Will that line be a complete line, so far as insulation is concerned?—I do not know what insulators they are using. I have nothing to do with the Indian telegraph department just now.

3124. Have you anything to do with what you call the Indian service, as distinct from the Persian Gulf line service at Kurrachee?—No, from 1857 to 1860 I was in the Indian telegraph department, but since then I have been on special duty.

3125. You at Kurrachee were the director of the Persian Gulf line?—Yes.

3126. And you had nothing to do with the working of the Indian lines from Kurrachee?—
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I had nothing whatever to do with the Indian lines.

3127. You made certain representations to the Commissioner in Scinde; those communications had reference, had they not, to the accumulation of messages in the office at Kurrachee, which were not sent forward with the rapidity with which they ought to have been sent forward?—As far as I can remember, my communication was with regard to the general mismanagement, and, on this particular occasion, the delay of a great number of messages.

3128. Owing to what circumstance was that delay?—Owing to the defective state of the line between Kurrachee and Deesa.

3129. Did that state of the line prevent messages from being sent on after they were received in the Indian office at Kurrachee?—Yes, it caused a delay in some instances of two or three days in Kurrachee itself.

3130. In what condition were the messages from England received at your office at Kurrachee, generally speaking?—At first they were rather indifferent, but latterly they have been wonderfully correct considering the number of different States that the messages passed through, and that they are handled by men who speak different languages to that in which the messages are conveyed.

3131. Great complaints have been made before this Committee of the defective condition in which the messages have been received in India and in London; from your experience do you consider that those defects were due to the mismanagement in the Turkish system, or in the Indian system?—In the case of messages from England, the defective state of the messages must be due to the mismanagement between London and Fao.

3132. Were the messages for England received at Kurrachee from Bombay and Calcutta generally received in good condition?—I think there were equally as many, if not more, errors in the messages on their arrival at Kurrachee from India, as on their arrival from England at Kurrachee.

3133. You found, did you not, that before you left Kurrachee an improvement was taking place in both particulars?—Yes, on both sides a great improvement was taking place.

3134. There is a line, is there not, from Kurrachee to Gwadur, by land?—Yes.

3135. Do you use that line at all?—We use it in case of the cable breaking, and for all local purposes and messages on the telegraph service, or from the town of Gwadur itself to Kurrachee, and the charge is much less on that line than by the cable.

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3136. Would

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H. I. 3136. Would there be any difficulty in extending that land line along the Persian Gulf?
Walton, Esq. —Not the slightest difficulty all the way to Bunder Abbas, immediately to the north of Mussendom.
 18 May 1866.

3137. And so along the shore of the Persian Gulf to Bushire?—I do not know anything about the country beyond Bunder Abbas, but as far as Bunder Abbas there would be no difficulty whatever, either from the nature of the country, or from the habits of the people.

3138. You have had no difficulty in dealing with the people on the Mekran Coast, between Kurrachee and Gwadur, have you?—Since the line was constructed they have never attempted any injury to it, on a single occasion.

3139. **Mr. Marsh.** Are the people Beloochees?—Yes, they are Beloochees; they call them the Mekranees; they are a different caste of men altogether from the Hill Beloochees; they are very good people indeed if they are treated properly.

3140. **Chairman.** Looking at the risks to which all submarine lines must be to a certain extent subject, would it not be a very great safeguard as respects the interest of the people using the telegraph, to have an alternative line as far as is practicable on land?—Most decidedly so.

3141. Would it not also very much facilitate the forwarding of messages to and fro?—Very much so indeed.

3142. What would be the expense, stating it very roughly, of continuing the line from Gwadur to Bunder Abbas?—I should imagine it would be about from 80*l.* to 85*l.* a mile; that is to have a good permanent double line.

3143. Do you think that the line as at present existing, a single line, down the Persian Gulf to Kurrachee will be sufficient, as the business increases, to carry the whole of the messages passing to and from India?—No, it is just sufficient for the present work; but there must be another line made very soon, I think.

3144. And in that case would not the extension of the land line to Bunder Abbas be an advantage?—A great advantage.

3145. And still more so if you could connect Bunder Abbas with Bushire, and so bring it into communication with the Persian line?—Yes, and so we would have an alternative line the whole way to England.

3146. A proposition has been made to this Committee for the making of a line through Egypt to Aden, and along the southern coast of Arabia by way of Muscat, to Mussendom; if that line were to be made, would it be possible, do you think, to convey all the traffic upon the single line at present existing, or even upon the double line which you have been suggesting?—If that alternative line were made there would be an immense local traffic between Bunder Abbas, and those places in Persia through which the line would pass to Kurrachee and Bombay, and other parts of India.

3147. Do you think that there is a sufficient foundation of commerce between Persia and India to supply a large amount of local traffic?—Yes, there is.

3148. I presume all your messages are sent in English?—Yes, all our messages are sent in English.

3149. And of course a native, whether he understands English or not, is obliged to have his message translated for him into the English lan-

guage before you can send it?—Yes; in every station there are moonshees who put their messages into English for a very trifling sum.

3150. Looking at the probable extension of the telegraphic system eastward from India to China or Australia, do you think it possible that with such an additional service to perform the Persian Gulf line could carry on its work without some addition to its present means of forwarding messages?—I think that if the alternative line were made it would be quite capable of doing the whole of the work.

3151. Do you think that two wires would be sufficient?—Yes; we can form a very good idea of the amount of telegraph traffic with our Eastern Colonies from what we do at present, and I find that of all the messages received at Kurrachee, Singapore, China, Japan, and Batavia, one-tenth are for Australia. If the telegraphic communication were extended, I believe that there would be an equal amount of traffic with those places as there is at present with India.

3152. Have you brought any statistical information with you as to the working of your line?—No, I have only come home on leave of one month in England. I have nothing at all of that sort with me. I send in a monthly statement to the Bombay Government of the traffic receipts and the length of time occupied in the transmission of messages.

3153. As director of that line are you in charge of the accounts of the line as well as the practical administration of it?—Yes, I am in general charge of the administration of the line.

3154. Do you receive all the cash which is paid in and make all the disbursements?—Yes.

3155. And you render an account to the Bombay Government?—Yes, I do that through the Accountant General at Bombay.

3156. **Sir Charles Bright.** What is the expense of working the line?—Including the steamer "Amber Witch," and all the expenses incurred in India, I think that the expense is about 26,000 rupees a month at the outside.

3157. That is how much in English money per annum?—£. 31,200.

3158. What were the last month's receipts of the line before you left India?—I cannot remember exactly; but it was about 85,000 rupees per month, or at the rate of 102,000 *l.* a year. The revenue would be very much larger if the service were properly conducted on either side of my section.

3159. At present it appears that you are earning a profit of about 70,000 *l.* a-year?—No, there is the value of the English stores to be deducted, and the wear and tear of the cable.

3160. But your own expenditure and receipts show a balance of about 70,000 *l.* a-year at present?—I think that I reported to the Government that we might anticipate a profit of 60,000 *l.* a-year. That is on the safe side, I know.

3161. You have a regular day and night service, have you not?—Yes; we have a continuous service.

3162. And you select the signallers from Europe?—Yes; they are first-class signallers.

3163. Is there not some proposal to alter the course of that line to Angaam at the other side?—Yes; owing to the unhealthiness of Mussendom, and the almost impossibility of keeping Europeans at such a place, the advisability of altering the course of the line is now before the Government.

3164. Have

3164. Have you had any trouble at all with the Arabs at Mussendom?—None whatever.

3165. The Arabs in the Gulf are in a state of revolt now, are they not?—If we let the Arabs alone, they will never interfere with us; and I take very good care that none of my people interfere with them, so that we have had no trouble with them whatever.

3166. We have had it stated in evidence that in the month of March last, between Kurrachee and Bombay, messages were still being very slowly and inefficiently carried, to what do you attribute that?—The line to the eastward of Kurrachee goes through a very bad country indeed; and at the suggestion of Sir Bartle Frere, I have drawn up a scheme for a different line of cable from Kurrachee to Dwarka, and thence a land line through the rich cotton district to Baroda or Ahmedabad, and thence alongside the railway to Bombay.

3167. You spoke of the local traffic; what is the proportion of local traffic that you have now on the Persian Gulf line?—I cannot tell exactly now, but I think I should be safe in saying that it is worth 750 rupees a month.

3168. What was about the average time occupied by a message from the head of the Gulf to England, or from England to the head of the Gulf, at the time that you left Kurrachee?—I think it was two days and five hours; I cannot speak quite positively upon that point.

3169. Can you state the average on the other side, between Kurrachee and Calcutta?—Matters had improved very much when I came away; I think the average must have been from 15 to 20 hours.

3170. Then how do you account for the fact that we do not get any news as a rule from India now under five or six days?—I do not know at all what has happened since I left Kurrachee. I have heard nothing at all about it; the reports which I sent in every month to the Government will show exactly how the line works.

3171. You referred to the risks attending a submarine line, but it seems to be the fact that the submarine portion of the Indo-European Telegraph, namely, that portion from Fao to Kurrachee, is the only part of it which works satisfactorily?—The submarine line from Fao to Gwadar is as good now as when it was laid, and it works excellently.

3172. I say it is the only part which works satisfactorily; all the land lines appear to give dissatisfaction, and the submarine cable is the only one which works well?—Yes, from Fao to Gwadar it works very well, but from Gwadar to Kurrachee it is parallel with the coast; and every monsoon it breaks and is likely to do so.

3173. Does the "Amber Witch" go up the Gulf frequently?—She goes up about three times a year on the average.

3174. What is her cost, including staff and coals?—Including coal and her commander's pay as engineer, her cost is about 3,400 rupees a month.

3175. Does she give satisfaction in her work?—As a cable vessel she gives every satisfaction, except that her horse-power is too small, and it cannot be increased without lessening her capability for carrying cable.

3176. You state, do you not, that the working in India has been improved?—The weather has improved and the working has improved; but whether the improvement of the working is to be

accounted for only by the change of the weather or whether it is owing to the better administration, I cannot say.

3177. Are the Turkish lines improving at all?—They improve sometimes, and then they fall back again; we cannot depend upon them.

3178. If the Turkish lines were in good order, and messages were carried from the head of the Gulf to England, say in half-a-day, what additional amount of traffic do you calculate from your observation of the traffic would be brought upon the line?—I do not think that there is more delay in Turkey than there is in Europe generally. I do not think that all the blame lies with Turkey.

3179. Our experience is, that the service through Austria is very well performed, and therefore we lay the blame upon Turkey, seeing that the cable has worked well?—In the middle of last winter, which was a very severe winter indeed, the Turkish telegraph worked as well as it could be wished, and at another time in the middle of the summer, when there is no reason for it, it breaks down; why it is I cannot say. But that it can work well, and that there is every probability of its working well, I think that there is not the slightest doubt.

3180. But if you could get a message from the head of the Gulf to England in half-a-day, the traffic, you think, would be very much increased?—The traffic would be doubled, no doubt.

3181. Therefore the Indian Government, through the bad working of these continental lines, are losing 60,000*l.* a year?—Yes, I think so.

3182. Mr. Moffatt.] What are the two termini of the Persian Gulf Telegraph Line to which your evidence has reference?—Kurrachee and Fao; Fao is almost the same as Busrah; it is a little lower down, just at the mouth of the river; and Busrah is 60 miles up the river.

3183. That telegraph is termed the Persian Gulf line?—Yes.

3184. Under whose responsibility is it carried on, that of the Indian Government, or of a private company?—Under the Government of Bombay.

3185. Can you state to the Committee any reason why messages should occupy 15 hours coming from Calcutta to Kurrachee?—No; I am not in the Indian Telegraph department.

3186. Have you been along that line?—I have been along nearly all of it many years ago.

3187. If properly administered, what, in your opinion, should be the time occupied in a message being conveyed from Calcutta to Kurrachee?—If there is a special line on purpose for certain messages, of course a message ought to be transmitted in 20 minutes.

3188. But as an ordinary telegraph line, what is the time that might fairly be occupied in the transmission of a message from Calcutta to Kurrachee?—I should say under two hours.

3189. And you state that upon the average it is about 15 hours?—Yes.

3190. So far as the Persian Gulf branch of the Indian telegraph system extends, there is a very large profit to the Government in its working?—I am not able to state that there is any profit, because I do not know the expenses of the stores from England, and what is allowed for the wear and tear of the cable and the interest on the capital.

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3191. You

H. I.
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18 May
1866.