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REPORT

FROM

THE SELECT COMMITTEE

APPOINTED TO INQUIRE INTO

THE EXISTING FACILITIES

FOR

INTERCOURSE between the UNITED KINGDOM and
the Colonies of NORTH AMERICA,

AND THE

EXPEDIENCY AND MEANS OF IMPROVING THEM;

AND TO REPORT TO THE HOUSE;

WITH

THE MINUTES OF EVIDENCE,

AN APPENDIX, AND INDEX.

1836.



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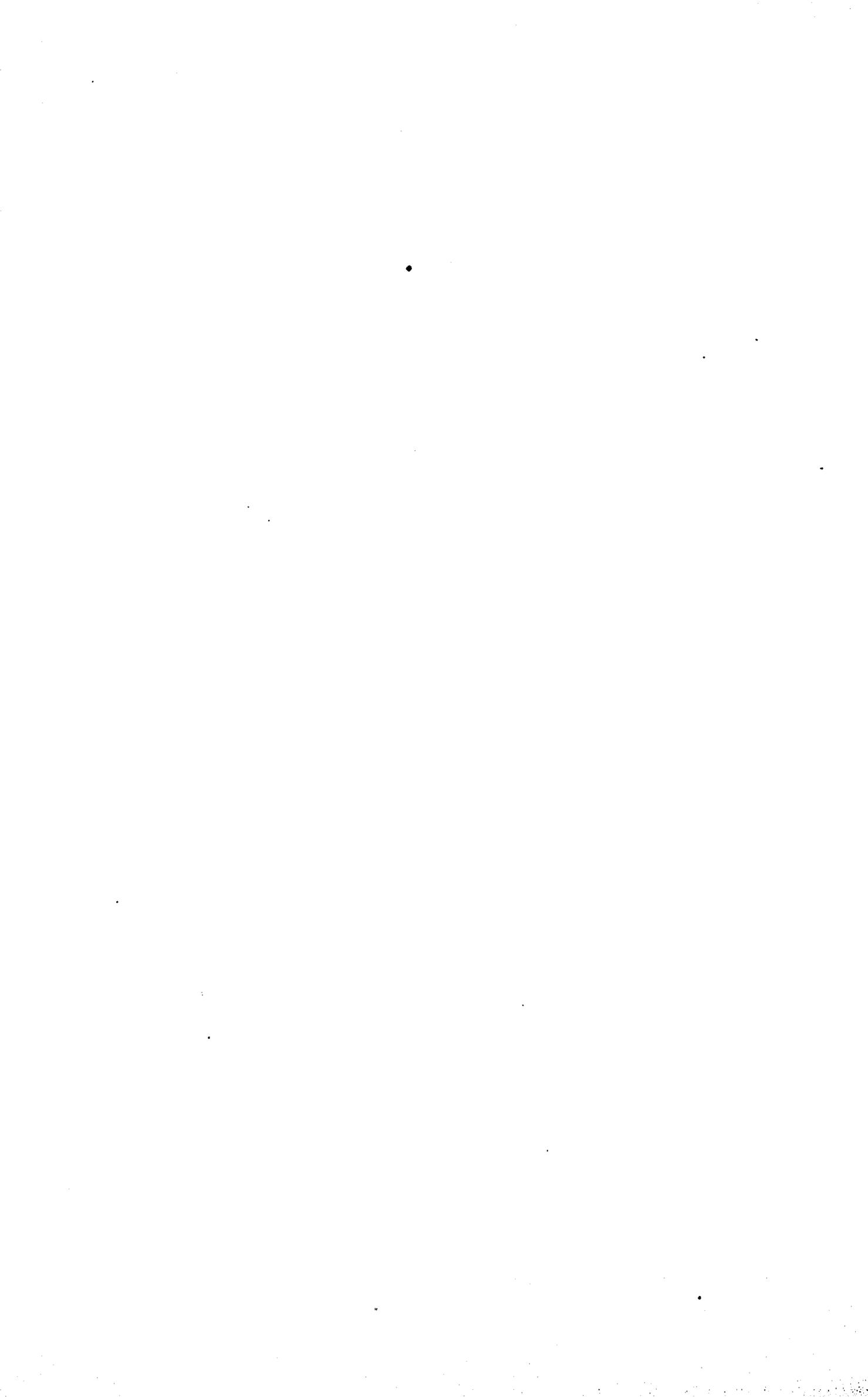
AND TO REPORT TO THE HOUSE;

WITH

THE MINUTES OF EVIDENCE,

AN APPENDIX, AND INDEX.

Ordered to be printed 13th June 1836.



R E P O R T.

BY THE LORDS COMMITTEES appointed a Select Committee to inquire into the existing Facilities for Intercourse between the United Kingdom and the Colonies of North America, and the Expediency and Means of improving them; and to report to the House; and to whom were referred the following Papers; (viz.) Copy of such Portion of the Evidence taken before the Commissioners of Revenue Inquiry as is complete referring to the Western Harbours of Ireland; and also the First, Second, and Third Annual Reports on Public Works, Ireland:

ORDERED TO REPORT.

THAT the Committee have, in discharge of the Duty imposed upon them, proceeded to inquire from the best Authorities, both into the Advantages which as well in a Military as a Commercial Point of View might arise from the Establishment of a more certain and speedy Intercourse between His Majesty's European Dominions and the American Colonies, and their Attention has more particularly been directed to the Western Coast of Ireland, as affording the nearest Points of Communication between the Two Continents.

Although they have succeeded in collecting much valuable and authentic Information on these Subjects from various Sources, they feel that before they could be justified in submitting any specific Recommendation for the Adoption of Parliament or of His Majesty's Government they must extend their Inquiry on Points with respect to which, notwithstanding the Number of Witnesses they have examined, they have not hitherto been enabled to come to any satisfactory Conclusion.

Into such an Examination they would not hesitate, even at this advanced Period of the Session, to enter, were they not convinced that on some of the most important Points, and more particularly that of the beneficial Application of Steam to Voyages of long Duration, some further Experience, which cannot fail soon to be obtained, is necessary, before they could satisfy their own Minds so far as to suggest any considerable Alteration

in the existing, or the Formation of any new and necessarily expensive, Establishments.

They have thought therefore that it would not be disadvantageous to suspend their Proceedings for the present, and to report the Evidence they have received to the House, in the full Confidence that those Departments of His Majesty's Government which have the best Means of collecting Information and observing the Facts which bear upon so important a Subject, will in the meanwhile not fail to give to it their careful and unremitting Attention.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE OF THE HOUSE OF LORDS,

APPOINTED

To inquire into the existing **FACILITIES** for **INTERCOURSE** between the **UNITED KINGDOM** and the Colonies of **NORTH AMERICA**, and the **Expediency** and **Means** of improving them; and to report thereupon to the House.

1836.



Die Jovis, 14° Aprilis 1836.

The Lord PRESIDENT in the Chair.

Evidence on
the Intercourse
between the U.K.
and the Colonies
of N. America.

*Colonel
J. F. Burgoyne.*

Colonel JOHN FOX BURGOYNE is called in, and examined as follows :

YOU have been for several Years Chairman of the Board of Works in Ireland?

I have.

You have served in different Parts of the Globe?

I have.

Have you had Occasion to consider the most advantageous Mode of carrying on the Intercourse by Sea between the British Dominions and the Colonies in America?

I have frequently considered that Subject.

Are you of opinion that a great Advantage would arise from having Stations to carry on that Intercourse from the most westerly Port?

I am most decidedly of that Opinion; inasmuch as it would lengthen the Inland Passage, and shorten the Voyage by Sea, which is always advantageous for the Transport of Letters or Passengers, of valuable Goods, or of any thing requiring Expedition.

Independently of the greater Proximity, would it be a great additional Advantage, from the habitual Current of certain Winds?

If it only regarded America, the Difference in the Distance probably would be quite sufficient to establish the Advantage; but for a Passage to the South of Europe, getting so far to the Windward (the prevailing Wind being westerly) would be of very great Importance. From the South-western Ports of Ireland, with a westerly Wind, you can make Cape Finisterre; whereas from the Ports in the Channel you cannot.

Do you conceive that Facility of Communication would apply chiefly to Merchandize or to Passengers, or to both?

I imagine that the Conveyance of heavy Merchandize is carried on with so much more Advantage by Sea than by any other Mode that it would be always embarked at the nearest Port, and sent at once to its Destination; whereas it is different with Letters and Passengers, and certain light Goods requiring Expedition; the Object with them would be to go to a little extra Expense to convey them with the greatest Speed, and therefore shortening the Sea Voyage would be a great Advantage.

Do you conceive, in that respect, some westerly Port in Ireland would possess considerable Advantages over Falmouth, which may be considered as the most westerly Port in England, for that Purpose?

Very great Advantages. There are plenty of good Ports in the South of Ireland, and Communication to them is very easy, and might be much improved at a comparatively moderate Expense. The Mails travel through Ireland now nearly as fast as through England; and any Road there might be put, at a very moderate Expense, into a State to enable the Contractors to carry them at the same Rate as in England.

You mean the Roads, independently of all Probability of establishing Railroads?

Yes; I refer to the existing Mail Roads.

4 MINUTES OF EVIDENCE ON THE INTERCOURSE BETWEEN THE

*Colonel
J. F. Burgoyne.*

Do you conceive that with respect to Passengers it is possible that they would be induced to embark for Ireland, with a view to obtain that greater Expedition in the subsequent Voyage?

Of those who go Abroad, some with very small Means might prefer the longer Voyage, at the Expense of Time; but Men of Business and Men of Pleasure would take the Means afforded of shortening the Voyage as much as they could.

You think that almost generally with respect to any Port on the West Coast of Ireland the Inland Communication might be made practicable and convenient?

I am satisfied of that; to any Western or South-western Port in Ireland.

From your own Observation on the State of Ireland, do you conceive such a Communication would be internally beneficial to Ireland, as well as important to the general Convenience of the Empire?

Certainly it would.

Would it afford great Facilities for sending Troops upon Emergencies to the Colonies?

Very great indeed. I should think any Military Man who served during the last War, and went Abroad from the Channel, must be aware of the Difficulty of getting out; they are frequently delayed for a Wind, which would rarely be the Case from the South-western Coast of Ireland.

Have you any Expectation that the Communication between England and Ireland will be materially improved as to Expedition beyond the Point at which it has already arrived?

There is a Project which has been in contemplation of making a Railroad to some Welch Port; Portdynllaen has been mentioned, but many Parts of the Coast of Wales are within a short Distance of Dublin; and if there should be a Railroad to a Port there, and an improved Steam Communication to Dublin, that would shorten the Passage very much; at present, I apprehend a Person might get from London to any South-western Port of Ireland in Sixty Hours by the present Means of Communication.

By Liverpool?

By Liverpool or Holyhead; but when the Liverpool Railroad now in progress shall be executed it will shorten the Time Ten or Twelve Hours more; it may be done then in about Forty-eight Hours.

Do you mean that they can get by the existing Communications from London to a Western Port of Ireland in Sixty Hours?

It could not be done at the present Time by the public Conveyances, because there is no Coach leaves Dublin at the Time of the Arrival of the Mail; but if a Coach started immediately from Dublin on the Arrival of the Mail from London it would take only Sixty Hours.

Do you suppose that Facilities would exist in Ireland for forming such Depôts of Stores as would be material if those were the Head Quarters of Troops destined for Service in the Colonies?

There would be great Facilities for forming Depôts in any Ports of the West of Ireland.

Could Troops intended as a Depôt for Foreign Service be maintained more cheaply in the West of Ireland than in other Parts of His Majesty's European Dominions?

Certainly, if there was a Barrack fixed in any Part of the West of Ireland, I have no Doubt there would be ample Supplies, and on cheaper Terms than in England, created in a short Time; they may not be in existence, perhaps, at the present Moment.

Have you considered in what Degree those Facilities of Communication could be increased by Railway Communication across Ireland being substituted for the present Communication?

Ireland presents great Facilities for the Formation of Railways in almost every Part. The peculiar Feature of Ireland is, that the great Mass of the
Country

Country consists of a Range of extensive Plains, surrounded by Mountains, parallel to and at no great Distance from the Coast. Dublin is a peculiarly favourable Point to start from; it is not only the Seat of the Government, the Law Courts, &c., but, by Nature, it is the Centre of Communication from England and from Scotland, and possesses a Port of great Resort; it is also peculiarly well situated to start a Railway from, being on the Plain between the Hills of Louth on the one Side and of Wicklow on the other, from whence you can diverge to any Part of the Kingdom. There is every Reason to believe that there will be no Difficulty in getting a good Communication through the Hills to any Port in the West; they have, however, not been minutely examined, I believe, yet, except in the Direction towards Valentia, where they know precisely which Way the Line might be carried; and I do not think as to the others there will be much Difficulty.

Do you feel yourself justified in leading the Committee to conclude that a Railway to the Western Part of Ireland could be effected with great Facility at a less Expense than the same Sort of Communications have cost in this Country?

I think the Country is much more favourable for the Formation of Railways.

You cannot give an Idea of the comparative Expense?

I cannot; the Land would be much more easily acquired, which is an important Feature in the Outlay, particularly if it was taken on any fair and just Principle.

Was not the Land between King's Town and Dublin obtained at a great Expense?

Yes; because it was in part occupied by Villas and Gardens, and of a Nature, so near the Capital, to be peculiarly valuable.

You have no Doubt that those possessing large Tracts of Property in Ireland are as much inclined to have Lines of Railways through them as in England they are averse to it?

I think they are anxious to have the Railways through their Properties, but that they will make the Undertakers pay the Value for the Ground they may take. In the United States Parties come forward and enter into binding Engagements not to charge for the Land if the Railways should be carried through their Property, and very often the Lines are selected where the Proprietors have made the best Offers.

Has not it been the Case in Ireland that Offers have been made of Land for the Purpose?

I have heard of but few such Offers that could be depended upon.

Have you heard of any Calculation of the Expense that would attend a great Western Communication by Railway?

It has been stated that the Line to Valentia would cost 3,000,000*l.*; that is about 15,000*l.* a Mile; it is 200 Miles.

Can you give the Committee any View of what would be the Sources of Remuneration to those who might undertake such a Speculation?

The Passengers Traffic is the principal Source of Revenue; where that was likely to be greatest the Undertaking would of course be the most productive; but, independently of that, I conceive a very considerable Revenue would arise from the Postage of Letters for a Distance of 200 Miles, a Postage that would be paid willingly in consideration of the increased Rapidity of the Communication.

How far do you conceive, beyond Passengers and Postage, the Railroads would be applicable to the Conveyance of the Produce of the Country, including Live Stock?

I do not think, generally speaking, Railways have been found to carry Agricultural Produce to Advantage, for the Expense is too great, considering that Time is of no very great Consequence.

Are not Pigs carried to a great Extent between Liverpool and Manchester?

I have no Doubt Pigs would be an important Article. There is a Point

Colonel
J. P. Burgoyne.

connected with the Western Harbour, as regards the American Packets, which is worthy of Notice; namely, that the Business would probably be transferred from the Americans, by whom it is now conducted, into the Hands of British Subjects. Presuming that there was a Steam Packet from a Western Port of Ireland to America, it might reasonably be expected to be carried on by the British, for they could do it, I imagine, to greater Advantage than the Americans; and this leads to the Consideration of another Matter: I doubt whether a Steam Packet could go securely from any other Part of Great Britain to America, on account of the requisite Quantity of Fuel for the Voyage; I have an Idea that no fast Steam Vessel could carry more than about Three Weeks Fuel; now the Average Passage from Land to Land may be estimated, perhaps, at from Twelve to Fourteen Days, and I should conceive there should be Fuel provided for at least a Week more, in order to allow for any particular Circumstances which might occasion Delay.

Are there any Steam Vessels at present supposed to be Three Weeks on the Passage?

I should think not. In coming from Lisbon I was myself Nine Days on the Voyage, and we were obliged to go into Spain to get Coal. There is an Explanation I should wish to give also, with respect to starting so far to Windward, in order to make Cape Finisterre. It is probable that an Objection might be advanced, that the further you get to Windward in going from Great Britain the more you are thrown to Leeward for returning, and thus that the Advantage would be counterbalanced; but the Cases are not the same; if the Wind, for instance, was at North-west, and consequently fair for the Channel, but very contrary for the Western Harbour, you would naturally run, in that Case, for Falmouth, and land the Mail, Passengers, &c., and then the Vessel might proceed to her Station; but in going out you could not run for a Port to Leeward, which would be in a different Country from that to which you were bound.

Have you considered what the Profits might be resulting from Railway Communication, as remunerative to those who had contributed to the Undertaking, without reference to the Political Advantages to which you have before adverted?

A Line connected with a large Population and much Business can alone be expected to yield direct remunerating Profits. Many incidental Sources may increase them; for instance, an attractive Place like Killarney, of interesting Resort and Curiosity, is very favourable on a Line; a greater Passenger Traffic might be expected, perhaps, from a Place like Killarney, than from a considerable City.

Any Railway to a South-western Port would go near Killarney?

Yes.

In looking at the different Lines of Western Communication which have been contemplated, are there any which have considerable Preponderance over others, either by the Shortness of the Railway to be constructed, or by the Nature of the Country through which it is to pass?

The shortest Line of Railroad would be to Galway; but the Object I apprehend would be rather to lengthen the Passage by Land as much as possible, if the Sea Voyage was by so much shortened.

Have you heard the Estimate for a Railway to Galway?

No; but I presume it would be low in comparison to other Railways, in consequence of the favourable Nature of the Country, and the Shortness of the Distance.

What are the greatest Obstacles to overcome in the Way of Railroads in the South-western Direction?

The greatest Obstacle is the Range of Mountains which must be overcome in going to any Port in that Direction.

To what Lines of Mountains do you refer?

The Mountains which run East and West through the Counties of Tipperary, Cork, and Kerry.

This

This Obstacle would apply equally to either of the South-western Communications?

The Lines have not been particularly examined, except as regards Valentia.

That Survey has not been minutely made?

No; but quite sufficiently to show that it is perfectly practicable.

The Distance you say would be about Two hundred Miles?

The present Distance is about Two hundred Miles, and I apprehend that it would not be much varied.

When you spoke of reaching a Port in Sixty Hours, you meant a South-western Port?

Yes; but Galway, which is West of Dublin, might be reached in Forty-eight or Fifty Hours. I meant by Sixty Hours the extreme to any Port in Ireland.

Do you think, if there were any such Railroad, much of the Merchandize which passes from Liverpool to the various Ports in America would be afterwards made to pass by this Railroad?

No; I should think that the great Bulk of Merchandize would be shipped at Liverpool, as at present. Light Goods, or Goods of Value, or requiring Speed, might be forwarded by the Railroad.

Parcel Goods you think would go in this Way?

Yes. I do not imagine the Mass of Goods from Liverpool would bear the extra Expense of that Medium of Transport.

You have no Knowledge of the Average Length of Passage between Halifax and Falmouth, or between New York and Liverpool?

No, I have not. I believe the Halifax Packet goes by Bermuda; that there is no direct Intercourse. The Passage is much longer in going than returning.

The Witness is directed to withdraw.

Ordered, That this Committee be adjourned till To-morrow,
Three o'Clock.

Colonel
J. F. Burgoyne.



Die Veneris, 15^o Aprilis 1836.

The LORD PRESIDENT in the Chair.

Colonel JOHN FOX BURGOYNE is called in, and further examined as follows :

Have you prepared a Paper, for the further Information of the Committee, on the Subject of your Examination Yesterday?

I have.

Have the goodness to deliver it in.

The same is delivered in, and read, and is as follows :

WESTERN HARBOUR.

The prevailing Winds in the Latitude of the British Islands, and considerably to the South of them, being westerly, it is of great Consequence that all Vessels bound to the Westward should start from a Port as far in that Direction, that is, as much to Windward, as possible. Cape Finisterre, the North-west Cape of Spain, is to the West of the Whole of Great Britain and of great Part of Ireland ; it follows, therefore, that all Vessels bound, not only to America, but to every Part of the World South of that Cape, have to gain a Westing, and are consequently in the Case of finding an Advantage in sailing from a Westerly Port. But the Transport of Goods by Sea being cheaper than by any other Medium, the great Bulk of Produce and Merchandize have hitherto been and probably will always continue to be shipped at the nearest Ports, and from thence proceed on their Voyage to their ultimate Destination. Letters, however, and Passengers, as well as Goods that are light and valuable, or that require quick Delivery, will bear a considerable extra Expense for Speed and Certainty. It has been with these Views that Falmouth, though an inconvenient Point to reach by Land, has been hitherto maintained as the most appropriate Packet Station, being the most Westerly Port in Great Britain, giving proper Shelter, and affording at the same Time Facilities for Egress and Ingress.

The Consideration of going to Ireland for a Port was scarcely contemplated, partly on account of the Uncertainty arising from the intermediate Voyage across the Irish or Saint George's Channel, partly by the inferior Nature of the Communications through Ireland, and partly from the continued unsettled State of that Country. In all these Points Circumstances are so much changed that it becomes a serious Question for Inquiry, whether it would not be desirable to establish leading Stations on the West or South-west of Ireland for the Departure of Letters, Passengers, and certain Goods. The Intercourse actually carried on between many of the British and Irish Ports of Saint George's Channel is such, and can be varied or multiplied in so many Ways, that it is tantamount to having so many Bridges ; the Transit is indeed more expeditions, less expensive, less fatiguing to Persons (though to some perhaps unpleasant), and less injurious to Goods than if made over a Bridge, and with a Degree of Certainty in point of Time very little inferior. The Two Countries may therefore be considered, for the Purposes of Intercourse, to be virtually united, and the first Objection consequently entirely removed. The Roads in Ireland have been of late Years much improved ; the Mails travel nearly at the Rate of those in England ; and by small additional Efforts, and at a very moderate Expense, any given Communication can be made as good as any in Great Britain, and the Mails forwarded with equal Celerity. On the Political State of Ireland Persons will hold different Opinions, but perhaps few will maintain that it is such as to disentitle it to be considered as an integral Part of the Empire, for the Purpose of developing such Objects of public and general Utility as can be alone supplied by that Country. There would seem then strong Reason to believe that a Packet Station from the most favourable Western Port in Ireland might be advantageous to the Empire : First, it would shorten the Voyages in some degree in Distance, and in a great degree in Time : Secondly, it would materially benefit the Prosperity of the Country and the Revenue, by lengthening the Transit through the Country.

But if these Advantages would be obtained with the present State of Communication, how much more will the Case be strengthened by taking into consideration the Progress of the Railway System, and the Extension of Steam Navigation across the Ocean. Railways are actually in progress that will connect London with Liverpool ; the Passage by them and the

Evidence on
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present Packets to Dublin will be effected in Twenty-four Hours easily; the Mails will probably be carried quicker; Twenty-four Hours more will convey a Mail by Coach to any Port in Ireland, and that Time may be reduced by more than One Half by the Application of a Railway. Thus, by Means that may be almost said to be in existence, the Passage from London to the embarking Port may be effected in Forty-eight Hours. But should Projects which seem feasible be realized, the Passage may be carried on in Twenty-four or Twenty-six Hours. The Projects alluded to are Railway Communication to a Welsh Port, the Application of the best possible Class of Packets from thence to Dublin, and a Railway from that City to the Western Port.

With regard to Steam Navigation across the Atlantic, the Position of the Port to start from may be thought to be of little Importance; but although Steamers are in some degree independent of Weather, they are delayed by contrary Winds in a Manner that in long Voyages is of serious Consequence; and on that Account, and from the Difficulty of carrying sufficient Fuel for lengthened Voyages, it is of infinite Importance to shorten the Distance from Land to Land as much as possible, and to gain every Advantage of the prevailing Winds. This is a Matter peculiarly for Attention in considering the Passage to America, where the Distance from the nearest Part of Europe, namely the West of Ireland, to the nearest in America, will but just come within the Limits for which in the present State of Steam Navigation, that is, to be rapid and safe, Stowage can be obtained for the requisite Quantity of Fuel. It may be inferred, therefore, that the Application of Railways and of Steam Packets will tend very much to strengthen the Propriety of a Packet Station on the West of Ireland.

The Question has been treated above solely as regards what may be called a Packet Station, but a very important Subject for Inquiry is as to the Adaptation of such an extreme Western Station for the Embarkation of Troops and Public Stores of a Nature and for Occasions where a Saving of Time is of sufficient Consequence to justify the Formation of Depôts in that Part. The reducing of the Time of Transport of Soldiers by Sea is a Measure of great Service, and even of Economy, at all Times; but in War a Gain of Time is usually of pre-eminent Consideration, and may and frequently does influence the whole Fate of the Contest. With regard to Depôts of Stores, &c. it will probably be as easy to collect them in such a Situation for further Conveyance as to add that Extent of Conveyance to their ultimate Course of Transit.

You have nothing to add to your Evidence, except what is contained in this Paper?

No.

The Witness is directed to withdraw.

Duke of Wellington.

The Most Noble the Duke of WELLINGTON (a Member of the Committee) is examined as follows :

Has your Grace ever had occasion to consider the Possibility of an improved Communication between this Country and the Trans-atlantic Colonies?

I have never had that Subject under my Consideration professionally; I have considered it generally, as I do not doubt many of your Lordships have likewise. Your Lordships may desire to have my Opinion upon it, and you may feel some Confidence in that Opinion, in consequence of knowing that I have considered and had under my Care at different Times the Embarkation and Disembarkation of Troops; but I must say that, professionally, I have never had an Opportunity of considering and deciding upon that Subject in relation to an Embarkation in Ireland of Troops to be sent either to the Southward or the Westward.

Will your Grace state generally the Opinion you have formed with reference to the Advantage which might ensue from Expeditions being sent out across the Atlantic from a more Westerly Port?

The Expedition of Troops involves necessarily a great Variety of Considerations. The Troops must be collected in the Country and in the Neighbourhood of the Station from which they must be sent, and I really am not sufficiently acquainted with the Details upon this Subject, whether there are the Means of giving Cover to the Troops, in case of the Collection of a large Body in that Country for the Purposes of a very extended Expedition, either to the Southward or the Westward. Besides the Troops, the Stores must be collected at the Point of Embarkation; and I should doubt very much the Means in Ireland of readily collecting a very large Supply of Stores for a very extended Expedition to be sent from that Country. I have myself embarked
twice

twice at Cork; Cork Harbour is sufficiently known, and I believe there can be no Doubt that there are great Difficulties in getting out of Cork Harbour; that the Westerly Wind, which would carry us to the Westward or the Southward, will prevent our getting out of Cork Harbour; I have been detained there at different Times a considerable Number of Days, and I have known of the Detention at Cork of Expeditions of Troops. I recollect particularly in the Year 1811 an Expedition of Troops, which had been sent from the Channel, being obliged to go into Cork Harbour, under the Convoy of a Fleet under the Command of Sir Joseph Yorke, and having been detained there a considerable Number of Weeks before it could move from Cork Harbour, although if it could have got out it would have had an Opportunity of going to the Westward and Southward. This renders Cork Harbour not so very convenient as the Rendezvous of a Fleet; but I really am not able to speak positively about other Places. If the Means existed of collecting a Body of Troops to the Westward, and of collecting the Stores and all that is necessary for an Army to be embarked, there can be no Doubt whatever that the further to Westward the greater will be the Advantage in the subsequent Voyage; that the prevailing Wind being a South-westerly Wind, the further the Embarkation to the Westward the more simple and easy is the Passage afterwards. That is a simple Principle, which every one will understand; but the Application of that Principle must depend on so many Circumstances, to some of which I have adverted, such as Cover for the Troops till they should be embarked, the Facility of collecting them at the Point of Embarkation, the Facility of collecting Stores for them, that it would be impossible for me to state positively that such an Object could be conveniently adopted. I am not sufficiently acquainted with the Means of Ireland to be able to state positive Opinions on those Points. I have served upon the Staff there, and cannot be supposed to know more about it than what every body knows.

Would the same Considerations apply to ordinary Reliefs of Troops that might be stationed in the Colonies?

No; there might be very great Facilities in giving Cover to a Battalion, or Two Battalions, or Three Battalions, that might be sent annually from Ireland, when there might be very great Difficulty in giving Cover to Five, Ten, or Fifteen thousand Men to be embarked that might be required for an Expedition. I know that at Cork and in the South of Ireland there are Means of giving Cover with great Facility to One, Two, Three, or Four thousand Men that may be required for the annual Relief of the West Indies or the Mediterranean, or wherever Reliefs may be required to the Southward or Westward; and I have no Hesitation in saying that a Voyage would be much more certain from Ireland, and particularly from the West Coast of Ireland, than it could be from any Part of the Channel.

Would not, in your Grace's Mind, any increased Facilities of internal Communication with Ireland itself be in favour of that Mode of carrying on the Reliefs?

I should think so.

As far as the Reliefs go, though there should be Three or Four Battalions, as there is no particular Object for their going altogether, a very small Degree of Cover for the Troops would suffice?

Certainly.

Have you considered the Subject with a view to Colonial Intercourse generally, not only in a military but in a political point of view?

I have no Doubt whatever that Communication would be carried on with much more Certainty from the South-west of Ireland than it is now from Falmouth or any other Port to the Eastward.

Would not a considerable Convenience arise from the Reliefs being carried on from that Part of the British Dominions in which the great Bulk of the Army is usually stationed?

I should think certainly it would be a great Convenience to the Military Department to be quite certain of carrying on their Reliefs from that particular Point. In all these Cases the Relief is a Matter of the Rolster; those which have been in the East Indies, or have been out there Four, Five, or

Duke of Wellington. Six Years within the Tropics, are, very naturally, not sent again to the East Indies or to a tropical Climate; they are sent to the Mediterranean, or elsewhere. But if it was once known that it was intended that the Reliefs should go regularly from Ireland, Care would be taken that the Troops for the several Reliefs should be assembled in Ireland, with a view to their being sent to the particular Station which they should be destined to relieve.

Is there any other Inconvenience which, in your Grace's Apprehension, would follow from that Arrangement?

None. If internal Communication in Ireland was improved, there would be increased Facility in carrying on those Arrangements.

If a Port could be found on the South-western Coast, from which, when the Wind is fair for the Voyage, it would take the Expedition out of Harbour, would not that be a very desirable Object?

Most undoubtedly.

Has your Grace any Recollection, during your Campaigns in the Peninsula, of many or any Instances in which Inconveniences were felt from Delay either in the Arrival of Troops or of Stores for the Campaign, which were afterwards attributed to the Delays from a Port in the Channel?

Frequently. I have mentioned One Case in particular, in which the greatest Inconvenience was experienced from the Delay of a Fleet under the Charge of Sir Joseph Yorke; in the Spring of 1811, I think it was. I think it was detained at Cork several Weeks; but that Fleet had come out of the Channel, the Troops having been embarked in England. I forget whether they were embarked at Portsmouth or Plymouth; but they had been driven by Stress of Weather into Cork, and there they were detained a very considerable Time. I also recollect many Instances of Stores and Recruits being detained, but those had all come out of the Channel, from either Plymouth or Portsmouth, or very possibly from the Downs or London.

Is it not usually considered that the Delays from Cork were occasioned by the same Causes as those from more distant Ports in the Channel?

Yes.

Are there any other Advantages or Disadvantages your Grace would state as resulting from the Plan proposed?

I cannot conceive that there can be any Disadvantage in having a Port on the Western Coast of Ireland to enable the Government to communicate either by Packets or otherwise with the Western and Southern World.

Does your Grace think the same Convenience would apply to the Formation of a Packet Station, with a view to the Conveyance of Letters and the Conveyance of Troops and Stores?

I have no Doubt that the greatest Convenience would result as to the Conveyance of both; the Conveyance of Letters would be considerably forwarded. They must be detained at Liverpool and at Falmouth, when they would not be detained in a Port on the Western Coast of Ireland. Supposing that there was no Improvement in the Land Communication, a great deal would be gained.

Would not the same Arrangement which it might be desirable to adopt with reference to the Nature of the Station for one of those Purposes apply in a great degree to the others?

Certainly.

Was your Grace embarked in the Fleet on the Expedition under Admiral Christian in the Year 1795?

I was.

Had you Occasion to observe the Disadvantages attending the Embarkation from a Port in the Channel against Westerly Winds?

Yes; that Fleet experienced the greatest Difficulties in getting out of the Channel, and was obliged to put back when it had made some Progress on its Voyage, and was in the Bay of Biscay; and I should think that if such Preparations for the Establishment of a Port upon the South-west Coast of Ireland as are now under Consideration had at that Time been made, and supposing

supposing that there had been the Means of collecting and embarking such a Body of Troops at that Port at that Time, the violent Gales which prevented the Progress of that Fleet would have been a fair Wind for the first Part of the Voyage, and would have enabled the Fleet to have made such Progress as that it would have arrived in the West Indies in a very short Space of Time.

Duke of Wellington.

The Right Honourable the Viscount BERESFORD (a Member of the Committee) is examined as follows:

Viscount Beresford.

Was your Lordship on the Expedition under Admiral Christian?

I was.

Will you state the Opinion that you had occasion to form with regard to the Disadvantage arising from the sailing from such a Port with contrary Winds?

From the Experience of that, and indeed I can say of other Expeditions on which I have been at various Times, it is impossible to form a worse Opinion than I hold of the Disadvantages that exist from having Ports so much down the Channel, or where the same Wind that would take you on your Voyage prevents your getting out of your Port. I think on that Expedition we were detained Three or Four Months on account of the Wind; we were certainly detained a very considerable Length of Time. I am speaking quite from Memory. Indeed, after having been a considerable Time on board, we left Portsmouth with a fair Wind, and having reached as far as Torbay, the Wind again came foul, when the Admiral made the Signal to make the nearest Port. Some of the Vessels got into Torbay, mine of that Number; the Remainder were obliged to bear up for Portsmouth, where, after a few Days, all were recalled to; but of the Ships that attempted to gain Torbay Twelve got so embayed, that not being able to weather the Beak of Northland, these, with all on board, perished. Had we been in and sailed with that Spurt of Wind from any of the Ports on the West or South-west of Ireland, the whole Fleet would have got clear out to Sea, would have met with no Accident, and, no Doubt, would have made good the Passage. The Wind after this continuing for a Length of Time contrary, we waited altogether Three or Four Months; and we sailed, as his Grace has observed, and got to the Latitude very nearly of Lisbon, with continued foul Winds, and then put back, after having been out altogether Forty or Forty-two Days; whereas, undoubtedly, if we had been embarked from any of the South or Western Ports of Ireland, we should have been in the West Indies probably in Four or Five Weeks; with this very Wind some of our Vessels, and Two Companies of my own Regiment, got to the West Indies even as it was.

When you say any Western or Southern Port, do you include Cork?

No; I do not include any Port in which the Wind which will take you on your Voyage will not permit you to get out of it.

That would be applicable to Cork?

Certainly it would, because I have experienced it at Cork more than once. I was in Cork embarked, in 1793, at the very Beginning of the French War, for the West Indies; there was only one single Regiment; we were Six Weeks at single Anchor in Cork Harbour, urged continually to sail. We were finally ordered to Portsmouth after Six Weeks waiting there: and I have been on other Occasions detained at Cork from the same Cause.

Your Lordship is acquainted with the Coast of Ireland generally, as well as with what is necessary for the Supply of Troops; will you have the kindness to state whether you conceive the Country in Ireland to afford such Means as may be necessary, or whether such Means might easily be found in Ireland, for fitting out Expeditions and Troops or the providing ordinary Reliefs?

I am certainly acquainted, generally speaking, pretty well with Ireland; as to the giving an Opinion on the Capability of Ireland for the furnishing of the necessary Resources and Wants of an Army embarking, with all its Objects, I do not know that I can show that Ireland, under its present Circumstances, would be able to do that; certainly in those Harbours we have had in contemplation, leaving Cork out of the Question, there is nothing at present

Viscount Beresford.

prepared for that; but if a Harbour were fixed on, all the Stores would necessarily there be deposited, as they are in other Ports of Rendezvous. As to Reliefs, there can be no Doubt that in Time of Peace, when there is no great Urgency, and when the Troops are sent out by Regiments, it would be a very desirable Object for the Reliefs.

Is it your Lordship's Opinion that Troops can be kept in Ireland at a more moderate Expense than they could be in England, to be ready for the Relief?

That would be rather a Question for the Commissary General; but as Provisions, and every thing for the Maintenance of Troops, is cheaper in Ireland than in England, that would appear the natural Result.

In the event of any Expedition sailing from a Westerly Port to the Transatlantic Colonies, would not the Ships and Transports employed in such an Expedition, if they sailed generally from this Country to a Rendezvous in a Western Port, attain their ultimate Object more certainly and more rapidly than if they did not rendezvous in this Country?

Certainly, there are many Reasons for that; any Number of Vessels hired in English Ports would sail singly to their Rendezvous, each making the best of its Way, unimpeded by the bad sailing or Carelessness of the others, and unincumbered with the Troops, Stores, &c.; but the great Object would be, that the Port of Embarkation should be so circumstanced that the Wind which will be fair to take the Vessels on their Voyage should also take them out of the Harbour of Embarkation, or it may happen that by the Time there is a fair one for the latter Purpose, it may be scant, or altogether unfavourable, for the former.

Lord Strafford.

The Right Honourable the Lord STRAFFORD (a Member of the Committee) is examined as follows:

Your Lordship commanded His Majesty's Troops in Ireland for a considerable Time?

Between Three and Four Years.

Had you, during that Time, Occasion to acquaint yourself with the Means possessed in Ireland for the internal Transport of Troops, or for sending them for Colonial Services?

I had.

What Facilities do you conceive exist in Ireland for the Purpose of supplying Reliefs to the Colonies?

In the County of Cork there is great Barrack Accommodation; at Fermoy there may be Three Regiments without any Addition; at Cork there can be Two or Three; at Kinsale and at Charlesfort there may be 400 or 500 Men put up; Buttevant will hold a Battalion and a Half. I am confining myself entirely to Barrack Accommodation, which would be desirable in respect of Troops about to be embarked. In the County of Kerry there is very little Barrack Accommodation at all; I should not think there is Accommodation for more than 300 or 400 Men at the utmost. In the County of Kerry, at Tralee, there is Room for a Depot.

What is there in the County of Limerick?

A great deal; there is Room for Two whole Battalions; there is a very good Barrack at Newcastle for about 150 Men.

Is there any in the County of Clare?

At Clare Castle there is Accommodation for 200 or 300 Men; in Galway there may be about a Battalion; at Gort there is a Cavalry Barrack; the Barrack at Tuam will hold about 100 Men; Dunmore, a Company; and Ballinrobe will hold about Three Companies of Infantry; Castlebar will hold a Battalion, and Westport Two Companies. I think those are the principal.

Independently of Barrack Accommodation, where do you conceive, touching on the West Coast of Ireland, the most ample Accommodation could be found for Troops?

There is no Doubt that the County of Cork and the County of Limerick hold

hold out greater Accommodation than any of the others ; but at the same Time either Galway or Mayo could find quite sufficient for the usual Reliefs that go.

Lord Strafford.

Have you had Occasion to observe any Difficulty arising from the waiting for Transports in Ireland ?

I have known very great Delays in Ships coming round from Portsmouth and the River.

There is a great Facility in Ireland in providing Accommodation for the Troops by means of what are called Half Billet Stations ?

There were a great many in my Time.

That Description of Accommodation is still to be procured ?

For any Number, I believe. I never had the slightest Difficulty in procuring it.

Your Lordship stated that Delays had frequently taken place from waiting for Transports ; in your Recollection, did those Delays arise from the Difficulties of the Navigation of the Channel, or from any other Circumstances ?

I cannot undertake to state that.

WILLIAM CUBITT Esquire is called in, and examined as follows :

William Cubitt, Esq.

You have been many Years a Civil Engineer ?

I have.

During Part of that Time have you had Occasion to become acquainted with the local Circumstances of Ireland ?

During the last few Years I have ; during the last Three or Four Years.

Will you state generally, without reference to any particular Undertaking, whether you conceive there is a Probability of great Improvement in the internal Communications of Ireland ?

I think Ireland is capable of very great Improvement in its internal Communications, and that nothing tends so much to the Prosperity of a Country as those internal Communications of all Kinds, whether by Roads, Railways, or Canals.

Will you state your Opinion generally as to the Facilities Ireland affords for more improved Communications than now exist ?

Yes ; the Communication must have reference to the Object.

Will you state with reference to the Object of a Communication by Sea with the Trans-atlantic Colonies, whether with reference to Merchandize, Passengers, or Troops ?

For that Purpose there must be a Combination of the best Line of Communication by Land with the best Out-port on the West or South-west Coast of Ireland. It is not to say that the best Road will be the best Thing, or that the best Harbour will be the best, but that there must be a Combination of the Two ; that the Two jointly must make the best.

Supposing a fit Harbour be selected, do you consider that the Country generally presents as great or greater Facilities than are usually found for making Communications ?

I think it does ; I have seen no Difficulty in getting a Communication across Ireland, either Westward or Southward.

Do you not think that the general Character of the Surface of Ireland presents more Facilities to Railway Communication than that of Great Britain ?

In a certain Portion of Square Miles ; I should say it does for Two hundred Miles long and Fifty Miles broad. The Southern Portion of Ireland is almost altogether Table Land ; I have been down in that District. The same may be said with regard to due West from Dublin also, inasmuch as the Course of the Canals in that Direction point it out at once.

William Cubitt, Esq.

From the Price of Labour in Ireland do you consider that public Works of the same Description can be carried on more cheaply than in this Country?

I think they can rather more cheaply; but it is not in consequence of the low Price of Labour that the Works are carried on more cheaply; that does not follow.

Does not your Answer apply to Railroads as well as to Canals?

To Works generally; I speak with regard to Expense. It does not follow that because Labour is cheaper there the Work can be done much cheaper; Labour must be brought in in connexion with Knowledge. Still Works can be done cheaper under good Management in Ireland than in this Country.

Have you had Occasion to observe, during the Progress of public Works in Ireland, whether the Skill of the Labourers employed, and their Industry, has been improved in the Progress of those Works?

Most assuredly. I have had more than 2,000 Men employed during the last Three Years on the Ulster Canal.

So that towards the Completion of any such considerable Work you would rely on a greater Quantity of Work being done by the same Number of Individuals you had employed than in their Commencement?

Just so; we put it out by what is called Task-work or Piece-work.

Have you found in any great public Work that the Wages have been increased with the Progress of the Work?

Oh, yes; from 1s. a Day to 2s. 6d.

You say that the Labour has increased, so that a Man has earned, beginning at 1s., increasing to 2s. 6d., according to the Amount of his Work?

Yes; by making him an expert Workman.

Of the same Quantity of Labour done in Ireland and in England, which would be the cheapest?

I think rather the cheapest in Ireland.

Would you give a Man in Ireland as much for doing a Cubic Yard as you would in England?

I would give as much per Cubic Yard; it generally comes to that; but some Men will do more Work in the Time; it generally happens that we get the Work done somewhat cheaper. I will mention the Ulster Canal; we get the Work done for 5d. per Yard; whereas in England we pay 6d. for the same Kind of Work.

Have you Reason to think that the same Observation has been made with respect to the Kingstown Railway which you have stated with respect to the Ulster Canal, namely, that the Workmen have become much more expert, and earned a great deal more at the Termination than they did at the Commencement of the Work?

Most assuredly. We have a great many of the Men from the Kingstown Railway now employed on the Ulster Canal.

Your Attention has been called generally to the Principles on which Main Lines of Railways ought to be constructed with a view to effecting the most important Objects?

Yes; I think that no great Line of Railway, with a view to ulterior Measures, can be carried into effect successfully without that Point being first determined.

On what Principle do you recommend the Adoption of Termini in any Main Communication?

Simply to run a Line of Railroad through Ireland from one Point to another would do little good without some determinate Object; by going to the further Side all Places in the Interior on its Way might be benefited as far as their Intercourse one with another might require; but to make it answer there must be some Object more than merely the Intercourse of Places in the Country, in my Opinion.

Do

Do you conceive that the Selection of a proper Terminus, to be made available generally for the Purposes of Communication with America and Great Britain and the Continent of Europe, would be desirable?

Yes; that is an Object at once to which a great Line of Railway might be beneficial; that Subject came under my Notice some Time ago, incidentally. I had an Idea, a long Time past, that a Railway carried across Ireland, the best Railway where it was most wanted, would be to an Out-port as a Packet Station — the best Port that could be found for the Purpose. If the best Line of Railway could go to the best Port, the Point would be gained with many Advantages, directly and indirectly.

Have you had occasion to observe the local Improvement produced in Ireland by Canals or Roads?

Yes. I wrote a Letter on the Subject Twelve Months ago, which contains my View upon that Subject, and I have before me an Extract from that Letter; it is dated "Dublin, 10th March 1835;" it simply arose from Conversation on the Subject. "Happening to state incidentally in Company last Evening, that if I were required to propose a Plan for the Amelioration of the South and South-west of Ireland, and bring it into a more intimate Connexion with England, it should be by making the most perfect Line of Road possible (say, if you please, a Railroad,) from Kingstown Harbour to Valentia, making the latter the Out-port and Packet Station for America, the West Indies, the Mediterranean, Spain, Portugal, &c. &c.; getting entirely clear of the Chops of the Channel, and all Delays attendant thereupon, either for Outward or Homeward-bound Vessels, and bring the most South-western Point of His Majesty's Dominions within Fifty Hours Distance of London, in all Seasons, viâ this Place and Holyhead, as the shortest and best Sea Passage for Despatches, or viâ Liverpool for all whom it might concern. That said Road or Railway should be carried in such Direction as would make it the most perfect as a Road, and that all the Towns and Places near or by which it might pass should branch on to the Main Line, and which I think would comprehend all the Places of any Note in the Counties of Kerry, Cork, Limerick, Tipperary, Kilkenny, Queen's, and Kildare, and thus bring a District 200 Miles long and nearly 50 Miles wide into direct Communication with both the Capitals of London and Dublin. The Subject was seized upon with Avidity by some Parties present, and I have had the Question put seriously to me To-day, to know for how small a Sum I could view the whole Line and Country to Valentia inclusive, and make a Report preliminary to any absolute Survey. This will most likely end in Smoke; but I thought I would just name the Subject to you, knowing the Interest you take in Improvements to this Country." I never had before expressed any Idea upon the Subject.

The Committee are not desirous to ask your Opinion, in this State of the Proceedings, with respect to any particular Port; and would wish your Answers to apply generally to the Selection of a Western Port with a view to American Intercourse?

I have not seen all the Ports on the South-western Coast of Ireland. I have seen the Shannon, having been appointed by the Treasury a Commissioner for the Improvement of that Harbour, and I shall be there again in the course of this Summer. Valentia I have seen; other Harbours in the South-west I have not seen, or in the West, except in the County of Sligo; there may be better Harbours than Valentia, which are not known to me; I mention that as a Port known to me.

With respect to the compound Question of a Railway Communication and a Packet Station, do you recommend or think it desirable that the greatest Distance should be travelled by Land and the shortest by Sea, or the contrary, with respect to making such a Communication available?

The greatest by Land and the shortest by Sea, certainly. I had rather go Ten Miles by Land than Five by Sea, with reference to the carrying of Despatches.

With a view to the general Advantages which might be contemplated, from what Point of Great Britain, as the most central Part, do you propose to direct the Line of Intercourse?

When I wrote that private Letter I have read, I stated Kingstown Harbour

William Cubitt, Esq. as the Point of Departure in arriving at Ireland, and I contemplated the Holyhead Passage.

It was with a view principally, if not exclusively, to the Packet Communication and to the Post Office Communication?

Just so. I think nothing of Railroads to answer the Purpose which Canals answer, for the Conveyance of heavy Goods; but for Passengers and the Passage of Correspondence and light Goods, and even heavy valuable Goods, but not heavy cheap Goods.

If in that Project which you suggest the Communication were to be from Kingstown Harbour and Holyhead, have you any Doubt a Communication might be made which would promote, by passing across Ireland, the Interests of Liverpool, and the manufacturing Districts both of Scotland and of England?

I have considered, with that view, that Liverpool would be one Passage and Holyhead another; that would embrace the whole of the North of Europe; that Argument would hold as to any West or South-western Port. If it were required to go the shortest possible Route from London to any South-western Port, another Question would arise; but I always had Dublin in view, as a Point of Importance.

Dublin would be, in your view, the natural Course for such a Communication to pass through, even with respect to European Continental Intercourse?

Yes, it would; and also with respect to the Intercourse with this Country.

Are you aware of any Lines of Railway which have been contemplated on the Continent, tending towards Hamburg?

I know some Engineers who have been over. I was spoken to by the Wertemburgh Minister with respect to a Railway connecting the Rhine with the Danube. I am not sure whether I am not going over on the Subject; but that also bears on the Question.

Will you state how?

Joining the Neckar and the Danube together, by which the Line will be brought nearly opposite the Port of Hull and of the East Coast of England. All European Produce will be sent, as I suppose, to Liverpool, and by a Railway Line through Ireland, and so on to the West or South-west Out-port.

The natural Extension of such Lines would be by Liverpool, across Ireland, to such Western Packet Station as might be recommended?

Exactly so.

Has there been a Railroad contemplated from France, by Southampton, to Bristol?

There have been Railroads contemplated from London, viâ Southampton, to France, and from London, viâ Brighton, and also by Dover; all those have been in contemplation, and I believe some of them are under Consideration now.

Have you heard of any contemplated Railroad in France to Havre, with a view to Communication with New York?

No, I have not.

Are you aware of the Difference of Longitude between Falmouth and the most Western Port of Ireland?

Five Degrees Five Minutes, which would be in round Numbers about 220 Miles.

Are you aware of the Grounds on which Falmouth was preferred to Plymouth for a Packet Station?

No, I am not, except on the Principle of Longitude, being nearer the Mouth of the Channel; I can imagine no other, for they are both fine Harbours.

Having considered the Subject of the Trans-atlantic Communication with any of the Western Ports, in Kerry for instance, you are perhaps acquainted with the Prevalence of particular Winds on the Western Coast of Ireland?

West and South-west Three Fourths of the Year.

Are

Are you aware of the Position of the principal Western Lighthouses which are connected with the Packets? *William Cubitt, Esq.*

The most Western Lighthouse in Europe is the Skellig, which is between Dingle Bay and Kenmare River, Eight or Ten Miles from the Land.

You have spoken of the Facilities which the Surface of Ireland and the whole of the Country affords for Railway Communications; can you give the Committee any general View of the probable Expense of such a Railway Communication as that you have alluded to?

It must be rather vague, generally. The Expense I should conceive in that Country could not be less than 10,000*l.* per Mile, nor do I think it could exceed 15,000*l.* a Mile. Some of the Railroads which are in contemplation will cost 20,000*l.* a Mile.

What other Railroads in that Country have you had under your Consideration?

We have one now under Consideration from Dublin to Drogheda, to form a Part of a North Line; it is now in its Passage through Parliament.

Is that the Coast Line, or the other?

The Coast Line.

Have you been engaged in Surveys of any of the Western Lines?

No, I have not. I have been frequently spoken to, to look at some partially, but I have been rather inclined not to look at them generally, if at all.

Is it your Opinion that a Main Trunk Line from Dublin, being well laid out, is most important?

Yes, if an Object is fixed on; but I do not think that, considered simply as a Trunk Line, it would pay its Expense, without an ulterior Object.

What is the Distance from Dublin to Valentia?

About 200 English Miles, by the nearest Road.

Do you suppose the Distance by a Railroad could be made so short as that? I think it could; a Line of Railway to Valentia might be very direct.

Are there not some high Hills on the Western Side to be passed?

Yes; but there are no Difficulties in the way of a Railroad in that Part from the Lakes of Killarney down to the Coast.

When you spoke of Communication through Ireland with the Continent, did you contemplate the Conveyance of any thing but Correspondence?

Yes; Troops, Packages, and Passengers of all Kinds; any thing which it would be worth while to carry with great Speed.

The Witness is directed to withdraw.

Ordered, That this Committee be adjourned to Friday next,
Three o'Clock.



Die Veneris, 22° Aprilis 1836.

The Earl of WICKLOW in the Chair.

Mr. WILLIAM BALD is called in, and examined as follows :

You are an Engineer ?

I am.

Have you made any Surveys in Ireland with respect to the Capabilities of the Ports on the Western Coast ?

In the Year 1809 I was employed by the Board of Ordnance, at least at their Recommendation, from Documents submitted to the Inspection of their Officers, to make a Trigonometrical Survey of the whole of the County of Mayo in Ireland ; that Map has been engraved ; it exhibits the Soundings in all the Harbours, and also the Bay of Killaly, where the Troops of France disembarked in the Year 1798 under General Humbert.

Was your Examination of Harbours confined to the Coast of the County of Mayo ?

During the Survey of the County it was.

At any Period subsequent to that have you made any general Survey of the Western Coast ?

I have been in a great many Harbours on the West Coast of Ireland, indeed from Cape Clear down to the Giant's Causeway ; I have been in every County in that Kingdom.

Round by the Westward ?

Yes ; but I have not been at the Harbour of Valentia nor Beerhaven, but I have been in the Harbours of Bantry, Glengarriff, and Bantry Bay, and Kenmare at the Mouth of the Shannon ; I have been at Galway Bay ; I have been upon the West Coast of Galway, in the Isles of Bofin, Achill, &c. &c., and in every Harbour in Mayo ; I have been in the Bay of Sligo, the Bay of Donegal, in Lough Swilly, Lough Foyle ; I have been at the Mouth of the Bann, West of the Harbour of Port Rush ; I have also been in the Harbour of Larne in Belfast, and in Strangford ; I have also been in the Harbour of Cork, and sailed through it.

Are you enabled, from the Inspection you have made, to say whether or no the Ports on the Western Coast of Ireland would be applicable to a Packet Station as a Port of Communication with America ?

I have been considering that Question for a long Period, and more particularly since last Summer, when I gave Evidence regarding it before the Committee of the House of Commons on Public Works in Ireland ; at that Period I directed public Attention to an Examination of the whole Harbours immediately lying opposite to the great Plateau or Flat, namely, that Portion of Country, remarkably level, lying between Dublin and the Western Coast, and which extends to the Harbours in Mayo, and those in Galway also, down to the Tidal Estuary of the Shannon. Since that Period I have been employed by the Irish Eastern and Western Railway Company to trace a Line of Railway from the City of Dublin, across Ireland's great Plain, to the Bay of Galway. I also examined the Harbour at the Town of Galway, where there is a small Isle called Mutton Island, within which Ships at present generally anchor, and find tolerable Shelter, but at that particular Place I have recommended a Rubble Embankment to join the Island to the main Land, and also to extend on its Southern Extremity a Rubble Stone Break-water running East-south-east into deep Water ; those proposed Works are to cover an Area of about 360 Acres, or about 100 Acres more than the

(56.s.)

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whole

Evidence on
the Intercourse
between the U.K.
and the Colonies
of N. America.

Mr. W. Bald.

Mr. H. Ball.

whole Surface of the Harbour of Kingstown; the Expense of which I computed at about, I think, if I recollect rightly, from 60,000*l.* to 80,000*l.*; and that Harbour to be formed only of rough Rubble Stone, of which there is an Abundance convenient, would, I think, afford sufficient Shelter and Protection to Steamers of from 1,000 to 1,200 Tons, or for such Description of Steam Vessels as might be necessary to open a Communication across the Atlantic to the nearest Land in America, namely, St. John's in Newfoundland.

You think there is a Capability in the Harbour of Galway to answer the Purpose of Packets for such Communication?

Decidedly so.

Do you believe it would be practicable to construct a Railway from Dublin to that Harbour?

I have not seen any Country or any Portion of British Territory where a Railroad could be made with more Facility, because the whole Country from Sea to Sea, from the Bay of Galway to the Bay of Dublin, is one vast continuous Plain, so inviting in Level, that at One Period there was a Survey instituted, I think, by Lord Cloncurry, and made by the late John Killaly, a Civil Engineer of considerable Eminence, for the Purpose of making a Ship Canal; there is along the whole Line of Country an Abundance of Secondary Limestone, extremely suitable to the Construction of a Railway, and, indeed, every other Kind of Material. During the Examination which I made of this Line, I found there were to be no Viaducts of any considerable Dimensions, except One, over the Shannon at Athlone, or any deep Excavations or heavy Embankments; and upon the whole, I never saw so much Facility for the Construction of a Line of Railway as that Country offers between Dublin and the Bay of Galway.

Have you ever made any Estimate as to the probable Expense of such an Undertaking?

I have given that a great deal of Consideration, for though I have not yet been able to carry the Levels actually across the whole Way to Galway Bay, yet they have been extended, under my Orders, from the Level of the Sea at the Bay of Dublin, over the Summit, to the Water of the Shannon at the Town of Athlone. I think the Expense of that Railroad would not exceed 10,000*l.* per Mile. The Distance from Sea to Sea, according to the Line traced out, is about 118 English Miles, shorter than the present Mail Coach Road by Fifteen Miles, and might be executed, I think, for 1,200,000*l.*

Have you made any Surveys that would enable you to speak as to the Practicability of Railroads to any other Ports more southerly on the Western Coast of Ireland?

I have at present the Direction of the most difficult Road-work which has been attempted to be executed in any Part of Ireland, the new Road which is now making between the Town of Kenmare and the Town of Bantry over the Caha Mountains, the Summit Level of which Road is 1,000 Feet above the Level of the Sea. I frequently visit that Country, sometimes twice in the Year, and travelling along I have paid considerable Attention to the physical Structure of the whole Face of the Country between Dublin and the Waters at Bantry Bay; and it strikes me there are many Difficulties in the Line to form a Connection by a Railway from Dublin to the Harbours on the South-west Coast of Ireland, because the Ground is the highest in the Island, and it will involve, in my Opinion, very great Expense, both perhaps in tunnelling and also in cutting; probably the Expense might be for the Formation of a Railway from Dublin to the Harbour of Beerhaven or the Harbour of Valentia, or to Kenmare Harbour, the Distance of which may be taken at 220 Miles, decidedly not less than Three Millions and a Half of Money.

Have you remarked any particular Convenience arising from the South of Ireland for Railroad Communications or for the Assistance of Steam Navigation for long Voyages?

I am not aware of any remarkable Facilities which the South of Ireland possesses as to the Formation of Railways; but with reference to the Facility for the Construction of a Railroad across Ireland's Centre, from Dublin to Galway, immense Facilities exist both in Stone, and also in Abundance of the finest Gravel for the Purpose of ballasting and making Stone Blocks. With regard to Steam Navigation, that is another Point,

in the Use of Coal, for Example, which exists in Ireland,—a great Quantity of Anthracite or Stone Coal. Anthracite Coal has been much used in America; it is found in considerable Abundance at a Place called Carbondale, on the Shulkyll River, where more than 40,000 Tons of this Mineral, in some Years, have been raised for Supply. A similar Coal exists in Ireland, near Kilkenny, which perhaps might be found available for the Purpose of working the Steam Engines on board of the Steamers destined to open a Communication between the West Coast of Ireland and the nearest Land in the New World.

You mentioned an abundant Supply in Ireland; where besides Kilkenny is there that Supply?

I am not aware of any in any other Part of Ireland. The Coal found in the County of Leitrim is of a bituminous Nature; also the Coal found at Dunganon, on the Western Borders of Lough Neagh, which is associated with Iron-clay, a most valuable Material, with which they manufacture Fire-brick and Tile, &c. &c.

Do you know whether much of the American Coal has been employed in Steam Navigation?

I believe that it has been proposed to employ it; its Specific Gravity is greater than the common Coal, and it would occupy not much more than Two Thirds of the Space, and it might on that Account perhaps become valuable in being employed on board Steamers destined to perform long Voyages.

At what Distance is it from any Ports in America?

The Information I have derived is, that it supplies Philadelphia, New York, and Boston; but it is of a better Quality than any Stone Coal in Ireland, and lies in deeper Veins.

How long have those Coals been worked?

I am not aware.

Is it used in the Steam Vessels of America?

I understand it has only been proposed to be used; Wood is used to considerable extent.

How is it as compared with the Kilkenny Coal?

It is said to be a better Description of Coal than the Kilkenny, for it contains of Hydrogen from Two to Five per Cent. The common Coal which is now used on board the Steamers varies in Quality in the Proportion of 260 Tons to 210. The best Description of Coal in Britain for Steam-boat Navigation is found in Wales, at Llangennech.

There are considerable Fishing Banks on the Western Coast of Ireland?

There are many Fishing Banks on the Western Coast of Ireland, particularly off the Coast of Galway and off the Coast of Mayo, on which Abundance of Cod and Ling are found; but this is a Deep-sea Fishery, which has not been pursued with any Success, by the People on the Shores of those Counties not having Vessels or Fishing Tackle sufficient for the Purpose of carrying on the Deep-sea Fishery; and I look upon the Non-prosecution of that valuable Deep-sea Fishery as a national Loss to Britain. I believe at present there are not less than 80,000 Americans employed upon the Shores of the British Colonies, viz. the Shores of Newfoundland and Labrador, fishing for Cod and Ling; there are 22,000 Frenchmen also engaged in the same valuable Fishery. There is a very remarkable Bank recently sounded on the West Coast of Ireland, called Rockall Bank, which lies, I think, about 200 or 230 Geographic Miles West-north-west of the Shores of Galway and Mayo. It extends in Length about 165 Geographic Miles, and in Breadth 52 Miles, bounded by a Line of 200 Fathoms in Depth; it presents an Area of not less than 6,000 Geographic Square Miles, an Extent equalling the Fourth Part of Ireland. The Soundings on that Bank are from 54 to 190 Fathoms, but between that Bank and the main Land of Ireland no Soundings are obtained with 200 Fathoms, and between Rockall Bank and the Hebrides no Soundings are got with 960 Fathoms. I applied to Captain Beaufort since I came to London to make Inquiry whether Cod and Ling are found upon this remarkable Bank, but he informed me that Captain Vidal, who sounded the Bank, was at present employed on the Coast of Africa, and he could afford me no Information upon the Subject.

Mr. W. Bald.

Is it probable there would be Fish in abundance on a Bank so deep?

I think it is quite probable that Cod and Ling are to be found on it in abundance.

Do you know the Depth of the Fishing Banks on the Coast of Labrador?

North of the Straits of Bellisle the Water deepens close to the Shore for a considerable Distance, but there are many Parts on which there are Twelve and Twenty Fathoms; seaward it is very deep; but on the Great Bank of Newfoundland it is from Thirty to Sixty-five Fathoms, and on the smaller Banks from Eighteen to Forty Fathoms, and from Twenty-six to Fifty Fathoms. There are a Number of Wherries belonging to the Skerries, and to Rush on the East Coast of Ireland, that generally leave those Places and proceed to the West Coast, and fish on the Grounds opposite Broad Haven and Black Sod, and also on the Fishing Grounds and Banks which lie off the Isle of Boffin on the Coast of Galway; they find generally an Abundance of Cod and Ling, which they sell in the Market of Dublin; it is cured on the Coast. The Fish is brought in Green, landed, and prepared on the dry Sea Beaches; and when they have got their Cargoes they then return Home. These Vessels generally follow the Deep-sea Fishery in Summer and the Herring Fishery in Winter.

Do you know the Depth of those Banks?

I think they are from Forty to Sixty Fathoms. There are several Banks off that Coast; they are very remarkable, and it would be very desirable to sound the whole of those Banks and Fishing Ground along the West Coast of Ireland, for, if I mistake not, I have seen at Cohens in Amsterdam, near the Stadthouse, in the Year 1826, Charts of the Western Islands of Scotland and the West Coast of Ireland, on which certain Fishing Grounds or Banks were marked, and they described that Abundance of Cod and Ling were found on those Fishing Grounds and Banks. In 1610 Holland employed not less than 150,000 Men by Sea and Land in her Fisheries. During the Survey of the Western Coast of Mayo, particularly at Black Sod and that Neighbourhood, I was informed that the Country People, when pursuing their Agricultural Operations, sometimes found Articles of Dutch Manufacture, which seemed to indicate that the Dutch had once a Connexion with that Country, perhaps in a fishing point of view.

Can you state to the Committee the Circumstances of Discouragement which operate to prevent Fishermen on the Western Coast pursuing those valuable Enterprises which you state those from the Eastern Parts of Ireland do on those Banks?

The People on the East Coast of Ireland being in Possession of more Wealth, and having a better Description of Vessels and Fishing Tackle, I may say in Possession of greater Capital, also greater Intelligence regarding the Deep-sea Fishery, are able to avail themselves of fishing on the West Coast of Ireland, when the People in that Neighbourhood cannot do so from the Want of Capital, and also not being acquainted with the Deep-sea Fishery.

Have they not improved in those respects?

I am not aware that they have; but when last at Galway it struck me that their Fishing Craft were very inferior to those on the East Coast, being only Boats of Ten or Twelve Tons, whereas the Vessels on the East Coast are from Thirty to Forty-five Tons, Two-masted. I think the Boats at Galway Bay have, however, increased in Number since I first knew it, but not as to the Deep-sea Fisheries. They have no Vessels on the West Coast of Ireland fit to fish in the deep Sea; for example, I remember when a very young Man, upon those Westerly Shores, when a Boat left the main Land early in the Morning, the Weather being remarkably fine, they would sail considerably seaward; the Moment they threw their Lines out they would catch Cod and Ling in abundance; but when the Westerly and North-westerly Gales rose they would be in danger of being lost before reaching a Place of Safety. Unless there be a larger Description of Vessels employed, and proper Fishing Tackle, it would be impossible for them to avail themselves of the Benefit of fishing on those Banks lying seaward.

Is there any Want of Disposition in the Population to avail themselves of those Means, as far as they have the Power?

Mr. W. Bald.

I think not; on the contrary they have the greatest Desire to avail themselves of profitable Employment. In travelling over Ireland in so many Directions, I was lately at the Skerries and Rush; they informed me, and I consider it a Duty to mention it, that, in consequence of the Repeal of the Bounties on Fishing, the Fishing Vessels at the Skerries and Rush are beginning to decline, owing to there not being so much Encouragement given to the Prosecution of the Fisheries as formerly.

If there were a Railroad between Dublin and Galway, could the Fish be brought into the Liverpool and London Markets?

I am of opinion that the Construction of a solid and substantial Railroad between Dublin and Galway would afford immense Facilities to the Transmission of Fish, not only to the whole of the Towns in the Interior of Ireland, but also to the Metropolis; and Fish could also be sent from Galway to Liverpool, Manchester, and to many of the interior central Towns in England.

Does not that Answer apply equally, or in a certain Degree, also to a Railroad to any of the Western Ports of Ireland?

Not in my Opinion like any thing to the same Extent, because the best and most productive Fishing Grounds on the Shores of Ireland are those which lie on the Galway and Mayo Coast; therefore I am of opinion this Railroad which is projected on the Map, extending from Dublin to Galway, being One Half shorter in Length than any South-western Line of Railway, and cutting Ireland into nearly equal Divisions, will be of national Advantage, because it will afford also the Means of sending the Butter, Bacon, Cattle, Fowls, &c., and also the whole Agricultural Produce of that immense Western Country, into Dublin, and thence on to the Country of the Steam Engine, I mean the great rich manufacturing Districts of England lying around Manchester.

You have been a good deal at Sea in the course of your Life, have you not?

I have been a great deal connected with the Sea; I have made many Voyages on board of Sailing Vessels, and also in Steamers, on almost every Part of the British, Irish, Dutch, and French Coast; I have been several Times round the Land's End in Steamers both in Summer and also in Winter, going from London to Dublin and from Dublin to London.

The Witness is directed to withdraw.

Vice Admiral Sir ROBERT WALTER OTWAY is called in, and examined as follows:

*Vice Admiral
Sir R. W. Otway.*

Are you well acquainted with the Western Coast of Ireland?

I am not personally acquainted with it; only by looking at the Charts; I have no local Knowledge.

Can you give the Committee any Information relative to the Advantages that might result from establishing a Station for Packets in any of the Western Ports of Ireland as a Mode of Communication with America?

I should think that any Ports on the Western Coast would be far superior to our present Packet Station; it is Five Degrees at least to the Westward of Falmouth, and in the Longitude of Cape Finisterre, from whence there is such an Offing that they can with very great Facility perform the Voyage.

Are there any other Reasons, independent of Longitude, that would make a Packet Station on the Western Coast of Ireland highly advantageous?

I think so, from being so much further to the Westward, and the prevailing Winds in the Winter are Westerly Winds.

Are there not great Delays occasioned by the Prevalence of the Westerly Winds as regards the Stations within the Channel?

Frequently so; and I know the Packets are occasionally blown back.

*Vice Admiral
Sir R. W. Otway.*

You have no personal Knowledge of the Capabilities of any of the Ports on the Western Coast of Ireland ?

My Knowledge of those Ports is from inspecting the Charts of the Coast.

Is there any other Point upon this particular Question on which you can furnish the Committee with any Information ?

I consider it will be productive of great Advantage to that Part of Ireland, making it a Packet Establishment, stationing the King's Packets there.

You mean Advantage of a local Nature ?

Yes. I was in the West Indies early in the War, and we lost Island after Island ; when if the Troops could have come out immediately, the Country would have been saved some Millions. We were nearly Six Months waiting for the Troops that went out ; St. Vincent was burnt, the whole of Grenada was destroyed ; and if we had had Three or Four thousand Men in the first instance all this Mischief would have been saved.

Are you well acquainted with the Harbour of Falmouth ?

I have been in there occasionally in a Man of War.

You are not able to speak from your own Knowledge to the comparative Facilities of getting to Sea from Falmouth or the Western Coast of Ireland ?

I can say, from my own Knowledge, there is no Difficulty in getting out of Falmouth, but the Difficulty is in getting to the Westward from Falmouth ; and on looking at the West Coast of Ireland, I see, from a View of the Harbours there, there is no Difficulty in getting an Offing, which is a great Thing.

With strong Westerly Winds on that Coast, do you think it is always certain that a Ship will get an Offing with a heavy Sea ?

Certainly not, with a Gale of Wind. I have spoken particularly with reference to Sailing Vessels. I beg to state that there is also a Difficulty in getting back to the Channel in the Prevalence of Easterly Winds.

Do you not believe that from the Offing you could gain from a South-western Port of Ireland, let the Wind be from what Point it would, if it was not extremely violent, Vessels could work to Windward to an Advantage they could not from any Port in the Channel ?

Decidedly they could get to the Northward or the Southward. I would mention One Fact : the Quail Packet, which sailed a short Time ago from Falmouth, was at Sea a Fortnight, dismasted, Half her Crew washed overboard and drowned, and she was at last picked up off Guernsey.

The Witness is directed to withdraw.

*Captain
Sir J. Franklin.*

Captain Sir JOHN FRANKLIN is called in, and examined as follows :

You are a Captain in His Majesty's Service ?

I am.

Have you any local Knowledge of the Western Coast of Ireland ?

Last Summer I went along the whole of the Western Coast of Ireland.

Had you an Opportunity of visiting any of the Ports of the South-western Coast particularly ?

Not on the South-western Coast ; I went to every Port from Broadhaven down to Valentia.

Did it occur to you that it might be advantageous, for the Purpose of facilitating the Communication between this Country and America, to establish a Station at any of those Ports ?

I should say decidedly, and perhaps more than One Station, for Purposes of quick Intercourse, and for Purposes of Commerce ; I should look at the Question under these Views. The Probability is, that an advantageous Communication might by this Means be opened between this Country and America. There are some of the Harbours well suited for Sailing Ships, others for Steam Vessels, and some adapted for both.

Which

*Captain
Sir J. Franklin.*

Which are the Ports that occur to you as being most desirable either as Stations for Sailing Packets or as Stations for Steam Packets?

I think for Packets exclusively, the Port I saw altogether most fitted for Steam is perhaps Valentia.

Have you had an Opportunity of knowing that great Delays or Disadvantages arise in the existing Communication from the Necessity of passing from some Port within the Channel?

Frequently; from Portsmouth I have seen very frequent Instances; from the Downs still more; I have also known it even from Falmouth, but the Disadvantages at the latter Place are much less in proportion; and it is very evident that the further a Ship gets West the greater the Facility of getting out of the Channel. An Instance occurs to me now: I was on the Downs Station during the Peninsular War; there was One Transport detained at that Anchorage for several Weeks; a Part of the Eleventh Regiment was, I believe, embarked on board. This Vessel, with many others, made several Attempts to get to the Westward, but could not succeed in getting even as far as Portsmouth, and were obliged to return to the Downs: this happened in the Year 1810 or 1811. In December 1834 I came Home in the Ship I commanded from the Mediterranean, and arrived at Spithead in a South-west Gale; there I found many Merchant Ships bound to different Places, some for the East Indies, some for the West Indies, that had been a Month already detained. While I remained paying off my Ship, about Three Weeks, they made Three Attempts to get to Sea, and were obliged to put back with a South-west Gale. They were in the whole detained Seven Weeks at Portsmouth. There were various other Ships detained by the same Cause in different Ports to the West, in Portland Roads, for instance, and even at Falmouth, which could not by any Effort succeed in getting clear of the Channel.

You think that if those Vessels had been in a Western Port of Ireland they could have immediately sailed with the same Wind?

They would have got out clear if they had sailed from any Port in the South-west of Ireland, provided the Wind was blowing from such a Quarter so as to enable them to make a Stretch into the Offing from the Mouth of the Harbour.

Under those Circumstances of Wind and Weather?

Yes, provided they could get out of the Harbour and get an Offing.

It is your Opinion, that, with the Wind which detained those Ships at Portsmouth and the Downs, they could have with Certainty got out of a Harbour on the South-west of Ireland?

Yes; if they had been as far to the West as Ireland every one of those Ships would have made her Voyage. I understand there was One Ship which did succeed in getting on, the Ship which took out Sir John Herschell. This Ship weathered Cape Finisterre, and was enabled to continue her Voyage to the Cape of Good Hope.

The Ships you speak of as detained were in Portsmouth and the Downs?

All of those mentioned in 1834 were at Portsmouth. The First Ship, I mean the Transport (with many others), which had the Eleventh Regiment, was in the Downs. I saw these latter Vessels, at Intervals, between Six and Seven Weeks, and they had been there several Weeks when I first came there.

You say there were other Vessels similarly circumstanced in other Ports of the Channel?

Yes, in 1834.

The Difficulty is occasioned by the Necessity of passing through the Channel with a Westerly Wind?

Yes.

The Westerly Winds being those which usually prevail?

The Proportion of Westerly Winds, I believe, is very much more than of Easterly, and more especially at the Time of the Year when they want Merchantmen to sail to the East Indies, from October or November to December.

Captain
Sir J. Franklin.

Are you of opinion that those Objections to those Ports within the Channel you have stated, are equally applicable to the Port of Cork?

I should think not so applicable; certainly that Port would be better situated. I myself sailed with a Convoy from Cork, being a Lieutenant of the Ship in charge of the Convoy; we got out when others could not get out of Ports in the Channel.

Do you not think it would frequently occur, there might be great Difficulties in getting out of the Port of Cork when there might be no Difficulty from the Western Coast of Ireland?

I do not bear sufficiently in my Recollection the Entrance to the Port of Cork to speak to that. The getting out of a Port depends on the relative bearing of the Head-lands. If they got clear of Cork they would get clear of Bantry Bay.

Can you state, from your own Knowledge, whether the South-western Coast of Ireland is a Coast very difficult to approach in the Winter?

I think there is always a very heavy Swell with a South-west Gale setting upon it, and there is of course considerable Danger, and the more so in consequence of the deep Water. There is not the Guidance of the Banks there as on entering the English Channel.

Suppose a Convoy to be obliged to bear up in bad Weather, or Vessels returning from America, is it not a dangerous Coast to approach?

In some Instances; but I believe many of the Harbours are good, and might be used with Safety, provided there were Pilots. I think one great Deficiency found on the South-west, certainly on the West Coast of Ireland, is the absolute Want of Pilots who know any thing of a square-rigged Ship; they can manage the Hookers, but they are perfectly valueless as Pilots on board a square-rigged Vessel. If I were quite certain there were Men to be found cruising off the Harbours as Pilots, who knew what to do with a Ship, I should have no Objection whatever, on several Parts of the Western Coast, to run with Confidence upon them; and especially I should not hesitate to do so if I were caught in a Gale, provided I knew there were well-informed Pilots who could take the Ship into the Ports, of which there are several good ones.

Are those Objections equally applicable to Steam Vessels?

I think not so strongly applicable to Steam Vessels as to Sailing Vessels, though Pilots are desirable for both; but I should run with more Confidence in a Steam Vessel than with a Sailing Vessel, unless I were assured of finding Pilots who understood the Management of a Vessel under Canvas.

You have been a good deal in Ireland by Land?

I have.

Do you conceive the establishing a Communication between the British Empire and the North American Colonies and North America generally through that Country would be of essential Benefit to Ireland?

I think decidedly so.

Is it your Opinion that it would also be attended with Advantage to the Empire in general?

I think it would, inasmuch as it would greatly improve Ireland itself; the very Circumstance of the Employment, and the facilitating the Means of Conveyance from one Place to the other in that Country, would be advantageous.

You conceive the Facility of Conveyance between this Country and America would be facilitated by its passing through Ireland?

The Time would be saved very much; and if there were certain Ports prepared to receive Ships, I think many Vessels that now come round to Liverpool and other Places would have no Objection to bring Cargoes to the Western Ports of Ireland, supposing there were Pilots for each Harbour, and they were likewise properly lighted and buoyed.

Have you considered the Subject of making Railways in Ireland at all?

I have considered it a good deal, but I do not feel myself competent to speak decidedly upon it, I have heard so many Opinions.

*Captain
Sir J. Franklin.*

Did your Examination extend so far as Galway?
Yes.

Did it appear to you to have the same Advantages as you describe as belonging to Valentia?

Galway has perhaps more Security for a Sailing Ship running into Galway Harbour. Galway has the Disadvantage of being so far up as to take a long Time to get out of it; but there are some Harbours near the Entrance of the Bay which, sooner than launch out at Night when the Wind was looking threatening, a Ship might put into; Casheen Bay, for instance.

Have you sufficient Knowledge of the Application of Steam to the Purposes of Navigation to be able to say that you think it would be practicable to establish a Communication by Steam between the Western Part of Ireland and America?

I have not had much Experience in Steam Vessels myself; but from competent Judges and the Passages I have made I think it might be perfectly secure; a Class of Vessels might be built which would carry sufficient Coals, which appears to me the principal Consideration.

Do you think that Object could be attained under the existing Communications between this Country and America?

I think so, provided the Americans were inclined to meet it with corresponding Feelings, and also to sanction a Steam Communication. If they were not to accede to our Proposals or Wishes, I think there might be some Interruption to it.

The Question referred rather to the Means of carrying sufficient Fuel for so long a Passage?

I think that might be done; that Vessels might be built with Capacity to carry the Fuel.

Could that be done from Liverpool or Falmouth, the Passage being so much longer?

I do not know what may be considered the Average Passage from America to Ireland with a Steamer; but I should think from the nearest Points a Steamer would go in Twelve Days, under the most favourable Circumstances; but to provide against less favourable Circumstances it would be necessary to allow Three or Four more Days, and to say Fifteen or Sixteen Days for the Passage. I much question whether a Steamer could carry more than Fifteen Days Coals. If the Passage could be made in Fifteen Days I think it would do.

You think the Average Passage from a Western Port of Ireland would be about Twelve Days?

To the nearest Point, if it were a practicable Point, and under the most favourable Circumstances.

Taking into Consideration the Circumstances of establishing a Steam Communication, you must not view it merely with reference to the most favourable Circumstances, but take the Circumstances on an Average of Voyages?

There should be added for that Three or Four more Days; say Fifteen Days.

There is no Want of Persons who know the Coast?

They know the Coast and the Bays very well; they can take a Vessel into the Bay; but they only know the Management of Boats and Hookers. They go out in the most crazy Boats, and are perfectly adventurous in them. In Dingle Bay I saw Men launching out in what I considered very insecure Boats, to proffer their Assistance. If those Men on the West Coast were provided with substantial Boats or Vessels, and probably it might be combined with Fishing, and if some of the Persons on board knew the Management of square-rigged Vessels, in my Opinion much of the Danger and much of the Evil of the West Coast of Ireland would be prevented, and many Wrecks would be avoided. Much of the Mischief which has happened to square-rigged Vessels has arisen from those Persons who acted as Pilots not understanding what to do with them in Cases of Difficulty.

Captain
J. Franklin.

They know the Depth of Water and the Currents of the Tides ?

Yes, they know the Depth, and they generally know where the Rocks or Shoals are; and I found them very well acquainted with their own Locality; but they have no Knowledge of managing any other Vessel than a Hooker or a Boat.

If, in consequence of the Formation of Stations on that Coast, Pilotage were to become a more valuable Business, have you any Doubt that a Class of Pilots of a superior Description would arise ?

Not at all.

In order to train Pilots to understand the Management of a square-rigged Vessel, would it not be necessary to send them Voyages in Vessels of that Description ?

I think the Plan I took the Liberty of suggesting to the Fishery Board, when I was passing through Dublin, would be good. The Fisheries want Encouragement as to the improved State of their Boats; but let every one of those Boats carry a Seaman or Two, who shall be made acquainted with the particular Harbours before which these Boats are to cruise; these Boats or Vessels should keep in Pairs and cruize off certain Ports, and when a Pilot is required for a Ship, let a Seaman be sent with One of the other Men, if he do not himself thoroughly understand the Dangers of the Harbour; when a Pilot is required for a Hooker or fore-and-aft Vessel, let One of the other Boatmen be sent.

Persons who are to pilot Ships must gain their Information elsewhere ?

I found there were several in the different Harbours who did know how to manage Ships and Sailing Vessels, but they had not any Boat they could venture out with beyond the Harbour.

The Generality of Traders in Ireland in the Coasting Trade are fore-and-aft-rigged Vessels ?

Yes, Sloops, which require a different Kind of Management.

Where are those Pilots to gain their Information of square-rigged Vessels ?

There are some who do understand it. But supposing they sent Seamen from other Ports; let One or Two of those go in each Boat; the Fishermen are expert Men, a most hardy Set of Fellows, very adventurous, and very willing to learn; let them be taught practical Seamanship by those Seamen, and they in return teach the Seamen the Shoals and Rocks and Tides or Currents in and near the Harbour, which they generally are acquainted with as regards the Harbours in their own immediate Neighbourhood.

If the Men are Seafaring Men in every Point except that of not knowing the Management of a square-rigged Vessel, would they not very soon learn, by a Voyage on board a square-rigged Vessel, the Management of such a Vessel ?

They would know, perhaps, the general Manœuvring of a Ship; but I should wish to have more qualified Seamen than they could make in a short Time.

You think it would require that they should go as Seamen on board a square-rigged Vessel in order to fit themselves ?

I think they should have been brought up there; there may be plenty of Seamen found on board Vessels, who know the Ports.

Are you enabled to inform the Committee, from your Knowledge of the Interior of Ireland, whether it would be practicable to facilitate the Communication between the Capital of Ireland and any of the Western Ports by means of Railways ?

As far as I have been enabled to judge of the Points and Lines, there are Two or Three; centrally there might be one towards Galway, and laterally towards a South-western Part of Ireland from Dublin.

You gave the Committee your Opinion as to the Safety with which the Coast might be approached, provided there were proper Pilots; have you formed that Opinion from Experience while cruising on the Coast, or your Experience while travelling on Shore ?

Mainly from travelling along the Shore and going to Sea in Boats. It is a strongly-

Captain
Sir J. Franklin.

a strongly-marked Coast. On all the Western Ports there are Points which cannot be mistaken; for instance, you might run to the Skilligs with very great Certainty; there is a strong Light, and a very remarkable Rock, which could not be mistaken for any other; then if you are going towards the Shannon, there are very strong Land-marks there; further up I think you see the Twelve Pins of Connamera at an immense Distance; and if you are at all right in the Latitude you cannot mistake the Entrance into Galway; then further North is Acisill Head, there cannot be any thing more remarkable than that; and if there were a Light on the Black Rock,—it is now on Eagle Island, which appears to me not on the best Point for being useful to Vessels coming from America. Those are very remarkable Land-marks which I have named.

The Witness is directed to withdraw.

Ordered, That this Committee be adjourned to Thursday next, Three o'Clock.

Die Jovis, 28° Aprilis 1836.

The Earl of WICKLOW in the Chair.

Mr. WILLIAM BALD is called in, and further examined as follows :

Evidence on
the Intercourse
between the U.K.
and the Colonies
of N. America.

Mr. W. Bald.

You stated on a former Day that you had been a great deal at Sea, and had been round the Land's End in Summer and Winter in Steamers ; are the Committee to understand that you are well acquainted with the Power of Steam as applied to Navigation ?

I have paid some Attention to it.

Do you know what the longest Voyage is that has been made in a Steam Vessel without touching at any intermediate Port for the Purpose of laying in Fuel ?

I believe that a great many Years ago an American Steam Vessel crossed the Atlantic, but she made use of Sails as well as Steam. The longest Voyage that I am aware of, without going to India or to Lisbon and the Mediterranean, is between Dublin and London, round the Land's End, and also from Dublin to Bourdeaux ; the Distance from Dublin to Bourdeaux is about 1,600 Miles backwards and forwards. The Vessel called the Leeds used to go regularly between Dublin and Bourdeaux ; she used to perform her Voyage at an Average Rate of 15 $\frac{1}{2}$ Hours back and fore, and the Average of the Quantity of Coal she consumed through the Voyage was about 115 Tons.

Did she touch at any Port from the Time she left Dublin till she arrived at Bourdeaux for the Purpose of taking in Fuel ?

No.

The Vessel which leaves Dublin for London you are aware does touch at one Place ?

I am aware that the Steamers between Dublin and London touch usually at Plymouth.

There they have an Opportunity of taking in Coal, if necessary ?

Yes.

Are they, in fact, in the habit of so doing ?

Yes. I have made some Calculations, that probably might be interesting to the Committee, regarding the Size of Steamers for the Voyage across the Atlantic, from the Western Headlands of Ireland to St. John's in Newfoundland, being the nearest Port in America. I will state the Particulars if it is wished by your Lordships.

Do you mean that those Vessels have been hitherto constructed, or that you can conceive such might be constructed ?

That such might be constructed.

Having stated the Distance from Dublin to Bourdeaux, do you know what the Distance is from Halifax, for instance, to the Western Coast of Ireland ?

The Distance from Halifax to St. John's in Newfoundland is 690 Miles, and from St. John's to the Western Headlands in Ireland is 1,855 Miles ; but the Distance I have calculated is that from the Western Headlands of Ireland to the nearest Land in the New World, namely, St. John's in Newfoundland, where there is an excellent Harbour. I have calculated the Distance to be : — taking the Circumference of the Globe at 24,896 Miles, and a Degree at 69.156 Miles, the Sub-tense of the Arc on the Sphere from the Western Headlands of Ireland to St. John's in Newfoundland is 26.834 Degrees, therefore we shall have for the Distance 1,855 Miles English from the most Western

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Land in Ireland to St. John's in Newfoundland ; taking the Distance from the Mouth of the Shannon or the Bay of Galway in round Numbers at 1,900 Miles, to perform this Voyage at the Average Rate of Ten Miles per Hour would require Eight Days sailing at the Rate of 240 Miles per Day. I beg leave to mention that the Countess of Sutherland, that runs between London and Inverness, performs the Voyage generally in about Sixty Hours : the Distance is 700 Miles ; that is more than Eleven Miles an Hour. It may be observed, that more Time would generally be occupied in going from Ireland to St. John's in Newfoundland, or any other Port in North America, than in returning, on account of the prevailing Westerly Wind ; but I am of opinion that the Voyage might be performed in going and returning at about the Average Rate of Eight to Nine Days, if powerful Steamers were employed, such as would be equal to 1,000 or 1,200 Tons Burthen, with Engines of about 300 to 350-horse Power ; and if the Consumption of Coal on board a Steamer be taken at something less than Ten Pounds per Horse Power per Hour, say about 220 Pounds per Horse Power per Day, then Engines of 350-horse Power will consume 275 Tons in Eight Days ; but a Steamer of 1,200 Tons would really carry more than 500 Tons of Coal ; her light Draught might be about Twelve Feet, and loaded about Sixteen Feet ; the Displacement between her light and loaded Marks might be about 210 Tons for One Foot. It would, in my Opinion, require such Power and such Dimensions to carry on an uninterrupted Communication with America ; each Steamer would cost, complete with Engines, not less than 25,000*l.* ; the weekly Expense of such a Steamer, including Wages, Tallow, and Oil, might be about 50*l.*, but not including Harbour Dues, Wear and Tear, or Coals. 1,400*l.* per Annum might cover the Wear and Tear, Repairs to Machinery, Hull, and new Boilers of a Steamer of 1,200 Tons and 350-horse Power.

Those Expenses are exclusive of Coal ?

Yes.

You think it practicable to build Vessels of sufficient Power to perform that Voyage ?

Yes, it is quite practicable to do so, and quite within the Power of Steam to accomplish such a Voyage.

What is the greatest Horse Power you have ever known employed in Steam Navigation ?

The largest Steam Boat I am aware of at present is the Countess of Sutherland, about 560 Tons ; Two Engines of 225-horse Power. There was a Vessel called the United Kingdom they said was 1,000 Tons, but that was a Mistake ; her Tonnage was much below that Amount. I have seen her, and been on board of her. She was 157 Feet long ; Breadth on Deck between the Paddle Boxes, 26 Feet 5 Inches ; Depth of Hold, 17 Feet ; Builder's Measurement, 528 Tons ; Engines, 200-horse Power.

Do you know the Tonnage of the Monarch, on the London and Edinburgh Station ?

By Builder's Measurement she is 875 Tons ; by the new Act she registers only 454 Tons ; Engines said to be 200-horse Power ; her Average Voyage between Leith and London, 480 Miles in Forty-two Hours. But the Shannon, on the London and Dublin Stations, is 190-horse Power ; the Tonnage is 500. There is another Vessel called the Thames ; I have frequently sailed in her between Dublin and London ; she is a very excellent Steam Vessel ; she has Two Engines of 160-horse Power, that is Eighty each ; her Tonnage, given to me on board, is 518 Tons.

How many Horse Power is the United Kingdom ?

She is 200-horse Power.

In fact, the Power that should be applied to one of those Vessels such as you calculate must very much exceed any you have ever known yet applied ?

The Peninsular Steam Navigation Company have Three large Steamers ; the Manchester, 200-horse Power ; the Glasgow, 160-horse Power ; and the Liverpool, 160-horse Power : these Vessels run between Falmouth, Lisbon, Cadiz, and Gibraltar. This Company is now getting a Steam Vessel built, the largest which has yet been constructed in this Country ; she is to be called the

Regenerator ;

Regenerator; she is 196 Feet long on the Deck, equal to a Ship of the Line of Eighty-four Guns; Engines, 300-horse Power; Builder's Measurement, 850 Tons; is to cost more than 26,000*l.*; and Two more very large Steamers are preparing for this Company, and I am informed will be ready next Month. This Company's Steamers generally, at an Average, run Ten Miles per Hour, and consume about One Ton of Coals per Hour, running between Falmouth and Lisbon; but the Hercules Steamer between London and Cork, a large Vessel, I am informed, does not consume more than 13 Cwt. of Coals per Hour; her Engines are very perfect. I think it is quite practicable to construct a Ship of the Dimensions I have recommended, and Engines of 300 or 350-horse Power.

Have you ever known a Steamer with 300-horse Power?

I have not.

Do you think it absolutely necessary, to cross the Atlantic, the Vessel should be of that Power?

I should think there would be a Saving in Fuel; the greater the Power the greater the Velocity, the greater the Saving of Fuel.

The greater the Power of the Engine the more Fuel they must have to work it?

It is found that when the Velocity increases the Consumption of the Coal is not so great in proportion.

Your Object in recommending such a vast increased Power is for the Sake of reducing the Consumption of Fuel?

It is for the Purpose of additional Speed; it is for the Purpose of encountering the heavy Sea in the Atlantic; it is for the Purpose of carrying more Fuel; it is also for the Purpose of having a more seaworthy Vessel in crossing such a great Expanse of the Ocean.

Do you conceive that a Vessel of the Capacity and Power that you mention would be capable of carrying Fuel enough for the Voyage?

Quite; she could carry more than 500 Tons of Fuel; and my Calculation for carrying a Ship of these Dimensions across the Basin of the Atlantic is, under favourable Circumstances, 275 Tons.

To what Port do you carry her?

I would run her from any Port on the West Coast of Ireland to the nearest Land in the New World, namely St. John's in Newfoundland.

Do you suppose that on the Calculations you have mentioned she could also ply between the Port of Liverpool, off Falmouth, and the same Port in America?

I think that she generally might.

With the same Fuel?

Not with the same Fuel, but with the Fuel she might carry, if the Weather be favourable; if she be of such Tonnage and Power she would be enabled to do so; but to go into the Basin of the Atlantic, if there should be a Wind ahead, the Quantity of Fuel consumed in making the Voyage across the Atlantic, if the Wind continued all the Way, would be Double the Quantity nearly, because she would take Double the Time; she would therefore go with only Half the Velocity.

Do you not suppose that the additional Weight she would carry in Fuel in going from a Port within the Channel would retard her Progress to a considerably greater Degree than the Difference of the Distance might imply?

Looking at the seaward Position of the Western Harbours of Ireland, being at least 260 Miles more westerly than Falmouth, there must be great additional Facilities offered in crossing the Atlantic, departing from these Western Harbours in Ireland, as compared to any within the Channel.

How would you say, as to Fuel, she would go from any Western Point of Ireland to Halifax?

The Distance to Halifax being about 2,500 Miles, she might run that Distance; but in my Opinion any Steamer going from a Western Port in

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Ireland might touch in Summer at St. John's in Newfoundland to get an additional Supply of Fuel, and then start to Halifax; the Distance run in that Case would be about 2,545 Miles.

Would not that be out of the Way to Halifax?

The Course from any of the Western Irish Harbours is nearly the same, and the Distance from St. John's to Halifax is somewhere from 680 to 700 Miles; it is nearly the Distance from Dublin to London. I have stated the Distance by taking it approximately from the Sphere.

Is it not very considerably out of the Way to touch at St. John's in the Way from Ireland to Halifax?

The Course or Direction of the Ship would not be much altered in running from any Western Port of Ireland, touching at St. John's in Newfoundland, bound for Halifax, and the Distance would be nearly the same.

What is the Distance from one of the Western Ports of Ireland to Halifax?

About 2,500 Miles.

What is the Distance to St. John's?

About 1,855 Miles to St. John's in Newfoundland.

What is the Distance from St. John's to Halifax?

About 690 Miles. If I take the Distance from Newfoundland to Halifax at 690 Miles, it will make the total Distance 2,545 Miles. I am aware there is a little Difference, because Cape Race lies a little South of a Right Line drawn, suppose from Galway Bay or Beerhaven, or the Mouth of the Shannon, to Halifax; a Ship must therefore run a little more to the South in order to double Cape Race to reach Halifax, sailing from a Western Port in Ireland.

How do you form your Calculation of the Consumption of Fuel?

I have formed my Calculation practically of the Consumption from Steam Boats that have been employed in navigating from Dublin to Bourdeaux, from Dublin to London, from London to Leith, and from London to Inverness, &c. &c.

How much per Hour for each Horse Power?

The general Estimate for each Hour per Horse Power is Nine Pounds and a Half; sometimes it is taken at Ten Pounds per Horse Power per Hour; in round Numbers per Horse Power for a Day my Calculations are founded on 220 Pounds of Coal per Horse Power per Day.

What would be required to carry a Boat of 300-horse Power from the Western Coast of Ireland to Halifax?

About 320 Tons, under favourable Circumstances.

What should you esteem a fair Quantity to meet the possible Contingencies you have referred to?

I should think One Half more, making about 480 Tons.

What would she carry?

She would carry more than 500 Tons.

Are you aware of any Steamer having crossed the Atlantic?

Not except the one I have before alluded to, that came across the Atlantic, and I think sailed up the Baltic; that was a great many Years ago; but that Vessel did not entirely go by Steam; she steamed when there was no Wind, and when the Wind was favourable Sails were used.

What Calculation have you made with regard to Steam Vessels; do you consider the Vessel is to be so constructed as to use Sails when she can, and so save the Use of her Coals?

Certainly; because Steamers generally always use Sails when the Wind is favourable, and that will diminish the Consumption of Coal.

Would not a Vessel, if constructed in that Manner, be rendered incapable of making the Passage in the shortest possible Time as a Steamer?

I think the Vessels might be constructed in such a Manner as to allow all the Speed that Steam could impart; and at the same Time, when the Wind would

would be favourable, to use Sails. The Monarch on the Leith and Edinburgh Stations uses Sails to a considerable Extent.

If one of the Vessels you advert to carried 500 Tons of Coals, what Tonnage would be left for other Goods and Commodities and for Passengers? Probably from 300 to 350 Tons.

From your Knowledge of the present Sailing Packets, do you consider that upon that Calculation there would be still sufficient Tonnage for the Purposes intended as Packets?

I think there would be quite sufficient.

That there would be still as much Room left for Passengers and Luggage, and Articles of that Kind, as there is in the regular Sailing Packets which now ply between America and Europe?

Yes, I think there would be amply sufficient for the Purpose of Passengers, Luggage, &c. &c.

With reference to St. John's in Newfoundland as a Depôt for Coals, do you conceive the Harbour of St. John's is accessible throughout the Winter always?

I understand that during Winter it is sometimes frozen up when the Weather is severe, but during the Summer Steamers might enter that Port.

You never were there?

No.

Have you never heard that that Harbour is blocked up in Winter-time?

I have.

Therefore there would be some Difficulty in the Circumstance of its being a Depôt for Coals in Winter Time?

I think under those Circumstances during Winter it would.

Are the Committee to understand from your Answer that you consider the Intercourse by Steam practicable, if there is not an Opportunity of stopping at St. John's to take in Fuel?

I think that a Vessel of 1,200 Tons, with the Power of 350 Horses, could go to Halifax.

If that Course were doubtful as regards the Ports within Reach, do you think there is any Doubt with respect to the Intercourse between the Western Ports of Ireland and Halifax?

I think that, taking a Western Harbour in Ireland as a Point of Departure, it would be much easier to make a Voyage across the Atlantic to Halifax than from any other Port in Great Britain.

Are you of opinion a Vessel could take in a Sufficiency of Fuel, starting from a Port on the Western Coast of Ireland, without, under any Circumstances, stopping at St. John's to take in Fuel?

I should think generally so, and I have stated the Consumption of Fuel for such a Voyage.

You apply your Opinion of the Practicability of the Thing to the Idea of starting from the Western Coast of Ireland?

Yes.

Are you acquainted with the present Sailing Packets between this Country and America?

I have been on board of them in Liverpool, but never crossed in them.

What is their Tonnage?

I should think generally about from 500 to 600 Tons.

Have you seen the Post Office Packets from Falmouth?

I have not been on board of them; I have seen them at Sea.

Are you aware whether much of the Correspondence between this Country and America is carried on by the Post Office Packets or the New York Packets?

I have generally understood that the great Communication with the United

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States of America has been entirely in the Hands of the Americans, and is carried on by their own Packets, which are remarkably well found, and which sail regularly between New York and Liverpool and London.

Those Packets you know to be of 500 Tons Burthen?

At least; but I do not remember at present their exact Tonnage; but they appeared to me to be generally at least from 500 to 600 Tons; a very superior Description of Vessels, much larger than those we have at Falmouth, and they appeared to be remarkably well built and extremely well found in every thing.

What Lines of Railway have you been engaged in?

I was employed by the Board of Works in Ireland about Five Years ago to examine the Line of Country extending from Carrick on Suir, by Clonmel, Cahir, and Tipperary, to Limerick; it was for the Purpose of making an Advance of Money.

Was that for a Railway?

It was. In addition, I have been employed to lay out a Railroad from the Cave Hill at Belfast to the Harbour of Belfast; they are now making that Railway. I have also laid out another Railway in Ireland, extending from the Town of Belfast to the City of Armagh; Distance, Thirty-six Miles. I have also been employed and have surveyed and laid out a Line of Railway from the City of Dublin inland towards the North of Ireland, to join the City of Armagh in the North.

Is that the Drogheda Line?

Yes, the inland Line. I was also employed last Winter in tracing out a Line of Railway from the City of Dublin to Galway across Ireland. I also suggested last Summer, in my Evidence before the Committee on Public Works, Ireland, with regard to Railroads across Ireland, communicating with the Western Harbours, that Three Lines should be particularly examined: One from Dublin to Clew Bay and Blacksod Bay, One from Dublin to Galway Bay, a Third extending across Ireland's Level from Dublin to Limerick on the Shannon. Mackenzie says, "The Shannon is a River of easy Access, where Fleets of the largest Ships may ride in Safety." All these Railway Lines have been delineated on a Map of the Empire, which has been lithographed, and is attached to the Evidence of the Committee of the House of Commons taken last Year on the Public Works of Ireland.

What is your Opinion with respect to a Railway for Transit across Ireland, with a view to Intercourse with America,—as to the Railway itself, whether the longer or the shorter Lines are preferable?

I should think, undoubtedly, the more level and shorter the Line the better.

Why?

Because it would be less expensive and more quickly gone over with both Passengers and light Goods.

Why more quickly?

Being shorter.

The Question is, with a view to the ulterior Communication with America, whether it is desirable to have a shorter or longer Line of Railway, as compared with the shorter or longer Sea Voyage?

It is extremely desirable to shorten the Sea Voyage as much as possible. The most seaward Harbour in Ireland is Valentia; the next is Beerhaven; Blacksod is a seaward Harbour also; but the Mouth of the Shannon is only Thirty Miles more to the North than Valentia Harbour, and the Harbour of Valentia is only Fourteen Miles more westerly than the Entrance to the Shannon, where the largest Fleets in the World may safely rendezvous. But it is clear, that in running a Railway from Dublin to Blacksod or Valentia or Beerhaven, it would be attended with an enormous Expense, and it would not shorten the Distance hardly any thing as to the Sea Voyage, if bound for the nearest Land in America.

The Question is not as to the Communication between the different Ports, but on the Principle whether a shorter or a longer Line of Railway is preferable?

That would depend on a great many Things, but more particularly as regards the Expense of the Construction of a Railway, and again the Safety of the Harbour, if a good one could be found Seaward, and Facility to the Construction of a Railway. I would decidedly get as much Seaward and as near to America as possible; but considering that since the Invention of Steam, and the Application of it to Maritime Affairs, it has very much changed the Character of Seaward Harbours. We have seen all the deep Bays, interior Harbours, and tidal Estuaries on the Shores of both Britain and the Continent successfully navigated; therefore Seaward Harbours do not become of so much Importance when Steam is to be applied.

When you spoke of the Line you have surveyed as the Main Trunk, that was from Dublin to Athlone?

Yes.

Was that applicable to all the Lines?

No; there were Two Lines, One to Athlone, from thence proceeding to Galway, and a proposed Branch Line to Clew Bay and Blacksod. The other proposed Railway to Limerick, on the Shannon, was a separate and distinct Line, and ran from the Metropolis to the City of Limerick in the lowest, shortest, and most level Direction, and where an Abundance of Material could be had to form a Railway. But since the Line from Galway to Dublin was traced out last Winter, on that Section of it from Dublin to Athlone, I suggested to have a Line to run from Eden Derry down to the City of Limerick on the Shannon River, thus connecting by One Main Trunk and Branches Two of the Western Harbours with the Metropolis.

Would not some of the Line you have described clash with the Lines of the Inland Navigation?

They would cross the Grand Canal.

You do not consider that an Obstacle to a Line of Railway?

I do not, nor perhaps to its Trade, on account of the high Velocities of Speed on Railways. I am aware that the Manchester Railway since it was made, which is only Thirty-two Miles long, has not carried upon it more than about 200,000 Tons of Goods, whereas the Canal, although being Sixty Miles long, has carried 2,000,000 Tons of Goods; the Railway has carried, therefore, only One Tenth the Quantity the Canal has carried.

You see no Reason, for the Purpose of carrying the Produce of Connaught to the Capital, why the Grand Canal should not be mainly auxiliary to a Communication by a Western Railway?

I think not, from the Circumstances I have stated, because very heavy ponderous Articles would still go by the Canal, while, no Doubt, from the great Facility of travelling, People would prefer the Railway to the Canal.

At what Rate do Boats travel on the Grand Canal now?

I believe, since Iron Boats of a peculiar Construction were invented and applied by Mr. Graham on the Canal between the City of Glasgow and Paisley, they have been able to travel at the Rate of Ten Miles an Hour, where Locks did not exist. They have got Boats similar to those on the Grand Canal in Ireland, and I believe the Speed is in consequence very much increased; I believe it now exceeds Six Miles an Hour, but I am not quite certain. I am aware that the Speed on the Canal from Glasgow to Paisley is Ten Miles an Hour, for I have sailed on it at that Speed, but on that Canal there were no Locks to pass.

Do you believe that a Line through Liverpool to Dublin, across Ireland, to New York, would attract American Travellers across England?

I should think so.

Have you considered that?

I have; and I have turned it attentively in my Mind, and I am of opinion, if there was a Packet Station on the West Coast of Ireland, and a Railroad Communication opened, the whole of the People belonging to the British

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Empire having Business with America would take that Direction in going to America, because it would shorten the Sea Voyage very considerably.

You are of opinion that it would attract Commercial Correspondence?
I am of that Opinion.

As regards Americans coming to other Parts of Europe, do you think that Passage would have any Attractions for them?

I should think that all the Americans that would have any Intercourse with either the British Empire, the Countries bordering the Baltic, Holland, or the North of Germany, would pass through Ireland, and also take it as a Point of Departure for America, which in my Opinion would be most beneficial to the whole of Ireland, and also to the entire Empire. The Regularity and Shortness of the Sea Voyage would attract vast Numbers.

Have you Information of any Railroad in execution or contemplation now on the Continent of Europe?

I understand there are several Railways in Belgium, between the Rhine and Antwerp. Railways have been laid out from Hamburgh, to run through Saxony and Bavaria, East of Hamburgh, forming, I believe, at present.

Having Hamburgh for their Terminus?

Yes. There is also a Railway at Brussels, and there is a Railway contemplated, as Mr. Stephenson mentioned to me the other Day, from Paris to the English Channel, but he did not mention what particular Point, whether Calais or Havre de Grace. A Railway has been constructed in the South of France near Lyons.

You have spoken of Persons coming from the United States to England by this Way; are you aware what the present Average Passage from New York to Havre de Grace is?

I do not remember exactly.

What do you reckon would be the Length of the Passage from New York to the Western Point of Ireland, and so on by Railway to Liverpool?

I think the Distance from New York to the West of Ireland, crossing it and going to Liverpool, would be about 3,400 Miles.

How long do you suppose it would take to pass over that Distance, according to the Plan proposed?

About Fourteen or Fifteen Days. The Distance from New York across the Atlantic, on a Circle of the Sphere, to the Western Harbours of Ireland, is about 3,077 English Miles; but if Steamers should call at the Azores Isles, which would be a most eligible Place as a Depôt for Coals, the Distance from New York to the Azores would be 2,403 Miles, and from the Azores to the nearest Western Harbours in Ireland is 1,296 Miles; this would be altogether a Run from New York, touching at the Azores, to Ireland, of 3,699 Miles. An important Fact connected with the Safety of the Navigation coming in from America to the West Coast of Ireland is, that Soundings with 200 Fathoms can be obtained Seaward in the Atlantic at a Distance of more than 100 Miles from the Light-house situated on the Island of Arran at the Entrance to the Bay of Galway, and a Ship running for the Shannon from America can obtain Soundings with 200 Fathoms so far Seaward as Seventy-five Miles from the Entrance to the Shannon; whereas, running for Valentia Harbour, Soundings of 200 Fathoms are actually not to be obtained until a Ship approaches within Fifty Miles of it, and 100 Fathoms of Soundings is within Thirty Miles of Valentia Harbour. Soundings are not to be obtained with 200 Fathoms in coming in from the Atlantic to Bear Haven Harbour, until within Forty-eight Miles of Dursey Island, the Seaward Headland of that Harbour at Bantry Bay. The Navigator will be within Twenty-five Miles of the Harbours of Blacksod and Broad Haven before he catches Soundings with 100 Fathoms. A Glance at the general Chart of the Banks, of Soundings to the Westward of the British Isles, surveyed by Captain Vidal, and published in 1833, will fully illustrate this very interesting Subject. The Bay of Galway is deep and capacious, and Ships may easily run into it. The high Land of Connemarra, called the Twelve Pins, are well defined Objects for the Guidance of the Mariner. A new Dock

Dock is now being formed at Galway, and it contains a Population of 35,000 Inhabitants, and possesses a Water Power equal to 3,164 Horses, with a fine navigable Lake extending more than Thirty Miles into the interior Country. In my former Evidence, published last Year, I have stated that Mackenzie says, "The Shannon is a River of easy Access, where Fleets of the largest Ships may ride in Safety." Limerick contains a Population of 70,000 Inhabitants, and there is a Water Power (see Evidence on Public Works, Ireland,) "equal to 35,590 Horses; but this Water Power, only working Twelve Hours per Day, would be equal to 1,424 Steam Engines, each 50-horse Power." The Shannon presents a Line of Navigation through the Interior of Ireland to an Extent of more than 180 Miles, and passing through Ten Counties. On the lower Shannon there are Two Steamers; the Garryowen, 100-horse Power, and the Clarence; and on the upper Shannon there are Six Steamers—the Lansdowne, Clanricarde, Wellesley, Lady Dunally, Avonmore, and the Wye. There are also Fifty Trading Barges of Fifty Tons each; they carry annually to Dublin about 50,000 Tons of Goods by the Shannon and the Grand Canal. The Entrance to the Shannon is well defined, and Eight Miles wide, having Brandon Hill on the South-west, a remarkable Land-mark, to guide and direct the Mariner coming in from the Ocean; it can be seen Seaward in the Atlantic at a Distance of Forty-five Miles, and consequently Sixty-five Miles Seaward of the Mouth of the Shannon. A new Ship Dock, Sixteen Feet deep, is now being formed at Limerick, which is supposed will cost not less than 80,000*l.*; and it is also contemplated to still further improve this magnificent River Navigation.

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The Witness is directed to withdraw.

Mr. CHARLES VIGNOLES is called in, and examined as follows:

Mr. C. Vignoles.

You are a Civil Engineer?

I am.

You have been employed a good deal in the North of Germany, have you not?

I have; in Hamburgh and Hanover.

In the Construction of Railroads?

In laying out the Lines for Railroads, and also in England extensively.

Are you aware of the Intercourse which subsists between the Port of Hamburgh and America?

There is a considerable Intercourse, but I am not acquainted with the Details of it; there is a great deal of Traffic from Hamburgh to America; they are about to construct Docks at Hamburgh for the Accommodation of the American Trade.

Through what Channels is that carried on?

It is carried on in American Bottoms.

Does that Answer apply to Trade or general Communication?

To Trade alone.

With regard to Communications of Passengers and Letters, how is that carried on?

Within the last Two Years they have established a very fine Line of Steamers between Hamburgh and Havre; a great deal of Traffic goes that Way; at present there are Two of the finest Steamers I have ever seen, between Hamburgh and Havre, that carry Passengers, and then they go by American Packets from Havre.

The Intercourse between Havre and America is direct?

It is.

Do you conceive, if any greater Facility for Intercourse between these Islands and America was adopted, that Intercourse which now passes by Havre would still continue?

I think they would be very glad of any Means of shortening the Sea Voyage and expediting the Communication.

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Have

Mr. C. Vignoles.

Have you sufficient Knowledge to be able to conceive whether that Intercourse between these Islands and America would be much facilitated by a Line of Intercourse direct with the Western Part of Ireland?

I think it will, particularly on account of saving the heavy Entrance and Exit by the Channel, which occupies a large Portion of the Time of the whole Voyage. I think any Port which might be selected far to the Westward and South-west Coast of Ireland would always be preferred for a Packet Station.

Have you heard any Speculations on that Subject in Germany?

The Merchants at Hamburgh are the only Persons I have heard speak of it; they entertain a very lively Expectation of something of the Kind being done; they have a great deal to do with Liverpool, that is carried on at present by way of Hull, and probably that will increase. The Hamburgh Merchants are extending their Connexions in America considerably, and any thing that would tend to shorten the Communication across excites very great Interest in their Minds.

Though there is a very great Intercourse between Hamburgh and Havre, it is well known the great Communication at present is through Liverpool; do you think from any Circumstances they prefer the Course by Havre?

They prefer the Havre because they are so much further down the Channel, and because having some Connexion at Havre as well as at Liverpool they prefer doing their Business at Havre, and then proceeding from Havre direct; so at least some of the principal American Merchants and others have informed me, some that I have had Occasion to travel with. It is a Rivalry at the present Moment on account of the Want of a better Description of Packet between Hamburgh and Hull; the superior Description of Packet the French have set on between Hamburgh and Havre is now turning the Trade; the Steamers from Hamburgh to Havre are French Boats.

Does the Commercial Correspondence pass by that Channel?

I think a large Portion of it does; at present it is turning away what used formerly to go to Hull, and then to Liverpool; but since the Communication by the French Steamers, I believe a good deal of it goes the other Way.

Then you entertain no Doubt, as you state that Passengers would prefer sailing from a Western Port, that that would attract the Correspondence also?

I know they are very anxious, I think even more so than the London and American Merchants, about their Correspondence; they go to a great Expense occasionally to get Intelligence and Letters.

You are of opinion, that if there was a better Description of Packets from Hamburgh to Hull, even Falmouth itself would have more of the Correspondence?

I think the Correspondence would then go by Liverpool, as it has formerly done for the last Three or Four Years. Nearly the whole Correspondence which went from Hamburgh to Hull and from Hull to Liverpool has gone away to Havre.

You attribute that to the Build of a better Description of Packet from Hamburgh to Havre?

Yes; a great Majority of Passengers go out from Havre.

It is from New York to Havre the Packets run?

Yes, and also to Boston.

Are those Vessels as fine and as large as those that pass between America and Liverpool?

Very nearly so.

And the Passage is preferred in consequence of Havre being so much to the Westward?

Yes.

At this Moment the Irish Correspondence with America passes through Liverpool, does not it?

It does, as well as most of the English Correspondence. I believe the Bags of Letters sent by every American Packet are very great. I am a great deal

at

at Liverpool, and am intimate with the American Consul there who has so informed me.

Mr. C. Vignoles.

You have stated what you know to be the Wishes and Anxiety of the People of Hamburgh; are you aware of the Wishes of the People of the United States?

I am not aware from my own personal Knowledge, though I am from a Variety of Circumstances. I have been in America myself formerly, and have a considerable Connexion there; and in consequence of my being a good deal consulted about Railways for the United States, I have a good deal of Correspondence, and know the Feelings of the People are very much excited in favour of a Communication from Ireland. Several very interesting Publications have been put forth by the Americans upon the Subject, and there have been Discussions in the Newspapers.

Have you Reason to believe that the People of New York are favourable to such a Project, or adverse to it?

I have only Reason to know it from their exceeding Anxiety to get forwards their Correspondence; I have known a large Sum of Money paid at New York to bring up the Letter Bag of the Mining Packet a few Hours sooner.

Have you been engaged in surveying any of the projected Lines of Railway in Ireland?

I have executed the Dublin and Kingstown lately, and have been engaged in exploring the Country with a view to Main Trunk Lines through the Centre in various Directions.

You are aware of the Resolutions the Committee of the House of Commons adopted, which are recommended for Adoption by the House of Lords?

I am; I am in course of being examined upon them almost every Day at this Time.

On what Principle do you think, with regard to internal Advantages and the Remuneration of the Speculator, a Railway ought to be constructed in Ireland?

I consider that, considering the State of Ireland, in order that the Lines should be remunerative, it would be very advantageous to the general System that Four or Five Lines of Railway should be explored; but the Difficulty is, who is to do it; it would save a great deal of Money in England to do so. The Contest for the Brighton Railway between Four Lines, is now costing 300*l.* a Day to the Parties; the same may be the Case with the Great Western Railway Line, and one projected parallel to it. There are even now Two Fival Lines projected from the Southampton Railway into the West of England, preparing to come into Parliament next Session.

Have you surveyed any Lines in Ireland?

I have surveyed the Line to Valentia.

Is it your Opinion, that for the Purpose of a Western Communication by Transit across Ireland, a shorter or a longer Line of Railway is preferable?

I think the Question would be, which is the Port most to Windward, rather than the Question of the Length of the Line. The Consequence of its being further to the Westward would be the most material; for a great Portion of the Line, say the first 150 Miles, I think a fair Source of Profit may be had, independent of a Packet Station. That is probably for Three Fourths of the Distance. The shortest Line will take in only a particular District, the longest Line will take in a larger District.

The Question was directed to ulterior Communication; whether a shorter or a longer Line is preferable with a view to that ulterior Communication; with respect to the Considerations of Expense, and the Facility of Communication, and other Considerations which must enter into the View, not excluding the Subject to which you advert of the Remuneration to the Undertaker?

It is a complicated Question: I can scarcely answer it categorically. I should state, that if the advanced Line across Ireland would also get to the best Port, there could be no second Opinion; but as I consider it desirable

Mr. C. Vignoles.

that the Port of Departure should be the most Western Port, then the Length of Railway is a secondary Question. The shortest and best Line, if that is looked to only as a level Line, is perhaps towards Galway; but that I conceive is a very minor Part of the Question, and such a Direction would not be so well as a general Line as a Line to the South-west. I think a Line of Railway might be carried out Fifty or Sixty English Miles in a South-west Direction, which would answer for Waterford, and that District for Galway, and also for Limerick; it might be made a Kind of common Line to many Points.

What would be that Line?

A Line that would start from Dublin parallel to the Liffey, and keep to the North of the high Ground of the Curragh of Kildare, and pass probably between Maryborough and Mount Mellich, and near Portarlinton, that is the Line of Country which presents the best Levels. The Remainder of the Survey, down as far as Valentia, I extract from the Bog Reports, which give the Levels: it is about Sixty English Miles to Monrath on the Course above described, and this is the Line which has been levelled. I explored in various Directions the whole Country, so as to determine its Eligibility for various Purposes, as well as the Western Part; and I think a Main Trunk Line of Railway carried in that Direction would answer equally well for Galway and Limerick as well as for a South-western Port, and would answer to branch off for Waterford, Kilkenny, and Cork, being well adapted for receiving lateral Communications.

Do you think it would be possible, except at an immense Expense, to get across the Range of Mountains between Monrath and the Shannon?

A good Line may be had to Limerick, if taken off at Monrath, or that Neighbourhood, after having crossed the Head Water of the River Nore; and as it advanced in the Country an Opportunity would be afforded for other lateral Communications with different Towns. The Levels from Monrath to Cashel are very favourable. We have those in the Bog Reports, and the Post Office have got the Levels up to Mallow. When I speak of the Levels, I mean those over the natural Surface of the Ground and along the Roads.

Have you made Estimates for any of those Works in Ireland?

I am making an Estimate for a Line Northward to Drogheda, and thence to be continued as much by the Coast as possible to Armagh and Belfast. I am having the Levels taken in that Direction with a view to a Main Trunk Northward. I have made no Estimates further than from Dublin to Maryborough through the District towards the South-west. I have had these Estimates made carefully; beyond that the Estimates are only general.

What is the Result of the particular Estimate as to Expense?

About 15,000*l.* a Mile; the highest is 20,000*l.*; in some Cases it is as low as 12,000*l.* Between Dublin and Drogheda the Estimate for the Main Line Northward from Dublin to Drogheda is about 16,000*l.* a Mile.

Are you the Engineer of the Coast Line or the Inland?

No; I am not connected with either the Coast or the Inland Line. I was requested to make a Survey and Comparison of both Lines.

The Works that are contemplated are of very expensive Construction?

Yes; I have recommended them to be altered. I have recommended that the laying out of the Gradients of the Coast Line should be made in a different Manner from those which the Engineer originally contemplated, and I believe he has assented to the Propriety of them.

Those extraordinary Constructions which would cost so much Expense are not included?

No; nor need they be executed; they are unnecessary. I do not know whether it would be interesting to your Lordships to know, that in connexion with Mr. Rastrick, another Engineer, I have just completed an extensive Survey through England and Wales, having a Railway Communication with Ireland in view. For the last Two Months I have had the whole of my Staff employed in taking Levels between Wales and Birmingham, and between
Wales

Wales and Worcester; I have made some Hundred Miles of Levels taken in those Two Directions.

Mr. C. Vignoles.

What Points of Wales?

The Point of Wales was Port Dynllaen. I have tried every Part of the Passes through the Mountains in North Wales, the Pass of Bala in Merionethshire, the Pass of Carno in Montgomeryshire. The Bala Pass leads towards Llangollier and Chirk, the Carno Pass towards Newport and Bishop's Castle. The Result is, that in either of those Directions a practicable Line is to be obtained. On the Bala Pass, however, we get a Line that locomotive Engines can travel the whole Length, and with only Two Miles of Tunnel at the Summit. The Distance will be about 260 Miles from London to Port Dynllaen; following the Line of Railway from London to Birmingham and then taking about Seventeen or Eighteen Miles North of Birmingham, past Wolverhampton, along the Grand Junction Railway, at a Point where the same makes a great Bend, and turns towards Stafford, the Distance being about 135 Miles from that Point to Port Dynllaen.

By the other Line you would require stationary Engines?

Yes, at One or Two Places; but perhaps the Bala Pass might be more economically worked by having a stationary Engine for a Mile. We can however get a locomotive Engine the whole Way, though the Engines could not proceed so rapidly, as the Inclination would be Thirty-two Feet in a Mile for Ten Miles. This would require an Assistant locomotive Engine; but by having an Inclination of One in Forty for a Mile we get over the rest of the Way without any.

At what Average Rate per Mile can you construct that Railway, including the Passes through the Welch Mountains?

I have not made a Detail, but 2,000,000*l.* was about the Price for the Railway; that would be about 15,000*l.* a Mile. I am now executing One or Two Railways at that Price, and I have been comparing them with this Line through Wales, which would have some Advantages, as it is a cheap Country. The Work in Wales would be done economically; the Cost of the Midland Counties Railway, which will be before your Lordships House in a Day or Two, is only 15,000*l.* a Mile. For many Miles the Country in Wales is remarkably favourable, viz. from Port Dynllaen to Barmouth.

How much would the Communication with Ireland be shortened by Port Dynllaen in preference to Holyhead?

The Distance would be about the same by Railway that it is now by Road, not shorter; but the Railway might be worked by locomotive Engines the whole Way. It could be done in Eight or Nine Hours.

As to the Passage across the Channel, what would be the Advantage of Port Dynllaen?

The Advantage is rather prospective; it rests in this, that Port Dynllaen having much deeper Water, Steam Packets of larger Power could go, and Passengers would be more comfortable, and it would ensure the Passage in a shorter Time. The Reason the Passage by Liverpool is preferred is, that the Packets are larger, and of greater Power.

What is the Difference of Distance between Kingstown and Holyhead, and between Kingstown and Port Dynllaen?

I believe not more than Five or Six Miles.

When you mentioned 15,000*l.* a Mile as being the Expense of a Railway across Ireland, what Port of Ireland had you in contemplation when you fixed that?

I fixed the Port I have examined.

Do you refer to that of Galway?

No; I think that would be done for less than 15,000*l.* a Mile.

How much less?

On an Average, I should think 1,000*l.* or 2,000*l.* a Mile less.

Mr. C. Fignoles.

Does not the Expense increase very much as the Direction of the Railway is more to the Southward?

The Expense would increase in proportion to the Number of Cuttings and Embankments.

Are there not great Difficulties as to the Mountains you have to pass?

Yes; but I think the Estimate will cover that; there are some Parts will be done for 9,000*l.* or 10,000*l.* a Mile.

What do you conceive to be the general Difference of Expense in constructing Railways in England and Ireland under Circumstances equally favourable?

I do not think it would be more than 10 per Cent. I find that I did not get the Work of the Kingstown Railway done so much cheaper as I expected. I think, with similar Facilities of Stone and so on, I could have got it done cheaper in England; but I think, taking Ireland generally, it would make that Difference of 10 per Cent.

Were not your Expenses of the Kingstown Railway increased by Combinations among the Men and Circumstances not foreseen?

No, not materially. I am speaking of the Amount paid to the Contractors.

Is there any Railway in contemplation between Birmingham and Hull?

There are a Series of Railways now in the House of Commons proceeding from Birmingham to Hull; the Birmingham and Derby which has passed your Lordships House; the North Midland Railway, which goes from Derby to Leeds, now in the Committee of the House of Commons; another called the York and North Midland, which has passed the Committee of the House of Commons; and a Railway called the Selby and Hull Railway, which goes from Selby to Hull, so that there is no Doubt there will be a complete Series the whole Way.

In calculating the Advantages of Intercourse between the Continent and Ireland, you reckon on this Connexion by those Railways to the Northern Coast?

Yes, partly; but there is one Railway through the Eastern Counties which starts from London, and proceeds by Chelmsford, Colchester, and Ipswich, to Norwich and Yarmouth; and there is a Branch proposed to Harwich, and I think the Effect will be to restore Harwich as a Port of Departure for the Continental Packets, and that very often Yarmouth will be made use of; that Port being only 126 Miles by Railway, they might run up there in Four or Five Hours. The Passengers from the Continent would come to Harwich or to Yarmouth, and I think the Passengers Trade will be diverted even from Hull, and they will come in that Direction. Those Parties who have Business at Hull and Liverpool, they will go that Way, but I think the Correspondence and most of the Passengers will come to London.

Is not the Post Communication with the Continent still by Harwich?

No; it is direct by Steamers from London to Cuxhaven, Hamburg, and Rotterdam.

You state that you have been in America, and have seen many of the Railways in the United States; have the goodness to describe to the Committee how they are constructed, and the Average Expense at which they can be formed?

I have not been in America since the Railways were so extensively introduced, but I am conversant with the Prices at which they are constructed. The chief Part of the American Railways, Nineteen out of Twenty of those they have in that Country, are composed of Wood, with a small Plating of Iron, similar to the old Waggonways laid down in the Northern Collieries Half a Century ago—Strips of Iron plated on the Wood; but the Americans also have greater Economy in respect of the Sum they have to pay for the Land. In most Cases the Parties never charge any thing for the Land, and it is quite common, in contemplating a Railway, for the Engineers to lay out Two Lines, and then inquire who will give them the Land. Those who will give the Land gratuitously to the greatest Extent, get the Line through their District, and a
very

very material Item in the Cost of a Railway is saved. Then most of those Railways are not for locomotive Engines, but simply Horse Tracks. It is almost as cheap to make a Railroad as a common Road. They are more like common Roads than the Railroads in this Country. There are One or Two very fine Railways worked by Steam Powers, such as the Baltimore Line, but that has cost 10,000*l.* a Mile; and whenever they attempt to execute them in the fine Style of Perfection we do, their Railroads are more expensive than ours pro rata.

Have any better Lines of Railways been constructed in a great measure by Grants of public Money?

No; they have gone on the Plan of their State Governments becoming Shareholders in the Concern. The American Government, I mean the Federal Government, have ordered their Officers and Engineers to lay out main Lines of Railway, which passed through the several States, so as to make a general Line; but they have never given a Shilling towards any of those Things, and the State Government have simply come in as Proprietors.

When you say they have come in as Proprietors, you mean they have taken an Interest in the same Way as any other Proprietor, in proportion to the Amount they have advanced?

Yes; precisely in the same Way as the Duke of Sutherland in respect of his Interest in the Liverpool and Manchester Railway, where he has the Privilege of nominating Three Directors in right of his 1,000 Shares. I have heard of only One Instance in which any Work has been entirely executed by any of the American State Governments; that was the Case of the Erie Canal; but that was as a great Commercial Undertaking; they are now appropriating the Profits of that Canal to the widening it; in fact, they are making the Canal over again. In another Work about to be carried into effect the State of New York went to the Expense of all the Surveys, and passed an Act of Incorporation; but they refused to be at the Expense of constructing the Road, but they are willing to take Shares.

There is a Competition among those who are the Possessors of Land to yield up that Land for the Purpose of having a Railroad passed through it?

In the remoter Districts.

That increases the Value of the Land?

Yes; they give the Land for the Railways on that Principle. The American Engineers take great Pains in laying out their Lines of Railroad, perhaps much greater than we do; they sometimes look out Six or Seven Lines; but they have very little Embankment or Cutting; they sacrifice the Gradients to save Expense in making the first Railways, and say, when we get rich we will make the Roads better. The Average of the American Railroads is not more than 1,000*l.* or 1,500*l.* Sterling a Mile.

Do you think that, considering the Intercourse between America and the Northern States of Europe, or England itself, the Americans themselves would make any Difficulty as to the additional Expense there would be coming and landing in a West Port of Ireland, and having to come by London, or to go to Hull, and the Expence of coming all the Way by Water?

I do not think it will make much Difference to them, that they will take the Means of Communication which will carry them fastest along without reference to the Expense; that is the American Character; they get along, and do not mind paying for it.

What do you think the People in the North of Europe would do?

They would do it, but for a different Reason; there is such an utter Horror of the Sea; they would rather shorten their Sea Voyage as much as possible.

That is the Reason they prefer Havre to Liverpool as a Point of Communication?

Yes; but Expense, I think, has a great Effect upon them.

Are you of opinion that if a direct Communication between the Western Part of Ireland and America was established, the Intercourse by Letters and Postage

Mr. C. Fignoles.

Postage between the North of Ireland and America would pass through that Mode of Communication?

I have no Doubt the whole of the Correspondence of Europe would pass that Way.

With a view to different Railways in Ireland, have you considered that any of them would be remunerative to the Speculator, independently of the ulterior Communication in view?

I think the first 100 or 150 Miles towards a South-west Port would pay itself by the Conveyance of Passengers, and probably further than that.

Would there be any Difficulty in making a Railroad from Dublin to any Port which lay between Bantry and Baltimore?

I think there would be very great Difficulty in getting through the Mountains which lie between the Valley of Blackwater and those Ports. I think it possible that a Railway might be got to the Head of Bantry Bay from Mill Street. The great Difficulty lies between the Vale of Blackwater and the Coast; the passing to Killarney would be the easiest; the great Difficulty towards Valentia is after passing Killarney. I think a Line might be got to the Head of Bantry Bay, but it would be a very difficult one.

The Witness is directed to withdraw.

Ordered, That this Committee be adjourned till To-morrow, Three o'Clock.

Die Veneris, 29^o Aprilis 1836.

The Earl of WICKLOW in the Chair.

The Right Honourable the Lord AYLMER attending, is examined as follows :

Evidence on
the Intercourse
between the U.K.
and the Colonies
of N. America.

Lord Aylmer.

Your Lordship has been Governor General of Canada?
I have.

During the Period you were in that Office had you an Opportunity of ascertaining whether any Delays took place in the Communication between this Country and Canada, which Delays were afterwards attributed or known by you to have been caused by the Detention of the Vessels in the Channel?

I have no Means of affording Information upon that Subject, except from common Report. From the Prevalence of strong contrary Winds I believe that considerable Delay is annually experienced in the Channel by Vessels on their Outward-bound Voyage.

Has your Lordship any Means of estimating the Amount of Correspondence between this Country and Canada?

I have no Means of estimating the Amount of Correspondence between this Country and Canada, but I believe Persons engaged in Commerce in Canada carry on their Correspondence with the United Kingdom chiefly, if not entirely, by the Port of New York, and I believe that by that Route the Communication, generally speaking, is in advance by Two or Three Weeks of the regular Communication by Falmouth and Halifax. I speak now with reference to Quebec and Montreal.

To what do you attribute the Circumstance of the Preference being given to the Route between New York and Liverpool?

The Preference arises from the more speedy Arrival of Vessels at New York than at Halifax, and also the more speedy Communication between New York and Quebec than between Halifax and Quebec. In the Summer Season the Communication between New York and Quebec does not require more than Four Days, and the ordinary Post between Quebec and Halifax requires Ten Days to perform the Journey, Winter and Summer.

Has any Inconvenience been experienced by the Correspondence passing through another State, it not being direct between the Mother Country and the Colony?

None whatever that I am aware of.

In case of War between America and this Country, would not that be the Fact?

Yes, of course the Communication would then be cut off.

Do you not think that any Mode by which the Correspondence can be made direct between the Countries, equally short in point of Time, would be very advantageous to the Colony?

Unquestionably.

Can you assign a Cause for the Arrival of the Correspondence from England to New York being quicker than to Halifax, the Distance not being shorter?

I cannot; it is a nautical Question; I only say I believe it to be so.

In the Winter there are other Reasons, as they can get into New York when they cannot get into Halifax?

I speak under the Correction of a Noble Lord present who holds a distinguished Rank in His Majesty's Naval Service. I am not acquainted with the Reasons adverted to in this Query. The Committee perhaps will permit

Lord Aylmer.

me to add, with reference to the preceding Questions, that the Commercial Interest at Quebec and in the State of Maine have had several Communications with a view to establish a Railroad which shall communicate between Quebec and the Port of Boston. I must confess that I entertain strong Doubts of the Success of any such Plan, arising from the Nature of the Climate, which I apprehend would render a Railroad impassable in Winter; but I think it highly probable that a Communication by means of a common Road may be very advantageously established. Indeed, a Stage now runs, as I have understood, between Quebec and Boston, and the Journey is performed in Four Days. I am strongly disposed to think that the Route by Boston would be the most desirable Line of communicating with the United Kingdom, in preference either to Halifax or New York. It must be borne in mind, at the same Time, that Boston being a Foreign Port, that Line of Communication is liable to the Objection which has been suggested in regard to New York with reference to a Period of War.

If you think that Boston would be the most desirable Port for Communication, to what do you attribute the Fact that it has never yet been used for such a Purpose?

To the wild State of the intervening Country within the Province, and its being only partially and very thinly inhabited.

Have you ever heard, during your Residence in Canada, any Speculations as to the probable Advantages which might be derived from having an Intercourse with one of the Western Ports of Ireland?

It is a Subject much canvassed in that Country.

Is it generally spoken of with Approbation?

I understand so.

Do Persons whom you consider scientific Persons in the Country think it a practical Mode of Communication?

I cannot speak positively upon that Point.

By what Route did your Lordship receive the Government Despatches?

I received the Government Despatches by Way of Halifax, generally speaking; occasionally by New York; and I have been always extremely urgent with the Colonial Department at Home to transmit Intelligence which they were desirous should reach its Destination at an early Period by the Way of New York.

You did not prefer your Intelligence being sent from one Port of England in preference to another?

No.

The quicker Passage by New York did not depend on Vessels starting from different Ports in England?

No, I imagine not.

Do you attribute the greater Despatch by Way of New York to the Mails going out by the American Packets from Liverpool?

That I cannot speak to.

You consider the Mails arriving at Halifax as coming by the Falmouth Packets?

Yes, by the Falmouth Packets only.

Are you acquainted with the Distance from Quebec to Halifax?

The Distance of Quebec from Halifax, speaking without reference to any Document, which would decide precisely, I consider 600 Miles.

What is the Distance from Quebec to New York?

About the same.

Is there any Reason why the Expedition should not be made equal in the one Case to that in the other?

There are Difficulties arising from the Nature of the Country; the ordinary Post takes Ten Days to perform the Journey between Halifax and Quebec.

How

How is that Post carried?

Partly on Horseback, partly on Foot, partly by Canoes on the navigable Waters of the River St. John's and the Lake Tomisconatta.

There is no Obstacle in the Nature of the Country itself to prevent any Road being made?

I cannot speak to that Point.

How is it taken from New York to Quebec?

The Communication from Quebec to New York is by the River St. Lawrence to Montreal; from Montreal to St. John's by Land (St. John's on the River Chambly); from St. John's, by the Lake Champlain, to Whitehall.

That is by Steamer on Lake Champlain?

Yes, and also on the St. Lawrence. From Whitehall to Albany by Land; and from Albany, down the Hudson, to New York by Steam. The Time occupied in this Journey from Quebec to New York is Four Days in Summer and Seven or Eight in Winter.

Your Lordship proposed that Boston should be the Place through which the Communication should be carried on; from what Port would you propose to carry on the Communication from this Country?

That is a Subject upon which I have no Means of forming an Opinion.

When you had any very important Despatches to send to England, which you were desirous should arrive in the shortest possible Time, through what Channel did you send them?

New York, invariably.

That was in consequence of the Communication being more rapid between Quebec and New York than between Quebec and Halifax?

Yes.

If you could have got it as quickly by Halifax should you not have preferred that?

I think even in that Case I should have preferred New York; but I wish to guard myself against stating that of which I am not quite clear. The Communication is, I believe, quicker between England and New York than between England and Halifax, generally speaking.

The Packets make their Passage in a shorter Time?

I believe so.

Has your Lordship heard of the Project there was for shortening the Time for passing from Halifax to Quebec, by cutting a Canal joining the Water of St. Lawrence and the Bay of Fundy?

I cannot say that I have ever heard of that Proposition.

Is your Lordship aware whether the Falmouth Packet goes directly to Halifax, or by Way of Bermuda?

Directly to Halifax, and then to Bermuda.

His Lordship withdraws.

Captain HENRY HAYNES, R.N., is called in, and examined as follows:

*Capt. H. Haynes,
R.N.*

You are a Captain in the Royal Navy?

I am.

You served a considerable Time during the last War?

With very short Intervals all the War.

Have you been stationed on the Coast of Ireland?

Occasionally Four Months and Five Months at a Time.

Are you well acquainted with the Harbour of Cork?

Sufficiently to take a Ship in with a fair Wind. I should not like to work her in at Night-time.

Capt. H. Haynes,
R.N.

Do you consider there is much Difficulty in Convoys getting out of that Harbour?

Certainly, when the Wind is South-east and South-south-east.

Is there not considerable Lee Shore with a South-westerly Wind in going to the Westward?

No one ever attempted to start with a South-west Wind from Cork. A Ship of War may do it under imperious Circumstances.

Is not that the Wind which prevails during the greater Portion of the Year on that Coast?

Certainly.

Have you been frequently across the Ocean, independently of your Service in the Navy?

Ten Times during the Peace.

Have you experienced much Difficulty in getting out of the Channel?

The Year before last I was Ten Weeks getting out of the Bristol Channel; I embarked on the 28th of November, and I did not get out of King's Road till the 6th of February following, after Half a Dozen fruitless Attempts. On the 9th of February the Ship put in to Kinsale, from which Place we finally departed on the 12th.

If at that Time an Opportunity had been afforded for sending a Vessel from a Port on the Western Coast of Ireland that Difficulty would have been obviated?

Of course. With the Wind at South-south-west any Vessel upon a good Construction would make a very fair Course to America, having started from a Western Port of Ireland.

Is not the Selection of Cork as a Port of Embarkation for Troops principally on the ground of its being more westerly than any English Harbour?

Certainly; there is an Advantage also of being clear of the light Cruizers within the Channel.

You say that Cork has been chosen for the Embarkation of Troops on account of its being more westerly than the Channel Ports; from that Circumstance would not any Port still further to the Westward be comparatively more advantageous than Cork?

With certain Winds; because last War I myself took a Convoy from Cork, starting with a Wind at North-north-west, and when we got outside the Harbour it was at North-west; but I still went on, and made the Passage in Twenty-eight Days to the West Indies with that Convoy; and no other Convoy was able for Three or Four Weeks afterwards to get out of the British Channel. This is from Memory only.

The Question respects the Length of Period according to the general prevailing Wind, which in the Winter is westerly, whether any Port would not be proportionably, according to its Distance to the West, more advantageous than Cork; Cork, from its Westerly Position, being more advantageous than the Channel Ports?

Certainly, the prevailing Wind being westerly.

With the Wind at North-west can you sail from an Easterly Port in the Channel?

I never saw it attempted with a Convoy in my Life.

In fine Weather could it be done?

Yes, in Summer-time it might be done, perhaps, but I never saw it attempted in the Winter. With a strong North-west Wind in the Channel, to the Eastward of Portsmouth, it requires a great deal of Care to keep a Ship of War off the French Coast.

Do you consider that the Introduction of Steam is likely to increase considerably the Danger of our Shipping in the Channel in Time of War?

Most decidedly; we should be liable to be attacked, supposing the French our Enemy.

Do you not think it important with a view to avoid the Danger of Steam Vessels

Vessels in War, that the Embarkation of Troops and the Departure of Packets should be as far as possible from the Channel?

*Capt. H. Hughes,
R.N.*

I am called on by surprise to answer these Questions, not having expected to be called upon at all till Yesterday. I have thought for a long Time the whole Course of our Military Operations must be changed in case of a War with France. If I were a French Officer I would never allow a Fleet in the Downs to remain unmolested; I would annoy them and attack them if there was not a Force ready to meet these Enterprises at a Moment's Warning; and it is almost certain that our Trade would be liable to a Variety of Attacks which never could be attempted by Sailing Vessels.

You think it would be important in case of War that Troops should be embarked and Packets despatched from a Port as far as possible from the Channel?

Yes, I do.

Do you not conceive it very important that those Embarkations should be as far as possible in a Harbour to the Westward of the Continent of Europe? Certainly.

Do you conceive that the Choice of a suitable Harbour for Steam Vessels on the Western Coast of Ireland would considerably increase the Naval Means of Defence of these Countries in Time of War?

Certainly.

Is it your Opinion that such a Harbour would also facilitate, and take away much of the Danger now existing in our Communications with our Colonies in Time of War?

It would certainly defeat the Enterprise of such Cruizers as issued forth from the North-west Ports of France, who were continually harassing our Convoys in the last War, and looking out for our Homeward-bound Packets, which were frequently charged with the Conveyance of Specie.

Are the Headlands of the South-west of Ireland favourable for observing Vessels at a Distance and for making Signals?

That is confessedly the Case.

Are you acquainted with the principal Lighthouses on the South-western Coast?

No, I am not.

Do you think the Transport Service in the Time of War might be put on a very improved Footing?

Certainly; for it was very bad last War.

In what Manner could it be improved?

By getting a better Class of Vessels; by having them altogether put on a proper Footing, as to the Commanders and their Crews being well selected and their general Equipment placed on some settled Plan.

That applies to every Station, as well as to the Western Coast of Ireland?

Certainly it does.

Are you sufficiently acquainted with the Coast of America, from the Entrance of the St. Lawrence to New York, to judge what could be done either by Sailing Vessels or Steam Vessels as to the carrying of the Mails and Passengers?

As to Sailing Vessels I can speak with some Certainty.

Do you know the Harbour of Halifax?

Yes, tolerably well.

Do you think that in Winter it is easy or practicable, or at all to be depended on for the Mails, by Sailing Vessels?

It has very seldom been tried yet; I believe the Packets generally go to New York, and the Mails are sent over Land.

Do you think, that under the late Improvements in Steam and by greater Power in the Steam Vessels, the Mails could be conveyed in Winter to Halifax with any Degree of Certainty?

I do not think they could with Certainty. I do not think we have arrived at that

Capl. H. Hays.
R.N.

that Point yet, for I have been in Situations myself where Steam Vessels could not proceed on the Voyages I was about to make between Ireland and the Port of Bristol and Hamburgh and the Port of London. I have been in Situations in which they could not perform that which was desired.

Do those Difficulties to which you have referred apply to any of the Ports in the United States?

In the Northern Ports, certainly, they are subject to the same Violence of Wind and Weather, and continuous Winds from the West.

You apprehend that neither to the Coast of the United States, or to our Colonies in North America, can we depend on a Passage by Steam during the Winter?

I include New York and the Country to the North to be, for the present, under the same Difficulty of approach by Steam Vessels in Winter.

Every Port between New York and Halifax?

Yes.

Under the Difficulties which arise from the contrary Winds and the heavy Sea the Vessels will meet with?

Yes.

Do you conceive, in respect to Newfoundland and Halifax, in the Winter Season, there might not also arise a Difficulty from Ice?

I have never heard of Halifax being frozen over; I have heard of St John's being frozen over, but I have never been in the Harbour of St. John's.

Do you conceive there would be great Advantage in Winter in Sailing or Steam Vessels going from one of the Western Harbours of Ireland to the West Indies, and especially during the Time of War?

Certainly.

What are the several Causes which prevent Vessels getting into the Northern Harbours of America, from New York Northward, in the Winter?

In the first place, the Incapacity of Steam Boats, from the Want of Power to enable them to contend against the Wind. I think their Construction is not perfectly safe yet; I have never yet seen a perfectly safe Steam Boat. The Accumulation of Ice on the Ship's Decks must be a great Inconvenience, for I have felt it myself on the Coast of North America.

Would not that Inconvenience be as great against Sailing Vessels as against Steamers?

Yes; greater, no Doubt, from the Accumulation on the Riggings.

Do you know whether the Communication is regular between this Country and America in Winter in the American Packets?

Almost regular, except when prevented by tempestuous Weather. There is a regular Line of Packets from Liverpool as well as from Havre.

Coming from America to this Country, and returning?

Yes; there is scarcely an Exception in coming from America.

Why might not we carry on the Communication with the same Regularity, either in Sailing or Steam Vessels, from hence?

The Difficulties that arise to Vessels in sailing from the present Ports in use would be very much diminished by having a Western Port.

You apply those Difficulties to their being obliged to start from the Channel?

Yes.

If they could start from the Western Coast you apprehend they would have the same Advantages and the same Regularity the American Packets have with the same Sort of Vessels?

They would have additional Advantages by sailing from a Western Port.

Or a Steam Vessel?

Yes, or a Steam Vessel, certainly, starting from a Westerly Situation, over an Easterly one.

Do you think that there is any more Difficulty in the same Vessel reaching Halifax than New York?

*Capt. H. Haynes,
R.N.*

There is a Difficulty in proportion to their going to the Northward, from the Causes before mentioned; and I always have considered that the Coast is not so dangerous in the Neighbourhood of New York as it is in the Neighbourhood of Nova Scotia.

You are practically acquainted with Steam Vessels?

No, I cannot presume to say so, though I have made Passages in them.

Can you state what is the average Rate of Steamers?

The last Time I came from Hamburgh the Steamer made Ten Miles per Hour, and I think she was an indifferent Boat; but the Wind was never foul.

Was that through the Water, or had you the Advantage of Tides?

In a Passage of Fifty Hours a Vessel must have Ebb, Flood, and Cross Tides to go with and against her. We averaged Ten Miles per Hour on the whole.

Do you conceive that in Summer, in moderate Weather, Steamers can make a Passage across the Atlantic at the Rate of Ten Miles an Hour?

I have seen very heavy Gales of Wind in Summer-time. No Seaman can calculate on fine Weather at any Season of the Year.

It would be impossible to calculate on making the Passage at Ten Miles an Hour at any Time?

Not to a distant Station, for nothing at Sea admits of a Certainty, particularly as Steam Operations are not of themselves reduced to a Certainty. There are Occurrences of tempestuous Weather when a Steam Vessel cannot go ahead at all.

Are not those Instances much more likely to arise in crossing the Atlantic than in crossing the North Sea to Hamburgh?

There is as ugly Weather between this Country and Hamburgh as in any Portion of the World, and as bad a Sea.

You think a Vessel going to Hamburgh has as rough a Sea to encounter as in any Voyage whatever?

I think so, indeed.

Are you aware whether by increasing the Power of the Engines you can indefinitely increase the Speed of the Vessel, or whether after a certain Point the Engines will destroy the Vessel by their own Action?

I have heard much on this Point of Inquiry, but I do not know any thing of it myself.

If a Witness has stated before this Committee that the Passage could be made across the Atlantic at the Rate of Eight or Ten Miles an Hour, you do not agree in that Opinion?

Most decidedly I cannot agree with any one in that Opinion.

Can you give the Committee an Opinion what might be considered the Average Passage by Steam?

The Average Passage by Steam ought to be more than by Sailing Packets.

You cannot give the Committee an Opinion of the comparative Difference?

I cannot; the Question is between Steamers and the first Class of Sailing Vessels, now known as American Liners.

Do you know what is the greatest Number of Hours for which a Steamer can carry Fuel?

No; I have no Data to go by; but that is capable of being ascertained with Certainty.

Should you consider that in making a Voyage by Steam from the Coast of Ireland to North America, St. John's, Newfoundland, would be a good Place to touch at for Coals?

It is likely; its Locality points it out as a convenient Place.

Could it be done in Winter-time?

I should keep as clear of it as I possibly could in Winter-time.

*Capt. H. Haynes,
R.N.*

Even with a Steamer?

Yes.

Are you practically acquainted with the West Coast of Ireland?

I have commanded a Sloop of War on the Irish Station, and was employed between Cork and Cape Clear; I have also, when a Lieutenant, visited the Harbour of Beerhaven Three or Four Times.

Are you acquainted with other Portions, — Galway or the North-west Coast?

Only Kenmare; and that but little.

Do you know that there are any good Ports on the Western Coast of Ireland?

Beerhaven is a magnificent Port.

You stated that Cork is a difficult Harbour to get out of with a Wind at South-south-west?

Yes; that is, with a Convoy.

Would not that Difficulty be much lessened now if Steam Boats might be had in any Number?

Yes; but that would be drawing largely on the Resources of a Naval Station, to have Steam Vessels for all the bad Sailing Ships.

Supposing the Government sent out a large Expedition from Cork, with a large Command of Steam Vessels; if they had a sufficient Number could not they tow out 100 Vessels in a Day?

I should doubt it, unless there was a Steam Vessel for every Two bad Sailing Ships, with a Southerly Wind or any Wind that compelled the Convoy to beat out of Port.

If there was a sufficient Number of Steamers at their Disposal that Difficulty would be lessened?

Decidedly; but Officers charged with the Care and Conduct of large Convoys do not like to move them on an Ebb Tide; with a foul Wind and Flood Tide the Demand on the Steamers would be enormous, and I cannot imagine what would be a sufficient Number for that Service.

You are aware that formerly a Frigate could not get out of Portsmouth Harbour with a contrary Wind?

Certainly.

Is there any Difficulty now in getting a Frigate out of the Harbour at any Time when it might be attempted?

At any Time that a Frigate may be got ahead she may be taken out of Harbour.

You have stated it would be very advantageous to have a Port on the Western Coast of Ireland for Expeditions to start from in preference to Cork?

Certainly.

And that there would be greater Security against the Enemy's Cruizers?

Certainly.

Would not the Transports that carry out those Stores or Provisions have to come from Portsmouth or the Eastward?

It is not a Matter of Necessity to have all the Transports or the Stores from Portsmouth or from the Eastward; Ireland contributes largely to the Supply of the salted Provisions. The Transports would be necessarily under Convoy; and if the Western Station selected became a fixed one for Embarkation of Troops, the Loss of a Transport would not be so great as it would be if the Troops had been embarked in an Eastern.

If they were light would they not find it difficult to get round?

Yes; but Vessels intended for Conveyance of Troops are despatched from Port to Port, with Casks filled with Water and Plenty of Provisions for the Crew, independently of what may be put on board for the Consumption of the Troops.

Could such a Port be made a Government Depôt?

I suppose that the Government of this Country could not proceed to make
a Westerly

a Westerly Port of Ireland a Depôt for all the necessary Stores and Provisions at once. Proper Defences and Communications must first be established, and I do not believe that any Western Port of Ireland is in a State of Security against combined and extensive Operations, nor can I pretend to foresee the Time when it may be advisable to increase our Naval Stations.

Capt. H. Haynes.
R.N.

Would not the Vessels be more exposed to Danger by sailing singly than in Convoys?

Yes, certainly; or a Convoy would never have been established.

What do you suppose is to prevent the South-west of Ireland being a good Depôt for Stores, &c.?

I do not pretend to say it may not be a good Depôt, but I suppose that the Time is yet distant before all the Munitions of War will be sent from England to a Western Port of Ireland to furnish an Expedition.

You have spoken of the Harbour of Cork; are you acquainted with any other Harbour on the Coast of Ireland?

I have been in Beerhaven and Kenmare.

Have you ever been in Valentia?

Never.

Have you commanded a Sloop of War on the Irish Coast?

Yes, Four Months.

In what Part?

I cruised between Cork and Cape Clear.

From what you have seen of the Western Coast of Ireland do you think it is difficult for a Vessel to get out of those Harbours generally with a Westerly and South-westerly Wind?

Not if it should be moderate.

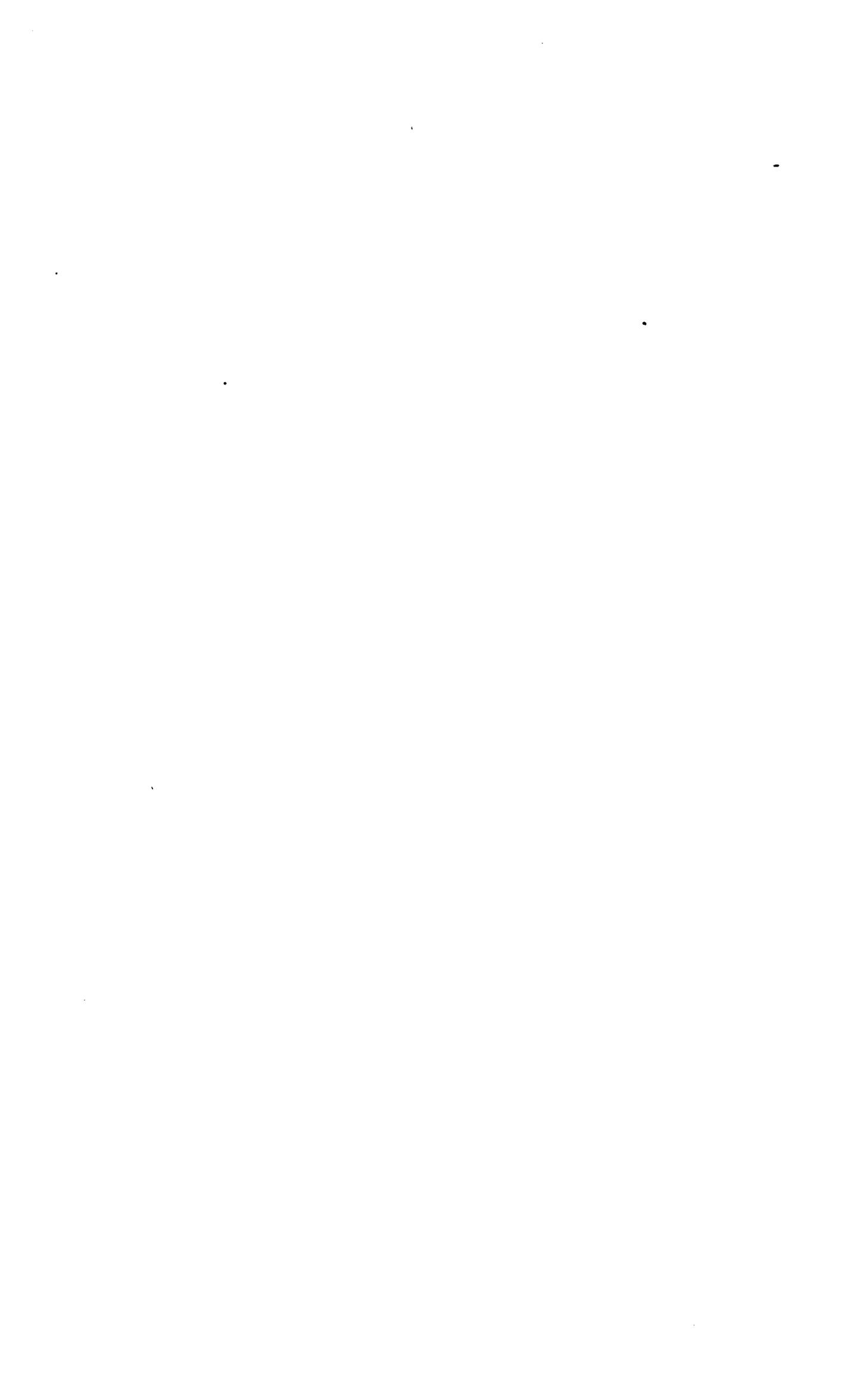
You spoke of South-south-west being a bad Wind to get from Cork; are you aware you could get out of those Harbours on the Western Coast, generally speaking, with that Wind?

Certainly. With a good Ship I would get out of Bantry Bay with a South-south-west Wind, and might make a tolerably fair Passage to the Westward; but if Valentia has Half the Advantages I have been told it has, for I do not speak from my own Knowledge, of course nothing can be more easy than to get out of that Harbour with a South-south-west Wind, and it would be a fair Wind.

The Witness is directed to withdraw.

Ordered, That this Committee be adjourned to Wednesday next,
Three o'Clock.





Die Mercurii, 4° Maii 1836.

The Duke of RICHMOND in the Chair.

Captain WILLIAM BOWLES, R. N., is called in, and examined as follows :

Evidence on
the Intercourse
between the U. K.
and the Colonies
of N. America.

—
Capt. W. Bowles,
R. N.
—

You are Comptroller General of the Coast Guard ?

I am.

You have been in Ireland ?

Yes.

Have you any Knowledge of the West Coast of Ireland ?

I have.

Have you had Occasion to consider the most advantageous Mode of carrying on Intercourse by Sea between the British Colonies and the Colonies of America ?

No, I have never turned my Mind to that particular Part of the Subject.

Have you visited any of the Western Ports of Ireland ?

The whole of them.

In your Opinion, which would be the best adapted for the Purpose of carrying on a Communication with the Colonies in America ?

I do not think that they are any of them adapted for that Purpose.

Have you had Occasion to visit the Coast of Ireland to make an Inspection of that Coast entirely, or nearly so ?

I have been Three Times completely round the West Coast.

Have you had frequent Occasion to call upon the Officers under your Orders there to report upon the Harbours, upon the Capabilities of Ingress and Egress, and Matters of that Kind ?

Having seen them all myself, I have not called for any detailed Reports on any of them, except Valentia, which was in consequence of one of the Cutters getting on shore there last Winter.

When you say you do not imagine any of the Western Ports are fitted for Communication with the Colonies, what is your Reason for forming that Opinion ?

From the Danger of that Part of the Coast during the whole of the Winter Months, the great Risk of approaching these Ports, and the great Difficulty of getting clear of the Coast after sailing.

Do you believe those Difficulties apply to Steam Vessels as well as to Sailing Ships ?

Most certainly in a much smaller Degree to Steam Vessels ; though I believe the Dangers of the West Coast of Ireland would make it hazardous for even a Steam Vessel in the Winter Months to attempt the Passage.

Do you imagine there is greater Danger to a Vessel leaving a Western or South-western Port of Ireland than leaving a Channel Port at the same Season ?

Certainly.

Must not Vessels leaving the Channel have not only the Coast of Ireland, but the Coast of France in some measure, to encounter in case of violent Gales from the Westward ?

The Channel is wide ; there is no real Danger, and very few Accidents comparatively occur on the French Coast to Vessels leaving the English Ports.

Capt. W. Bowles,
R. N.

You do not consider the Sea in the English Channel so bad as the Seas on the South and South-west Coast of Ireland?

On the West Coast of Ireland the Sea is as heavy as in any Part of the Atlantic; there is no Shelter between Cape Horn and the West Coast of Ireland.

In making a Passage from the Colonies, should you always avoid Ireland as much as possible?

I do not think a Ship would attempt a Western Port of Ireland in bad Weather when she could keep to the Southward, from the great Danger of the Navigation, particularly in the Winter Months, when a small Mistake in the Longitude would be fatal. The Latitude can be to a certain Degree ascertained either by the Sun by Day or by a Star in the Night; but in their Longitude they may be always mistaken; and as they are running directly for the Coast, they may suddenly find themselves fatally entangled upon it.

Were you ever called upon by the Lords of the Admiralty or the Treasury to make any Report respecting the Expediency of forming Valentia into a Harbour?

No, never.

Upon which of the Entrances to Valentia did the Cutter run on shore?
The South-western.

That is, generally speaking, supposed to be the best Entrance?
It is much the best.

Has the Rock on which she ran any Name?

No; the Entrance is very narrow, and by endeavouring to keep off the Lee Shore they ran on the Weather Shore.

Does the same Objection apply to Beerhaven as to Valentia?
Beerhaven is infinitely preferable as a Harbour to Valentia.

Is there the same Objection as to Vessels coming from the Westward in Winter?

The great Difficulty they have is in getting clear of the Land after they get out of Bantry Bay; it is a very dangerous Coast, the prevailing Wind being the South-west, and from the South-west shifting often to the North-west. In that Case the Ship, after clearing Bantry Bay, would be in danger perhaps for Two or Three Days before she got a sufficient Offing. There was a fatal Accident happened some Years ago from a Ship mistaking Dunmanus Bay for Bantry Bay; they could not get out again, and every one was lost.

Lights would prevent that, probably?

Yes; but there are frequently Fogs on that Coast in the Winter.

If you were disposed to make a Contract for the Conveyance of the Mails from this Country to America, and you were to be paid a larger Sum in consequence of the Quickness of the Passage, would you prefer all the Year round to contract from Falmouth, or from one of the Western Harbours of Ireland?

I should answer the Question by saying, as far as Celerity was concerned, I should take Cork in preference to either Falmouth or one of the Western Harbours.

And Security also?

Cork Harbour is a perfectly secure Harbour; it is fortified, and there is also a Naval Establishment already there.

Taking into consideration the going to Cork or the going to Falmouth, which should you conceive to be the safest?

Cork is a perfectly safe Harbour, and Ships bound there run in an open Channel until they haul in for the Land, which they may make either by Day or Night in perfect Safety.

You would prefer Cork to any Harbour you know for Communication with the Colonies?

As far as Celerity is concerned, when once the Mails are put on board.

Would

Would that include Steamers as well as Sailing Vessels?

Steamers overcome bad Weather, of course, more easily than Sailing Vessels; but for the one or the other the Distance is to a certain Degree an Object.

Is not Cork a Port difficult to get out of with a South-east Wind?
In severe Gales it is.

Supposing as a Naval Officer you were to take charge of a Convoy of Transports with Troops embarked to go on Foreign Service from Ireland, which possesses comparatively the greatest Advantage or Advantages for the sailing of Transports, Cork Harbour, or any Port on the Western Coast of Ireland?

Cork, certainly.

You say that in blowing Weather from the South-east it would be difficult to get out of Cork Harbour; with what Wind is it most difficult to get out of the Western Ports of Ireland?

With the Wind that prevails Nine Months of the Year, the South-west and West Winds.

The South-east Wind is not considered as very prevalent in the Irish Channel?

Not at all; it seldom lasts more than Twenty-four Hours at a Time.

You are too young to recollect the Expedition of Admiral Christian from the Channel?

I was not at Sea at that Time.

Do you believe that an Expedition sailing from Cork or Bantry Bay would have been in the same Situation as that sailing from a Port in the Channel?

I cannot answer that Question from my own Knowledge; but if it had sailed from Cork instead of sailing from Portsmouth, I have no Doubt the Chances would have been very much more in its Favour.

Were you ever in Crook Haven?

Yes.

What is your Opinion of that?

It is too narrow, excepting as a Shelter for small Vessels.

Are you acquainted with Castlehaven?

Not sufficiently to give a decided Opinion upon it.

Supposing it was determined to have a Port somewhere on the West Coast of Ireland, should you prefer it to be between Cape Clear and Valentia, or to the Northward toward Galway?

If it was determined to have a Port on the West Coast of Ireland, there cannot be the least Doubt, I should think, that it should be at Beerhaven.

The Witness is directed to withdraw.

Captain JAMES HANWAY PLUMRIDGE, R. N., is called in, and examined as follows:

You are a Captain in the Royal Navy?

I am.

Did you ever command a Revenue Vessel or a Man of War on the West Coast of Ireland?

A Man of War, the Sappho.

Against Smugglers?

Yes, for the Suppression of smuggling and the Protection of Trade.

Are you well acquainted with the Harbours on the West Coast of Ireland?

With some few of them.

State those that you know, and your Opinion on each?

I know the River Shannon, Cork Harbour, Killybegs, Blacksod Bay, and Lough Swilly.

Captain
J. H. Plumridge,
R. N.

Which is the best, in your Opinion?

They are all very good Harbours; in fact, I found them so good that I could not get very readily out of them again.

Supposing a Harbour established for a Communication with our Colonies, which should you select for Packets, for instance?

I am not able to answer that Question, because One or Two of the Western Harbours I have never been in. Valentia, I believe, has some Advantages over Cork, but it has some Disadvantages; it has the Advantage of Two Entrances.

What were the Limits of your Station when you commanded the Sappho?

My principal Station, and the longest, was from Malin Head on the North Part of Ireland to Achill Head.

You have not had much Experience in Ports on the South-west of Ireland?

No; in fact, I had very little to do with going into their Ports; my Object was to keep at Sea, which I succeeded in doing.

You mean to say, that in case of bad Weather you preferred keeping the Sea to going into Harbour on account of the Difficulty of getting out again?

Yes; it is a tremendous Coast to run for in blowing Weather, with very great Difficulties; and if not under low Sail, and ready to haul the Ship to the Wind, they may be in Danger; it is a tremendous Coast to run for in a Gale of Wind, but a very easy one to get off, if ready, and your Vessel well found.

Should you prefer running for one of the Harbours on the West Coast of Ireland, or to Falmouth?

To Falmouth, in Westerly Winds.

State your Reasons why, if returning from the Colonies across the Atlantic in bad Weather, you would prefer running for Falmouth to running for any of the Ports to the West of Cape Clear?

The Danger is not Half so great. The Irish Coast is what may be termed an Iron-bound Coast; we may be very close before we can see it; whereas in approaching the Coast of England we have very excellent Soundings and very excellent Lights.

Have you any regular Soundings to guide you in running for the Western Coast of Ireland?

No; I do not think they are sufficiently good to authorize a Vessel in running for it by them alone. I should do it with a great deal of Nervousness, and I am not particularly nervous on those Occasions. If there should be a Mistake of the Longitude or Latitude, there is great Danger.

You cannot give the Committee any Information in respect of the State of the Lights upon that Coast; it is some Years since you were there?

It was some Years ago; my Object was to keep at Sea when I was there.

What was the prevalent Wind on that Coast?

From South-west to North-west in the most blowing and worst Weather; but it chops round, which makes the Coast comparatively easy of getting off; if it begins at South-west, it almost invariably goes round to North-west.

Does that apply to getting out of the Harbour?

No; I should apprehend there would be no Difficulty in getting out of the Harbour with Steamers.

Will that apply equally to Steam Vessels?

No Difficulty. I think, without Steam, they can hardly get out at all. That was the Difficulty I felt in Blacksod Bay; it took me a whole Day to get out of the Harbour.

Are Fogs prevalent on that Coast?

Yes, with some Winds.

In endeavouring to work out of Blacksod Bay, what Number of Hours would it take you?

I was about Seven Hours just clearing Black Rock.

Do you mean that it would take a whole Winter's Day?

Yes, with a good Sailing Vessel; and then I could only carry my close-reefed Foresail and Main Top-sail when I got out.

Is Cork Harbour an easy Harbour to get out of?

No, not at all Times; it takes a good while to get out there sometimes, but I suppose that is pretty well obviated by Steam Vessels bringing out Vessels to the open Sea.

There is Room for a Line of Battle Ship to beat out of Cork Harbour, is there not?

It must be at short Tacks.

Have you ever known that happen?

No, I have not; it would, I think, be difficult to do with a Line of Battle Ship; it might be done possibly.

It has not been done within your Knowledge?

No; I found it sharp Work and short Tacks to get out with a Brig.

The same Wind that would impede a Vessel in getting out of Cork Harbour would facilitate her Departure from Bantry Bay, would it not?

Yes, I think so; but I never was in Bantry Bay.

The Question refers to Packet Communication?

They could get out of any Harbour now with Steam.

Though they may get out with Steam, they may find it difficult to get clear of Headlands?

I should think not, from the Western Ports.

Which should you prefer going out of, one of the South-western Ports of Ireland or a Channel Port?

When once I was at Sea I should prefer being to the Westward; I should be so much advanced on my Voyage, and then of course could take advantage of every Wind, and be so far to the Westward.

The great Objection to the Irish Ports appears to be the Difficulty of getting in from Sea?

Yes, I should state that as the Case.

And the Danger of approaching the Coast?

Yes.

From the Nature of the Coast and the Soundings?

Yes, and the Nature of the Weather; during the Winter it is tremendous Weather.

There is a Deficiency of Soundings?

Yes; the Soundings are not sufficiently marked.

The Difficulty of approaching the Coast of Ireland from the West, and entering those Harbours, would apply less to Steam Vessels than to others, would it not?

I apprehend the Danger would be less, but I do not know what the Difficulty would be; the Danger would be less because the Steam Vessel would go on without any Sail, and she would keep off the Coast if she saw any Danger; but should the Sailing Vessel be under full Sail it might be difficult to keep off the Coast.

Would that Difficulty apply to the Ports on the South of Ireland between Cork and Cape Clear?

I know very little of those Ports; it applies less to Cork, certainly.

Are you acquainted with Falmouth Harbour?

Very little.

In addition to the Circumstances you state which make it dangerous to approach the West Coast of Ireland, is there not a Difficulty from the very heavy Sea that accompanies a South-western Gale?

Yes; I do not think the Sea goes directly home to the Coast; I think that generally the Swell on the North-west Coast, which is tremendous, is less

*Captain
J. H. Plumridge,
R. N.*

when we come to the Southward. I found it less down at Achill Head, which is only Half way down; but it is such continuous bad Weather, I have been a Fortnight without a Square-sail set.

If you were to undertake the Conveyance of Mails by Sailing Packets between the Colonies and the Metropolis, would you prefer a Port in the Channel or a Port on the South-west of Ireland for your Departure?

I should choose for a Place of Departure in Ireland, but for a Place of Arrival, in Westerly Winds and bad Weather, in England; we should be so much advanced in sailing.

Do not the same Objections apply in the Spring to the East Wind approaching the Channel Ports which apply in the Winter to approaching a Port in the West of Ireland?

Yes; that is the Case when Vessels are coming in frequently.

They could reach an Irish Port in many Winds when they cannot reach an English Port?

Certainly.

If there were some Port to be fixed on as a Station for Packets as the Point of Departure and Arrival, on which Coast should you fix it?

I should say to the Southward of the Shannon, certainly.

You conceive that Part of the Coast would be most easily approached?

I should have no Doubt of the Vessels getting in there generally.

Do you know the Ports North of the Shannon?

The Lough Swilly I know very well, and a little Harbour called Killybegs, in Donegal, and Blacksod.

The Witness is directed to withdraw.

*Admiral
Sir David Milne.*

Admiral Sir DAVID MILNE is called in, and examined as follows:

You have had a great deal of Experience in the course of your Service on the Coast of North America and the West Indies?

I have.

You were at one Time Commander in Chief of His Majesty's Ships and Vessels on the American Station?

Yes, I was; Three Years.

You also have an intimate Knowledge of the Nature and Properties of Steam Vessels, having had much Experience in them?

I have had a general Knowledge; more particularly than others, perhaps; I have gone on board of them, and have attended to the general fitting of them.

Have you had Occasion to superintend in some Instances yourself the fitting-up of those Vessels?

Not particularly; not officially. I have had a general Knowledge of them.

Are you of opinion that it would be advantageous to our Government to convey the Mails from this Country to North America by Steam Vessels, in preference to the present Class of Vessels employed?

Undoubtedly; I think that would be very serviceable.

Are you of opinion it would be fit in that Case those Steam Vessels should take their Departure from some Port on the Western Coast of Ireland, in preference to going from Falmouth?

I cannot give a direct Answer to that without knowing the Facilities of having Coal on the West of Ireland for the Vessels to take in.

Are you of opinion, from your Knowledge of the Capacity of the larger Class of Steam Vessels at present employed, and the Consumption of Fuel necessary for those large Vessels, that a Steam Vessel could carry a sufficient Quantity of Fuel to last a Voyage either from Falmouth or from one of the Ports of Ireland to Halifax in the Winter Time?

That is merely a Calculation of Fuel and Distance. If the Distance is such that any Vessel can carry a sufficient Quantity of Fuel there is not the least
Doubt

Doubt she may go that Distance; it is a mere Calculation of the Distance and the Quantity of Fuel she may carry.

The Difficulties of approaching the Coast of Nova Scotia in Winter Time are very great, are they not?

Not particularly so; if a strong North-west Gale prevails there it will retard her very much; in short, there is no Vessel will beat up against a North-west Gale on the Coast of America; the usual Course is to lie to and to wait for a Southerly Wind, which always follows the North-west, and they get in without much Loss of Ground, but with considerable Loss of Time.

That same Gale of Wind would retard the Steamer, in all Probability?
I do not think a Steamer could make any Way against a North-wester.

Are you aware how the Mails are conveyed now to America?

They were, during the Time I commanded there, formerly, by Packets from Falmouth, sometimes to New York, then to Bermuda, sometimes to Bermuda, then to New York, then to Halifax, according to the Season.

What was the Average Passage from Falmouth?

I cannot fix my Memory with the Time, but they were generally considered as due on a particular Day; it was sometimes One or Two Days over or under.

Do you know whether the present Mails are now conveyed in fast sailing Vessels from Falmouth to America and back?

I am not aware of that personally; I read that they are so conveyed.

Do you think there would be any Danger in the largest Vessel from America approaching the West Coast of Ireland?

Not in the least.

Are you of opinion there is very bad Weather generally off the West Coast of Ireland?

It is always in the Power of a Steam Vessel to keep off Shore in that Case, which a Sailing Vessel could not.

If she were wrong in her Longitude what would she do?

If she were much out in her Longitude she would run the same Risk as another Vessel.

Is there a great Risk on a Coast like the Western Coast of Ireland?

No, I think not; no Person ought to have the Command of any Vessel who was not capable of working the Time-piece, to know very nearly the Situation of the Vessel; none but those should have the Command of such a Vessel.

Are you acquainted with any Harbours on the West Coast of Ireland?

No.

Have you ever been in any Harbour on the West Coast of Ireland to the Northward of Cape Clear?

No.

You are not aware of the usual bad Weather prevalent upon the Western Coast?

Bad Weather is occasioned by a very heavy Gale of Wind from the North-west, the Weather which is against Vessels approaching the Coast of Ireland; but I should think a Steam Vessel could approach the Coast of Ireland without any Risk.

Would there be any Danger to a Steam Vessel approaching Ireland in the Weather usually prevalent there in the Winter Months?

I think if the Weather is clear and they can see the Land there would be no Risk, if it was hazy Weather no one ought to approach the Coast without having seen it; a Steam Vessel will always keep off when other Vessels could not.

Do you think that in thick Weather, when there is no Opportunity of attaining the Latitude, Vessels can run with the same Confidence for that Coast as they would for the English Channel by Soundings?

I am not aware of the Soundings off the Coast of Ireland as in the English Channel; in the English Channel they can go by the Soundings with great Safety.

*Admiral
Sir David Milne.*

You would have no Fear in running for Falmouth in thick Weather by your Soundings?

None whatever; if they get into the Latitude in the Middle of the Channel by the Soundings they know pretty accurately where they are.

Have you been in Cork Harbour?

I was once, many Years ago.

Can you state, from your Knowledge of Steam Vessels, what Number of Days or Hours a large Class Vessel can keep up her Power without taking in a fresh Supply of Fuel?

I am not aware how many Hours Fuel they can carry; that must depend upon the Size of the Vessel and what Quantity of her Tonnage she could allow for her Fuel, allowing for Water and Provisions and any other Articles.

The Question is, whether any Vessel could take sufficient Fuel to cross the Atlantic?

I think a large Steam Vessel would require 24 to 27 Tons in the 24 Hours so that a Calculation must be made according to the Quantity of Fuel put on board and the Number of Days for the Run.

What sized Steamers do you refer to when you speak of 25 Tons a Day?

I speak of the Steam Vessels which generally run between London and Scotland; in that Passage they generally expend about 60 Tons of Coals in about 52 Hours.

What is the Tonnage of those Vessels?

I do not recollect.

Having been engaged in superintending the Equipment of Steam Vessels, can you give the Committee an Opinion as to what the Tonnage of those Vessels would best be for making a Passage across the Atlantic?

I cannot answer that Question with regard to the Tonnage of any particular Vessel; the more Fuel she can carry in proportion to her Tonnage the better adapted she will be for crossing the Atlantic; 700 or 800 Tons perhaps.

How great a Portion of the Tonnage of a Vessel of 700 Tons would be occupied in taking in Coals?

I cannot answer that Question; they ought to take, exclusive of Provisions or Stores, all the Coal they can; I should imagine that she ought to take all the rest in Fuel.

What Means for the Supply of Fuel would be offered in North America?

At Halifax they have Abundance of the finest Coal, not immediately at the Port, but a Depôt might be made at Cape Breton; there are Seams of Coal in Picton near 50 Feet thick.

Is there Coal in Newfoundland?

Not that I am aware; I believe it is brought principally from Cape Breton; I have seen the Seams of Coal in Picton.

If a Vessel was making a Passage across to the United States, and was stopped for a Supply of Coal, should you think St. John's, Newfoundland, a fit Port for her to go to?

I should consider that most difficult, because in some Seasons she could not get into it.

Is there any other Port in any Part of Newfoundland which could be safely approached?

No, I think there is none which is not liable to the same Objection.

Are you of opinion, that to ensure a quick Conveyance of the Mails by Steam, either from England or Ireland, to North America, it would require to send them by Steam Vessels of the greatest Power, Vessels able to encounter any Seas, and consequently possessed of a high Rate of Power, or do you suppose that a small Rate of Vessel would answer the End?

It will certainly require a Vessel of the largest Class of Steamers to go, both from the bad Weather and from the Distance.

You

You are not acquainted with the longest Voyage which has been made by the present Government Steamers of the largest Power?

*Admiral
Sir David Milne.*

I am not aware of the longest Voyage they have made, but I suppose they have made 150 Miles a Day, one Day with another.

The Witness is directed to withdraw.

The Honourable Captain FRANCIS MAUDE, R. N., is called in, and examined as follows :

*Captain F. Maude,
R. N.*

You are a Commander in the Navy?

I am.

Have you commanded a Ship on the North American Station?

I was First Lieutenant of her.

You were sometime stationed at Newfoundland?

I was.

In what Ship were you stationed there?

The Grasshopper.

You are well acquainted with the Harbour of Saint John's, Newfoundland?

I am.

Have you ever been a Winter there?

Two Winters.

Have the goodness to state to the Committee whether, from what you gathered of Saint John's, it is an eligible Place for a Vessel to approach, coming from Europe, that wanted a Supply of Coals in Winter?

Generally speaking, I should say it was; but the Winters are very uncertain. The first Winter I was there the Sea for Thirty Miles distant was frozen over, it was a Field of Ice all the Way round to Seaward; the next Winter there was scarcely any Ice to be seen till the Icebergs came down in May and June. It is quite uncertain.

During the Time that the Ice was surrounding the Port for Thirty Miles of course it would be impossible for a Vessel to get in?

Yes, but not altogether; there is sometimes a Separation of the Ice from the Coast sufficient for Vessels to pass up, and they can then get from one Harbour to another.

If they had got up would it have been easy for them to have got away again?

Very uncertain, depending entirely upon the State of the Wind.

That would not have been an eligible Station for a Packet sailing from Europe to North America to touch at?

I think it would have been uncertain, though those severe Winters do not often occur; a Ship could not go out from Europe with a positive Certainty of finding the Entrance into the Harbour clear.

Does that apply generally to the Ports of Newfoundland?

It is more uncertain to the Northward; they generally get into the Ice, as they term it, to the Southward, off Cape Race.

You say that Icebergs come down in a later Part generally?

In May and June.

Do they render dangerous the Approach to the Harbour?

No, they do not.

Do they render the Approach to the Coast difficult or dangerous?

In the thick Fogs.

That Coast is subject to Fog, is it not?

Very much so, though it does not approach the Land immediately; the Vessels acquainted with the Coast run through the Fog, and generally find a clear Space sufficient to make their Way into St. John's. There is a considerable Break in a Fog close to high Land; it does not appear "to blow home."

Captain F. Maude.
R. N.

Is the Harbour of Halifax much impeded with Ice in Winter?

Not that I am aware of; I was never there during that Season.

Does the North-west Wind prevail much on the Coast of America?

Very much.

Does it often blow so hard as to prevent a Sailing Vessel making her Way against it?

It blows so hard at Times as to prevent a Sailing Vessel getting into St. John's when a Steam Vessel might, and from the Nature of the Coast they cannot keep their Ground.

Have you any practical Knowledge of Steam Vessels?

No, none, except making a Passage in them frequently.

Are you of opinion that Newfoundland would be a desirable Place to touch at by a Steam Vessel carrying out the Mails to Halifax, if she was in Want of a Supply of Fuel?

I should say that Nine Times out of Ten it would be a most desirable Place; but I cannot speak to the Certainty of making the Port.

Is there any Coal in Newfoundland?

I am not aware of there being any in the Island of Newfoundland. It is well supplied from Sydney and Picton, but even cheaper from England. That arises from the Circumstance of Vessels taking no Cargo (comparatively speaking) to Newfoundland; they have little carrying Trade to Newfoundland, and they generally take out Coals as Ballast, or at a slight Profit.

Are you acquainted with the Ports on the Western Coast of Ireland?

Not the least; I never was on that Coast.

The Witness is directed to withdraw.

Ordered, That this Committee be adjourned to Friday next, Three o'Clock.

Die Veneris, 6^o Maii 1836.

The LORD PRESIDENT in the Chair.

Mr. CHARLES WYE WILLIAMS is called in, and examined as follows :

You have been long connected with a Steam Navigation Company in Ireland?

I have.

How many Years?

We commenced in the Year 1823; the first Steamer that went across the Channel for trading Purposes was in March 1824.

Has the Business of the Communication of Steam been materially altered as to the Mode in which it has been conducted during that Time?

The principal Alteration that has taken place has been in the Size and Power of the Vessels, with a view of shortening the respective Voyages, and accomplishing it in a smaller Number of Tides than was at first supposed to be practicable. The Size of the Vessels is almost double, and so is the Power double.

Has a much greater Economy of Coal been produced by the Improvement in the Management of Steam Vessels?

Yes; I think a great Economy of Coal has taken place; we find in some of the largest Vessels that with a considerable Addition of Power there is not a greater Consumption of Coal than with the smaller Vessels. The City of Dublin Company are about to send a Vessel to Bordeaux, and we have selected a Vessel called the City of Limerick; though she has a greater Power than the Vessel that went out during some Years back she consumes less Coal, and we have selected her for the Voyage on account of the Economy in the Consumption of Fuel. She goes from Liverpool to Bordeaux, touching at Dublin.

What is the Quantity of Coal she will consume upon that Voyage?

Upon the Average, about Eighteen Hundred Weight an Hour.

Is she a large Vessel?

She is above 200-horse Power.

She of course takes in Coal at Bordeaux for her Return?

She does not take in Coals at Bordeaux; the Supply she takes out is sufficient to bring her back.

Have you ever had Occasion to consider the Subject of Steam Navigation across the Atlantic?

We have given it a good deal of Attention and are very likely to undertake it this Year; we see no Difficulty whatever in it; in fact the Voyage to and from Bordeaux approaches very nearly what it might be across the Atlantic, and we have done that with a small Vessel; of course we can see no Difficulty in effecting it with a much larger one, with double the Power and double the Capacity for carrying Fuel.

Do you think that a Vessel about double the Size you are employing to Bordeaux would be the best adapted?

We should prefer one still larger; as large as 1,200 Tons.

Does the Quantity of Coal required increase in exact Proportion with the Tonnage of the Vessel?

No; it rather diminishes in proportion.

(56.7.)

I S

Then

Evidence on
the Intercourse
between the U.K
and the Colonies
of N. America.

Mr.
C. W. Williams.

*M^r.
C. W. Williams.*

Then if you employ a Vessel double the Size across the Atlantic you would not consider it to require a double Quantity of Coal?

Certainly not. Very likely, with new Modes of economising Fuel, a larger Power may go across with the same Quantity of Fuel that would be sufficient for a smaller one.

And that without a diminished Speed?

With increased Speed in consequence of increased Power.

In considering the Probability of a successful Communication across the Atlantic by Steam, do you reckon upon Supplies of Coal at Nova Scotia and Cape Breton, or elsewhere?

I am afraid it would be too much to the Northward to go to the Coal District; the first Voyage might be to Nova Scotia, to the Port of Halifax; it might then settle down into going there first, and let the Continuation of the Voyage be afterwards carried on by a distinct Class of Steamers. That is what in our Opinion is likely to be the best Course ultimately, with the view of shortening the main Transatlantic Voyage.

Have you had an Opportunity of knowing the Quality of the Coal to be procured at those Places?

I have not, but in Liverpool the Opinion of it is favourable. The Price of Coal, however, in New York is not unfriendly to Steam Navigation; from 20s. to 25s. a Ton is about the Average at New York.

And of good Quality?

Very good Quality.

Equal to that which you would use upon this Side?

Yes. English Coals can be had at 25s.

How many Days Consumption of Coal would you reckon it safe to undertake the Voyage with?

We should take perhaps for Twenty to Twenty-five Days; but there are other Modes in which, in the Event of being run short, Fuel may be economised, so as not to be entirely dependent on the mere Quantity of Coals taken out; there are other Modes that we have in preparation to put in practice just now, so that in the Event of a very long Voyage we should not be obliged to return from Want of Fuel.

Then you would require upwards of 600 Tons of Coal?

Under the present Circumstances we do not think it would be safe to go without sufficient Coals to meet a long Voyage and an adverse Passage, particularly outward-bound. We propose Vessels of 1,200 Tons Burden; of course they will have abundant Capacity for Fuel.

Half of that Tonnage would be required for Coal?

That Quantity may be carried out; 600 Tons may be carried out with great Ease.

Would not Twenty-two Days be a long Calculation?

Of course, but it would be to avoid the Possibility of falling short in the Supply until we have more Experience.

You would consider nearly One Third of that as Reserve against Accident?

Certainly, a large Portion may be considered as Reserve.

In case of meeting with very heavy North-west Gales when you approach the Coast of America, and finding yourself short of Coals, under those Circumstances, are you aware of any Place where you could get supplied?

Under those Circumstances, in case of being completely exhausted, we should then have recourse to our Sails in the ordinary Way.

You would make use of your Sails to go to some Place to the Southward to get a Supply?

There would be no Place to the Southward, unless we got to the Azores; but having been Four or Five Years in the habit of going to Bordeaux, we know what can be done by a smaller Vessel, and have no Apprehension on that Head.

Can you state what would be the Difference in the Amount of Coal required, and in other Facilities between a Steam Passage undertaken from Liverpool and from any of the Western Ports of Ireland to North America?

We consider the Channel Service as more likely to consume a larger Portion of Fuel, relatively with the Number of Miles gone over, than in the open Sea; and therefore supposing there to be Two or Three hundred Miles coasting and channelling, we would prefer avoiding it in the first instance. There would be a smaller Consumption of Coals for the same Number of Miles if we were free from the Channel.

So that in fact you would set the Channel Part of the Navigation at considerably more than its regular Proportion of the whole Voyage?

Decidedly. That would be the great Consideration to induce a Departure from a Western Port.

How many Days have you found practically that it takes for your Vessels upon the Average to go from Dublin to Ushant?

About Thirty or Thirty-five Hours.

You have no Occasion ever to go near Cape Clear?

No; we go to Bordeaux in about Sixty or Seventy Hours.

How many Miles is the Passage?

We consider that the Vessel may go between Seven and Eight hundred Miles, between Liverpool and Bordeaux.

Do you know the direct navigable Distance between Dublin and Bordeaux?

I do not know, except in the Way I have mentioned. We have taken out Coals from Liverpool, touching at Dublin, and left Thirty Tons of Coals at Bordeaux, and yet brought back Thirty Tons of Coals.

In what Degree do you consider Turf as applicable to Steam Navigation?

I think it is quite applicable if it could be condensed. There is no Objection whatever except the Space it occupies—quite the reverse; there is a great Advantage in its Use.

Do you consider the various Experiments that have been made within the last Ten Years for the Purpose of endeavouring to condense Turf as having failed?

Hitherto it has been a total Failure. We are very anxious to introduce Turf, and we do so upon the small Steam Boats in the Shannon, very much to the saving of the Machinery and Boilers, and with a great deal of Economy.

Of course, unless the Means of condensing Turf were discovered, it would be entirely inapplicable to a Voyage across the Atlantic?

Yes. I am afraid that Turf will never be introduced in large Vessels, because even though it were condensed, still the relative Bulk would be so great, compared with Coal.

What is the Size of the Vessels to which you consider Turf most applicable for the Purpose of generating Steam?

We have tried it on board the Lansdowne, and we have succeeded very well.

Is not that rather a large Vessel?

100-horse Power.

Would not you rather conceive it applicable to short Voyages than to long ones?

Yes, but merely on account of the Bulk.

Would there be any Danger of its igniting?

No; less than Coal. We are obliged to be very careful with the Coal.

Supposing the River and Coast Navigation in Ireland by Steam to be considerably increased, you have no Doubt that Turf would be more generally available?

Not the least Doubt.

Mr.
C. W. Williams.

Do you find that using Turf is equally economical with using Coal?

We find the Turf more economical, inasmuch as it produces Steam without the Waste which Smoke creates; we find it more economical wherever we can use it. In all the Boats in which we use it we consider that it effects a Saving of at least Thirty or Forty per Cent. upon the Fuel. Wherever it is practicable in point of Bulk we adopt it, with a view to Economy, as well as the Saving of the Machinery and Boilers.

You intend that your Vessels going to Bordeaux shall touch at Plymouth?

Yes; we go there for the Purpose of getting Passengers.

You do not conceive that the Difficulties in getting out of the Channel are so considerable as to prevent your going so much out of your Way as Plymouth to take in Passengers?

No; except the Loss of Time. It is very likely that if the Weather was very unfavourable we might not go there. Plymouth, however, is not much out of the Way. It is possible that in the course of the Season the Weather may be so unfavourable as to compel us not to go there.

Can you state what the Difference is from Dublin to Bordeaux, and from Plymouth to Bordeaux, as to Time?

No. We have never touched at Plymouth; we are only commencing this Season.

Have you ever found that in crossing the Bay of Biscay the Weather has been such that Steam Vessels cannot make any Head against it?

No. We find the Channel much more unfavourable for Steamers than the Bay of Biscay. We have had some very experienced Commanders, and they prefer being in a Steam Vessel in the Bay of Biscay, under the most unfavourable Circumstances, to being in the Channel.

In heavy contrary Gales do the Wind and the Sea ever prevent a Steam Vessel from making Headway against them?

Not if the Vessel have sufficient Power. A long Swell is favourable to Steam Navigation; it is the short Sea which is most mischievous. A long heavy Sea the Commanders prefer to the short chopping Sea during a Gale in the Channel.

And you consider that in a long Swell, with contrary Winds, the Steamers would be able to make Way?

Certainly, if you have Power enough. Hitherto we have not had Power enough. We have only begun the last few Years to adopt sufficient Power to enable us to meet very adverse Winds.

Are the Vessels which at present run between Bordeaux and Dublin of sufficient Power to make Head against a heavy Gale?

We have been able to make Headway, even in the Bay of Biscay, under very severe Weather; of course, not so much as it would have been if the Weather was not so severe, or the Power of the Vessel greater.

Have you ever found the Wind so severe against the Vessels as to reduce their Speed to Two or Three Miles an Hour?

Yes; but we have still made Way; and that is quite sufficient, at least, during the Severity of the Gale.

Then, when you meet with Gales of Wind contrary to you, that will very much diminish the Speed of the Steamer?

Certainly; in that Case we should not go directly Head to Wind.

You are of course aware that in the Winter the prevailing Winds across the Atlantic are very strong westerly Winds. Taking that into consideration, what is the Average Rate at which you expect to make the Passage across the Atlantic?

I think at Seven Miles an Hour on the Average.

That is the Rate upon which you make your Calculations?

Yes.

How

How do you mean to provide your Vessels as to Masts and Sails; do you mean to trust much to Sails?

No. There is no Use in using Sails if the Weather is such that you can use your Machinery, because you can always outrun the Power of the Sails when the Wind is moderate.

But in the Event of any Accident happening to your Engine, or your Fuel being expended, are your Vessels so masted as to enable you to get on with your Sails?

Yes. We should not be without the Resource of Sails. Our Vessels are so rigged as also to be able to lie to very advantageously.

In a fair Wind, would the Sails save the Expenditure of Fuel?
I do not think they would, if the Wind was light.

Do not they steady the Vessel a good deal?

Small Vessels require Sails occasionally to keep them steady; but, generally speaking, large Vessels do not. Occasionally Sails are useful in preventing Vessels from rolling.

Would the Vessels of 400-horse Power merely have Two Paddle Wheels?

No more than Two Paddle Wheels. We have an Experiment lately of a Paddle, which, as far as we have tried it, has been very successful. The severe Shock is taken from the Machinery; it allows of a greater Immersion in the Water in case of the Vessel being deep, without Inconvenience.

You have had Occasion to build several Iron Steam Vessels?

We have several Iron Steamers.

What Opinion have you formed of the comparative Merits of Iron and of Wood for Steam Vessels?

We consider that an Iron Steamer has a great many Advantages over a Timber one; it is stiffer, and sails better, though we do not know why; and it can carry upon the same Draught of Water a larger Burden. An Iron Vessel may be made almost so that it could not be sunk; it is divided by Iron Bulkheads into so many Divisions that if it was run into it would not be sunk. We have not found the Iron at all deteriorated. The Two largest Iron Vessels we have are the Lansdowne and the Garryowen, of 100 Horse each, and built entirely of Iron. We have them monthly examined most minutely inside and outside, and we do not find the smallest Appearance of Deterioration. We find there is something in keeping the Vessel in motion which prevents Deterioration. If a Piece of Iron is left to lie on the Ground it rusts directly, but if kept in motion, as in a Vessel, it does not rust.

Where do you employ those Vessels?

On the Shannon; one in fresh Water, the other in Sea Water.

You have no Doubt that the same Principle would be applicable in large Vessels for Steam Navigation?

The only Objection is the Effect produced on the Compass. We were in hopes that that would be brought to an Issue by the Admiralty before this. I lent the Garryowen to the Admiralty last Autumn for the Purpose of having a Course of Experiments performed on board, with the view of ascertaining how the Irregularities in the Compass could be corrected. The Experiments were carried on under the Direction of Commander Johnson, but the Weather was so unfavourable that they were not brought to a Conclusion. Had that Question been decided, we should now have been building the largest Class Iron Vessels.

But as it is, you do not contemplate crossing the Atlantic with Iron Steam Vessels?

We cannot attempt an Iron Vessel till the Question of the Compass is decided. That is a very important Consideration, and well worthy the Consideration of Government. In fact, an Iron Vessel may be made to bear Gun-shot without sinking.

What is the comparative Expense of Iron and of Timber?

It is about Twenty-five per-Cent. more. Then we consider the Durability and other Advantages as compensating that Outlay.

Mr.
C. W. Williams.

Would the same Objection as to the Compass apply to Copper?
Copper would not be stiff enough to build a Vessel with.

What is the Tonnage of those Iron Vessels?

If they were ordinary Sailing Vessels, and measured as such, they would be about 200 Tons.

Has Teak Wood been employed in the Construction of Steam Vessels?

We use a good deal of Teak Wood in our Steam Vessels; all our Stringers and most of the Beams are of Teak Wood.

And you have found Reason to think well of it?

Yes; we hold it in great Estimation. In all our new Steamers now we are adopting Mr. Kyan's Patent for preserving the Timber from Dry-rot.

Does not Teak Wood, when it comes in contact with Iron, operate favourably as to its not rusting?

It is more favourable than the British Oak; there is an Acid in the Oak which destroys the Iron. In the Main Bolts that go through the Oak Floor-timbers we find great Inconvenience in consequence of their decaying.

Acquainted with Liverpool as you are, you are aware of the Extent of Correspondence from England and from the Continent which passes to America through Liverpool?

I am.

Do you consider that great Advantages would result to Commercial Correspondence, and much Convenience afforded to all who are interested in it, if a Communication between the Western Part of Ireland and the American Continent were established?

I have no Doubt that it would be most important. There is a great deal of Interest excited at present upon the Subject, and a Desire to co-operate in what would expedite the Correspondence and Passengers between Liverpool and America. I will not say that the Desire in Liverpool is to co-operate in any Departure from the Western Part of Ireland.

Can you state what is the general Increase of Communication of late Years between Liverpool and North America, both as to Passengers and Letters?

I cannot give a comparative View of it, but I know that it has considerably increased.

Do you consider it to be now actually on the Increase?

I do; greatly increasing every Year. Such is the Opinion generally entertained in Liverpool.

Do you know whether there is a corresponding Feeling upon the Subject in America?

I believe there is. There has been a strong Desire to establish it. Already there have been some Experiments made, and I believe a Vessel built for the Purpose; but the Parties interested in it being also interested in the Sailing Vessels, they find upon the whole it would be better to continue as long as they can with the Sailing Vessels, as a mere Matter of Profit, and therefore they are not likely to be Parties to accelerate the Adoption of Steam Navigation.

Has not the Number of Ladies that come over increased lately?

Yes, considerably.

Do you conceive that a Steamer would be capable of running before the Wind in a heavy Gale as well as a Sailing Vessel?

Certainly.

That from her sharp Construction she would not be liable to bury herself?

She may be sharp as to the Bow, but there are good Bearings forward, and the Length of the Vessel also is in her Favour. We find no Difficulty in running before the Wind.

Would she be able to continue scudding in a Gale of Wind which would oblige a common Merchant Vessel to lie to?

I have no Doubt she would.

Should

Should you conceive that there would be a great Difference in the Time in sailing across the Atlantic from the Port of Cork, or from any of the Ports round Cape Clear ?

Yes ; I think the Situation of Cork is rather unfavourable, on account of the Set of the Current.

You conceive there would be an Advantage in sailing the Vessels from a Western Port round Cape Clear, rather than the Port of Cork ?

I do. That Distance might occupy a considerable Time if the Vessel be bound to the Westward.

What Time would you suppose a first Class Steamer would take to go against a strong Gale of Wind from Cork to the Longitude of one of those Western Harbours ?

We have found a Day occupied in coming from Cork to the Parallel of the Western Port, and we had to put back again to Cork.

Would you have got on if you had started from a Western Port with the same Weather ?

Not with the Vessel I allude to, but with a larger Vessel we should.

With that better Vessel would you have got on from Cork ?

Yes, we should. The Difference between Cork and a more Westerly Port would be the Time occupied in going over that Ground and the additional Consumption of Fuel.

Have you any Idea how many Tons of Coal she would burn in an Hour, and how many more Hours she would take ?

That might be a Consideration in the Length of the Voyage ; it would not perhaps be more than Twenty Tons of Coal altogether between Cork and the most Westerly Point, but in unfavourable Weather it might operate as a serious Delay.

How many Hours would you be in doing it ?

I am supposing that it would occupy, under unfavourable Circumstances, Fifteen to Twenty Hours ; but supposing that Extension of the Voyage operating at the Time of its Termination, rather than its Commencement, it might be attended with great Inconvenience.

Are there Circumstances in which you would not get round at all ?

There are. Under those Circumstances we should not go right ahead, but should tack.

And you think that by tacking you would make it in Twenty Hours ?

Yes.

Can you say what additional Time against an adverse Wind it would take to go from Plymouth to the Longitude of Cork ?

Our Vessels going out to Bordeaux have never yet touched at Plymouth ; but it might require several Days, or even a longer Time.

In making a Voyage to Halifax it would not be necessary to keep due West ?

No ; the Object would be to get rather more to the Southward.

Would you, with the greatest Power of Steam that is at present in use, attempt to start across the Atlantic from any Port against a South-west Gale ?

We might wait a Day or Two for the Severity of the Gale to abate. We do not start now even from Liverpool in a very heavy Gale. I have known a Vessel obliged to wait Two Days at Liverpool, but unless it is a very severe Gale we are not deterred from going to Sea.

But if you were starting from the Westernmost Point of Ireland, you would not attempt under all Weathers to start even from the Westernmost Point ?

We should not be deterred except under very unfavourable Circumstances, and that only for a short Time.

Is not the Delay that occasionally takes place in Liverpool more in consequence of the Difficulties of the Entrance and the Probability of getting on

Mr.
C. W. Williams.

a Lee Shore during a Gale, than absolutely the Gale being so severe that they could not make Head-way against it.

Chiefly in consequence of the Difficulties of the Entrance to the River, and the Danger of being caught in the Dark among the Banks. If it were open Sea I do not think they would be detained in the Way they are.

If from a Western Port of Ireland the open Sea could be more easily gained, the Delay would be less?

Vessels would not be deterred from going to Sea, provided they got at once to the open Sea. Liverpool in a heavy Westerly Gale is very critical, lest you should be caught at Night under those Circumstances.

Have you ever had a Calculation made as to what might be the Difference of Time in going in a Steam Vessel direct from Liverpool, or from a Port in the West of Ireland?

We have never made a Calculation, because so much depends upon the Weather in the Channel, but we consider that it would be very desirable to get rid of the Channel Navigation altogether, which is so much more dangerous than the open Sea.

If you were to contract for the Conveyance of the Mails from this Country to the United States in Steam Vessels, would you prefer their departing from the West Coast of Ireland or from Falmouth?

If I were to contract for the Mails, the Port I should prefer under present Circumstances would be Limerick.

Would you take a less Sum of Money for conveying the Mails by Steam from Limerick than you would from Liverpool?

I would, decidedly.

You mean from the Shannon; not Limerick itself?

From the Quay of Limerick.

Would you conceive that you would have as many Passengers go from Limerick as you would from Liverpool?

At first, certainly not. On the Return Voyage Passengers would prefer being landed on the West Coast rather than have to continue the Voyage round to Liverpool.

Are there not now many Passengers going by the fast-sailing American Vessels from Liverpool to the United States?

There are a great many.

Are not those Vessels very fine ones of their Class?

They are very fine Sailers.

They make very good Passages?

They do.

But still you think that after a Time those Persons would prefer going by Steam from Limerick?

Provided there was a satisfactory Communication with Limerick, such as a Railroad.

You are now connected with a Company for the Conveyance of Passengers from Liverpool to Dublin; do you, when you prefer Limerick as the Point of starting, take into consideration that they would be obliged to come over from Liverpool to Dublin?

They would certainly have to come over in our Vessels, or those of the Post Office Packets.

And therefore it would be in your double Capacity that you would prefer Limerick first, as being concerned in the Vessels from Liverpool to Dublin, and then from Limerick to the United States?

No; if the Company had nothing to do with crossing the Channel from Liverpool to Dublin, I should consider that the more desirable Port would be the Port of Limerick for Passengers, rather than starting direct from Liverpool.

You would still think it more desirable?

I would, certainly.

Your

Your Company are not concerned in the Passage Trade to any great Extent from Liverpool to Dublin?

No. The Mail Packets carry the great Bulk of the Passengers. We carry Second Class Passengers and Deck Passengers.

Why would you prefer the Port of Limerick to a more Western Port?

Because I consider the Situation of Limerick as a Westerly Port has many Advantages at present. I consider that the Shannon has no Difficulty whatever for Steam Navigation. It is, as it were, smooth Water sailing.

Do you found that Opinion upon the Shannon in its present State, or with reference to the Improvements of which the Shannon admits?

With respect to the Improvements upon the River, Steam Navigation does not require them; the Improvements that would take place as far as Steam Navigation would be in the Port, by giving the Means of being always afloat.

Are there not Improvements contemplated by the Commissioners appointed to improve the Navigation of the Shannon below the Port of Limerick?

There are Improvements, but they will be of very little Avail for Steam Navigation; in fact, Steam Navigation does not require it. The only Disadvantage in Limerick is, that the Vessels take the Ground at low Water.

Are you acquainted with the Anchorage and Roadsteads at Tarbart?

Yes, very well; we have a Station there.

Is that below all those Shoals and Difficulties that you allude to?

It is quite to the Westward. For Steam Navigation there are no Shoals and Difficulties as far as the City of Limerick.

What is the Amount of Time consumed in Steam Navigation between Limerick and Carrigaholt?

Under any Circumstances it would not be more than a few Hours.

What is the Distance?

Forty-five Miles.

That is the extremest Harbour in the Shannon, is not it?

It is.

There is no Port immediately at the Entrance of the Shannon?

No; Carrigaholt is the first.

When you stated that if you were taking a Contract for conveying the Mails to America, you would prefer the Port of Limerick, had you Reference to the present State of that Port as compared with any other on the Coast of Ireland, or to the Advantages of any Port in an equal Condition with that of Limerick?

I had Reference to the State of both Harbours at present, and the relative Conveniences of each.

And the present existing Roads between Dublin and Limerick, and any other Western Port?

Yes.

The Witness is directed to withdraw.

Captain GEORGE EVANS, R. N., is called in, and examined as follows:

Captain G. Evans.
R. N.

You are a Commander in His Majesty's Navy?

I am.

You have had Occasion to make yourself acquainted with the Western Ports of Ireland in that Capacity?

I have.

Have you had Occasion to form an Opinion as to the Practicability of a Communication between the Western Ports of Ireland and North America?

I examined the Western Ports of Ireland as to their relative Capability or Eligibility

John G. Evans,
R. N.

Eligibility as Packet Stations for Communication, both with America and the West Indies, and other Places.

Are you of opinion that, generally speaking, without referring to the Merits of any one particular Port, Facilities exist in that Part of Ireland for carrying on such Communication with greater Advantage than any Communication that now exists?

I certainly think that if the Communication through Ireland were improved the Sea Voyage undoubtedly would possess very great Advantages over the Sea Voyage from any Port in England.

Will you state in what those Advantages would consist?

The prevailing Wind, being from the Westward and Southward, enables a Vessel leaving a Harbour on the West Coast of Ireland to be very far advanced in her Voyage to what a Vessel under similar Circumstances would be leaving any Port in England. Besides, if the Port in Ireland be judiciously selected, so that a Vessel can easily get in and out of it (such as exists on the South-west Coast of Ireland), and be clear of the Land immediately after her Departure, I should say that in every Sense of the Word a Vessel leaving such a Port is not only far advanced in her Voyage, but in a far preferable Situation than if she were leaving any Port of England.

What you now say applies to Sailing Vessels; do you consider that it would also apply in the same Degree to Steamers?

It would apply to Steamers, though not in the same Degree, when you take into consideration that there would be less Expenditure of Coal.

Do you think that the Western Irish Ports would require any considerable Expenditure to adapt them to the Purposes of Communication by Sea?

Some of them would; but the only one that I saw that would combine every thing would require very little Expenditure at all.

What Port is that?

Beerhaven in Bantry Bay.

Supposing that great internal Advantages were possessed by other Ports, do you not conceive that other Ports might also be found which might be made by an Expenditure upon them well adapted to the Purpose.

Yes, under such Circumstances they might; there are several very good Harbours on the West Coast of Ireland that might be made available at a small Expense.

Will you state generally what those Harbours are?

In the Shannon there are several Places. There are very good Places at Joyne's Island, Labasheda Bay, Tarbart, and Kilrush, all in the River Shannon. Valentia Harbour would require very little Expense, but it is only available for Steam Vessels; from the Narrowness of the principal Entrance there would be great Difficulty in getting Sailing Packets in and out with certain Winds.

Should you have any Apprehension generally in approaching the West Coast of Ireland more than any other Coast for the Purposes of Navigation?

A great deal more; if you go to the North of Beerhaven, you are upon a Lee Shore. I should think that for the Purpose of a Packet Station any thing to the Northward was objectionable, in consequence of the prevailing Wind making it a dangerous Coast to approach in the Winter-time, when you cannot get an Observation perhaps for Three or Four Days, and cannot tell whether you are in a direct Line for the Port or not; and if you make the Land and find yourself to the Southward or Northward of the Port, you would not be able, without great Difficulty, to extricate the Ship in a Westerly Gale.

When you say to the Northward, you mean to the Northward of Bantry Bay?

Yes.

Do those Objections apply in a greater Degree as you advance Northward, or to the greatest Degree as soon as you get to the Northward of Bantry Bay?

About the Middle of Ireland I should say would be the most objectionable.

About

About Galway?

Yes; if they had not their Latitude correctly it would be very difficult to make their Port upon that Coast. I should say that, on the contrary, in making the South-west Point of Ireland, a Ship could run with Safety, and if she made the Land she might haul off either North or South, according to the Wind, and get clear of the Land.

Would additional Lights in different Parts of the Coast do away with any of those Objections?

What I allude to is approaching the Land in thick hazy Weather, which is very frequent upon that Coast, and no Lights that could be placed would be any Safeguard to a Vessel in that Situation, for she must get close in shore in such Weather before she saw the Lights, and then she may be very awkwardly situated to beat off again.

When did you survey these Harbours upon the Coast of Ireland?

Last Winter.

When did you arrive upon the West Coast?

In November.

How long did it take you to survey these Harbours?

I did not survey them; I merely inspected them, and sounded all over them myself with my own Hand, and inspected them with a Seaman's Eye, to see their Capabilities.

How long did it take you to do that?

According to the Size of the Harbour. I sounded every one of them all.

Have you got those Soundings?

I have the Charts that were drawn of the Places. I went to verify those, to see that they were correct.

Were the Soundings contained in your Report to the Admiralty?

No; I was not ordered to go into the Minutiæ of the Soundings; it was more to look at the Capabilities of the Harbours, and by taking the Soundings I was able to give an Opinion.

Have you any Memorandum which you can furnish to this Committee to show them what the different Soundings are in those Harbours?

Yes; I have got a Memorandum Book from which I can tell the Soundings of all of those where I was.

How long did it take you to look at those Harbours, and take the Soundings so as to satisfy yourself to make the Report which you did make?

I was Three or Four Days at each of them, sounding all Day, when the Weather permitted, from Daylight to Dark.

Could you place those Soundings upon any Chart of the Harbours?

Yes; I found the Soundings correct upon some of the Charts.

What Harbours did you survey?

Beginning from the South, I examined Beerhaven and Bantry Bay; then Valentia,—I was acquainted with the Shannon River before,—Galway, Clew Bay, and Black Sod Bay.

Did you ever command a Vessel stationed upon the Coast of Ireland?

Never stationed upon the Coast of Ireland.

Were you ever an Officer in any Vessel stationed upon the Coast of Ireland?

I was upon the Irish Station a short Time when I commanded the Lightning Steamer, and previously in the Brazen.

Was she a King's Ship?

She was.

You were not stationed upon the Coast with that Ship?

No; we were ordered to the West Indies in 1814.

Captain G. Evans.
R. N.

When was your Knowledge acquired of the Shannon?
A good many Years ago.

On Service?

Partly on Service, but principally by having a Pleasure Boat on it. I know every Part of it up to Limerick.

How many Years ago?

About Twenty-eight Years ago.

In the Lightning were you in any Port of the West Coast of Ireland?
No; upon the South Coast.

Black Sod is the most northerly Port that you surveyed?
It was.

How long have you been in the Navy?
Since 1810.

Have you made any Surveys?

I have made several Surveys since I have been in the Navy; particularly when I was Master of the Magicienne Frigate, in 1817, in the East Indies. I remained in her as Master till 1819, when she was paid off.

Do the Observations you have made as to the Departure of Packets from the West Coast of Ireland apply equally to their Arrival?

Undoubtedly, though not to the same Extent, because the Winds that would prevent a Ship coming into the English Channel do not prevail to the same Extent as the Winds that would prevent her going out of it.

You served on board the Lightning Steam Vessel; what Horse-power had she?

Two Fifties.

What Horse-power would you think it necessary for Vessels to have to go from the Ports of the West Coast of Ireland to North America?

I should say they ought to have at least twice the Power I had in the Lightning; i. e., Two Engines of 100-horse Power each.

Would it not be better if they had 250-horse Power, the same as the Monarch?

That would depend in a great measure upon the Construction of the Vessel, inasmuch as the Expenditure of Coal must be taken into consideration. In crossing the Atlantic a great deal of the Voyage might be made by sailing independent of the Steam.

What should you say would be the Average Passage from New York to one of the Western Ports of Ireland?

The Average Passage going and coming would differ very considerably in consequence of the prevailing Winds; the Average Passage in coming would be about a Week less than in going; say about Sixteen Days in coming, and add a Week to that for going back.

Do you know what is the Average Passage now of the fast-sailing American Packets from New York to Liverpool?

I do not know their Average Passage.

You think it would be about Twenty-three Days going by Steam?
Yes.

You consider that the Difference between the Steam and the Sailing Navigation to be the same going as coming?

Yes. At present Steam Vessels have not arrived to that Degree of Improvement that will give them so decided an Advantage in the Western Ocean as they possess in all narrow Seas, such as the Mediterranean and the West Indies, where they are not subject to those heavy Gales and Seas that they are in crossing the Atlantic. In any other Voyage there would be a greater Ratio of Difference between their Average Passages and the Average Passage of Sailing Vessels. In crossing the Atlantic, a good Sailing Ship leaving New York with a fair Wind would probably come faster even than a Steam Vessel.

You

You mean in scudding before a heavy Gale?

Yes; after you get the Maximum of Speed out of the Wheels of a Steam Engine they tend to retard her if the Vessel be forced by Sails to go faster.

Captain G. Evans,
R.N.

What was the Maximum Speed in the Steam Vessel that you commanded?
I got Twelve Miles an Hour out of the Rhadamanthus.

You made a Voyage to the West Indies, as Commander of that Steamer, and returned?

I did.

Did you never get more than Twelve Knots an Hour?
Never.

Do not you conceive that these New York Packets, or any fast-sailing Ship, coming home before a heavy Gale from the Westward, might exceed Twelve Knots an Hour?

Yes; I think they might come Thirteen or Thirteen and a Half in a heavy Gale; a Frigate will go that.

Did you meet with any severe Weather in making that Passage, either to or from the West Indies?

Coming home I met with very severe Weather and contrary Winds.

Could you under the most severe Weather make Headway?

I could have done, but I did not attempt it; I had not Coal enough to go against the Gale; I therefore unconnected my Engine, and went under Sail until the Gale abated, and then by that Means kept Coal enough on board the Ship to enable me to get to England.

Were you for many Hours in that State?

Three Days, with a very heavy Gale from the North-east.

At what Rate could you have gone ahead?

I might have gone about Three Miles and a Half an Hour.

What do you suppose would be the Average Rate per Hour in crossing the Atlantic?

In crossing the Atlantic with the present Steam Vessels I should say Seven Miles an Hour would be about a fair Average; but then they are improving every Day.

What sized Steamer should you recommend to be employed in conveying the Mails from Ireland to America?

To cross the Atlantic, I should say a Vessel of 1,000 Tons Burden would be the least that ought to be employed, with Two Engines on the low Pressure Principle, of at least 100-horse Power each.

That being the Size and Power of the Steam Vessel, what Quantity of Coal would she carry?

I think she would carry 400 Tons of Coal.

Are you of opinion that that would last the Vessel in her Passage from one of the Western Ports of Ireland to Halifax, for instance?

Yes.

When you had consumed such a Quantity of Coal, would there be any Inconvenience from the Want of Ballast in the Steamer?

None whatever. Steam Vessels have not got the Top Weight that Sailing Vessels have to contend with, and their Engines and Boilers are sufficient Ballast.

Would you consider it necessary that a Steamer should be able to spread any considerable Quantity of Canvass?

Certainly; but they should be rigged so that when the Wind was ahead, as much of the lofty Rigging as possible should be got on the Deck.

Captain G. Evans,
R.N.

When it was blowing very hard, did you find using Sails advantageous to work to Windward?

Always a very great Advantage; a Vessel will get to Windward that Way when she could not do it with Steam alone.

In a Manner similar to a Sailing Vessel?

Exactly, only that you have the Advantage of lying closer to the Wind.

How many Points do you consider most advantageous with Steamers?

Four, and Six with a Sailing Vessel.

Do you consider the long Swell which you meet with in the Atlantic more disadvantageous to a Steamer than the short Swell which you meet with in narrow Seas?

No; I think the short high Sea impedes the Progress of a Vessel a great deal more than a long Swell.

The Steamer that you propose would have no Difficulty in carrying sufficient Fuel to make the Passage across the Atlantic in the Number of Days you have stated?

I think not. I beg leave to remark, that were it a Question of conveying Mails by Steamers alone to America from Ireland, then the Remarks I have made respecting the West Coast of Ireland would, in a great measure, be obviated with respect to the Difficulty, because in a Steam Vessel it is quite immaterial whether you make the Land upon a Lee Shore, if you have the Power of getting off; and therefore with respect to the Sea-port, if there were great internal Advantages to be derived from having one Port rather than another, those Advantages might be obtained; because in the event of using Steam Vessels alone, the Objections to getting upon the Coast would, in a great measure, be done away.

Supposing that by some strong Gale in a heavy Sea Damage was done to the Vessel, how would the Vessel then get off?

In that Case the Vessel must get to the nearest Port she can.

Or go upon the Shore?

When an Accident happens to her she must get to the safest Port she could find.

Would she not be worse off than a Sailing Vessel, because she would not be able to make so good a Fight as a real Man-of-War?

In very bad Weather she would do very well, because the real Man-of-War would have all her lofty Spars without a Stitch upon them, and the Steamer having short Spars, every Bit of Canvass she had would be available in a Gale of Wind.

What Draught of Water would the Vessel you describe of 1,000 Tons be when she was full of Coals?

I should think about Fifteen Feet would be the proper Draught of Water for a Steamer of that Description.

Would such a Vessel consume more than a Ton of Coals in an Hour?

It would depend upon the Power; Two Engines of 100-horse Power will consume, upon an Average, Eighteen Tons of Coals in the Twenty-four Hours: but a great deal depends upon the Manner in which the Fireman is brought up. If a Fireman has been well trained, he will keep the Steam up with Half the Quantity of Coal that a bad Fireman will do; and there is in Steamers as much Necessity for bringing Men up as Stokers, that is, Firemen, as there is for Engineers. I have tried the Experiment repeatedly, and I found that a bad Fireman used Double the Coal a good one did.

Are you well acquainted with the Harbour of Falmouth?

Yes.

What are the Difficulties that the Packets experience that sail from Falmouth to North America in getting away with the Mails?

From the prevailing Winds blowing into the Channel they find it very difficult to get to the Westward.

When

When it blows strong from the Westward?
Which is Nine Months out of the Twelve nearly.

From your Knowledge of the Western Ports of Ireland, are you of opinion that when the Westerly Gales blow so strong as to prevent the Falmouth Packets getting out of the Channel, you would always have a fair Prospect of getting out of one of the Western Ports of the Coast of Ireland in a Steam Vessel?

I should think that a Vessel sailing from a Western Harbour in Ireland could get out of such a one as Beerhaven, and would be a Week or Ten Days ahead of a Vessel leaving Falmouth with the same Wind.

Are you sure that the Vessel would be able to get out of a Port of the West of Ireland when it blows hard with a heavy Sea?

There is no Doubt that you could get out of Beerhaven at any Time in any Weather that a Ship could carry Canvass, either sailing or steaming; a Steam Vessel could always get out when she could keep the Sea.

You have never experienced such Weather as would make it difficult to get out of Beerhaven?

There is no Weather that a Ship can carry Sail but you can get out; but when you get out the Wind and Sea may be so heavy as to prevent the Vessel going ahead at all; but you can always get outside of the Harbour; it is when you are outside that you meet with the Difficulties; but whatever they may be, you have always at Beerhaven and Bantry Bay a Harbour under the Lee.

The Witness is directed to withdraw.

Ordered, That this Committee be adjourned to Thursday next,
Three o'Clock.

Die Jovis, 12^o Maii 1836.

The Earl of WICKLOW in the Chair.

Captain GEORGE EVANS, R.N., is called in, and further examined as follows :

Evidence on the
the Intercourse
between the U.K.
and the Colonies
of N. America.

Captain G. Evans,
R.N.

You were directed the last Day you were here to produce a Chart, with your Observations on the Soundings?

Yes.

Have you brought it?

I have brought these with me, which show all the Places I have been at; there is only one published by the Admiralty.

Do they contain the Soundings you have taken?

Yes; where they wanted correcting I have corrected them. We are badly off for Charts of these Harbours, except Valentia; those I have here I have compared with my Remark Book, and I have put them here.

Have the goodness to hand them in?

I have brought one, which is the best I could get, of the whole Coast, including all the different Harbours.

This is a Chart of the Harbour of Valentia; did you sound the Harbour of Valentia so as to know that this is correct?

Every Part of it.

Do you agree in the Soundings as laid down here?

Perfectly; Soundings and Bearings.

You are quite sure they are correct?

Yes, quite.

Are the Soundings at Beerhaven and Bantry Bay correct?

There is more Water in the Centre of Beerhaven. I did not correct the whole of the Chart; the principal Points I have got corrected.

Are the Harbours of Newport and Westport correct?

Yes. I have made some Alterations in the Soundings in the Entrance to the Harbour, which is the only Thing of any Consequence. In my Report to the Commissioners of Post Office Inquiry I recommended the Harbours to be surveyed.

In the Galway Bay, did you find any Errors there?

This Chart of Mr. Nimmo's is not sufficiently minute as to the Soundings, but there is no Error in it.

Did you not take each Sounding?

I sounded to see if they were correct; this is one of the Fishery Charts by Mr. Nimmo; I sounded it all to see if it was correct. This is a general Chart; it is the only Plan I could find of Blacksod Bay. I have brought it to show that Bay, as well as to show the whole Coast; it is the best Plan I could get in London.

Did you sound Blacksod Bay?

Yes.

Do you find the Figures to be correct?

Yes, the Figures are correct; but the Scale is too small to give the Committee a correct Idea of the Harbour. My Report, which is in the Possession of Lord Duncannon, distinctly states all the Particulars of the Harbour.

Can you find Soundings off the South-west Coast of Ireland?

Yes.

*Captain G. Evans,
R.N.*

How far from the Land?

Twenty-five Miles off you find Soundings; the Line of the 100 Fathom Sounding lies Twenty-five Miles off the Land, increasing in Distance as you get to the Southward. I find off Dursey Island it is Thirty Miles. As you get to the North the Line of 100 Fathom Soundings is closer to the Shore; it is there about Twenty Miles, at Valentia Twenty-five, and off Bantry Forty Miles.

Are there Soundings close to Grelagh Rocks?

Yes; they are very correct.

Did you sound them very lately there?

Not outside; I was only ordered to look at the Harbours.

You stated on the last Day that you had received a Letter from some Person at Holyhead, saying that the Cinderella's Boiler had blown up?

Yes. I merely mentioned it in Conversation, not in Evidence, to corroborate a Statement of one of the Lords of this Committee, my Lord Colchester I think, when he asked if there was any Danger in using high-pressure Steam on elastic Principles.

Have you received any other Letter from Holyhead stating whether that Report was correct or not?

No. That Letter was from the Captain of a Packet at Holyhead; I was told that the Boiler had burst, and that the Vessel was delayed on its Passage by it.

Was the Letter written from Holyhead to you?

Yes. The Writer said in coming over from Dublin that the Boiler had burst, that it had detained her a long Time on her Passage, that no Accident had occurred, and that after she had arrived at Holyhead she was observed to be on Fire; that by great Exertions they scuttled her Decks and put the Fire out. I have been lately employed under the Post Office Inquiry Commission; I found fault with the Plan adopted of stowing the Coals against the Boilers, and this was written to me as a Proof how dangerous it was to stow the Coals against the Boilers; that was the Reason the Officer wrote to me.

You had Occasion in your official Situation to speak against that Practice?

Yes; I represented it as highly dangerous. Some Coals have so much Sulphur in them that the Heat of the Boilers would create a Gas that would cause them to ignite of themselves; it is the most dangerous Plan imaginable to be used in any Steam Vessel.

Were you employed to survey the Packets?

Yes; the whole of the Packets on the Post Office Establishment. The Report I believe is now publishing.

The Witness is directed to withdraw.

T.H. Brooking, Esq. THOMAS HOLDSWORTH BROOKING Esquire is called in, and examined as follows:

You have resided for some Time at St. John's, Newfoundland?

Yes; from the Year 1806 to the Year 1830.

You are not a Naval Man?

No; I am a Merchant and Ship Owner.

Can you give the Committee any Information which may enable them to form an Opinion as to the Practicability of making use of the Port of St. John's as a Place for Vessels to touch at on their Voyage from any Port on the Coast of Ireland or England to Halifax?

The Port of St. John's is generally open to Vessels approaching that Coast; I have known Instances to the contrary, but the Interruptions have not been of long Duration. The longest, I think, I have ever known, was about Eight Weeks; it was in the Year 1818, and lasted from the Middle of January to the Middle of March. At that Season no Vessels could approach the Harbour of St. John's for the Ice; but generally Vessels may approach there at all Seasons,

Seasons, certainly with greater Facility between April and November than from November to April. The Port of St. John's is safe and commodious, and being the nearest to Britain I should think would be found most convenient for Vessels to touch for Supplies when bound for the Westward.

T.H. Brooking, Esq.

Do you consider that, on the Average of Years, it is practicable for Vessels to enter that Port at any Period of the Year?

Certainly. The Drift or Field Ice does not always come along that Coast, but the Icebergs are generally very numerous in May and June. They sometimes impede the Navigation, but do not prevent it.

What Period of the Year do you consider the most dangerous for Ice?

The Field or Drift Ice generally comes down in the greatest Quantities from the Beginning of February to the latter End of March.

Seven or Eight Weeks?

Yes; but a good deal of that depends on the Prevalence of Winds. If the Winds are from the North, the Ice will drift on the Coast early in the Season, sometimes so early as January; if, on the contrary, the Winds prevail from the South, they check the Ice off the Coast, and it drifts a great Distance from Shore.

During that Period would it not be better that Vessels should take St. John's in their Course?

Vessels may generally approach St. John's, as I have before stated; but when the Field Ice lies upon the Eastern Coast there would be great Difficulty and sometimes Impracticability of getting into St. John's.

Are there Fogs prevalent in that Season of the Year?

Not at that Season; they prevail mostly in May and June, after the Drift or Field Ice has passed.

Is it not often the Case there is a heavy Fog?

The Fogs are at Times very dense, and make the Approach to the Coast occasionally difficult.

Are there any Coal Mines?

Not in the Eastern Part of the Island; there are Coals in the Humber and St. George's Bay.

For Steam?

Yes. Sir Thomas Cochrane, the late Governor of the Island, showed me some good Specimens from the Humber about Five Years since; it is just opposite to Cape Breton where the Mines are worked with great Success. The Mines in Newfoundland have never been worked, except a Copper Mine about Fourteen or Sixteen Miles to the South of St. John's, and this did not succeed.

Are the Fogs prevalent in May and June close off the Land?

Yes; close to the Coast, particularly the South-western and Eastern Coast. They do not reach over the Land much; the Margin of the Coast is frequently enveloped in a dense Fog in the Spring Months.

Does the Fog impede the Navigation and increase the Danger?

It increases the Danger of the Approach of Ships when the Masters are not particularly well acquainted with the Place; but those who are well accustomed to the Coast having the Benefit of Soundings on the Great Bank affords them a fresh Departure, and they generally make the Land out with great Accuracy. Many who are accustomed to approach the Coast at all Seasons are not often impeded by the Fogs.

Then the Fogs do not prevail at the same Period with the Icebergs?

Yes, but not usually with the Field Ice.

Did you not say there was more Danger from the Field Ice than from the Icebergs?

I should say generally there is greater Danger from the Field Ice. There is, however, usually a White or marginal Line outside the Field Ice, which in-

T. H. Bruoking, Esq. dicates to Seamen its being near at hand, and enables them to keep clear of it.

The Icebergs are often met with during the Summer Months, but they are not considered very dangerous at that Season?

That is the Period of the Year. I have seen Icebergs at all Seasons, but generally they are most numerous in May and June.

Very large ones?

Some of them are immensely large; one of them will extend over a Surface of a Mile and a Half or Two Miles, and have a great Elevation.

The Witness is directed to withdraw.

Captain G. Evans,
R.N.

Captain GEORGE EVANS, R.N., is again called in, and further examined as follows:

You referred in your Evidence to a Letter you had received; have you that Letter in your Possession?

I have.

Will you read from it the Extract to which you referred?

“The Cinderella burst a Boiler Yesterday coming from Dublin—Lord Howth and Family, also Lord Cole, on Board—no Damage further than a tedious Passage; but in the Morning at Half past One the Watchman on the Pier (a new Thing) observed her on Fire, which was got under without much Damage; but had not the Watchman been on the alert nothing could have saved her from Destruction.—They scuttled the Decks and got Water into the Coal-box.”

You have put in the Surveys you have made of the Western Coast of Ireland, and also some Charts?

Yes; they are the best Charts I could procure of that Coast. But I did not survey the Harbours; I only examined and sounded them.

Do you consider the Approach to the South-western Coast of Ireland as safe or safer than the Approach to the Land's End?

I should state, as a Seaman, that the Approach to the South-western Corner of Ireland is safer, as we have not got that violent Current setting there that generally in thick Weather throws us out of our reckoning in entering the British Channel, commonly called Rennell's Current.

Describe more particularly what you call the South-west Corner?

About Bantry I should say it is safer, because a Ship running in that Direction when she makes that Land can haul off on either one Tack or the other so as to keep clear of it. There is no Possibility of her being embayed or placed in a dangerous Situation; there is Kenmare River on one Side, Bantry Bay on the other, both which she may sail fearlessly into; and there is also Crookhaven and Long Island Sound; she will be sure to fetch into one of them with the Wind on the Shore.

With respect to other Parts of the South-western Coast?

That Answer would extend as far North as Valentia, where there are some bold Headlands.

Do you think, as a Seaman, that you are in greater Danger in running for the Chops of the Channel and making the Land, having reference to Scilly, or that it is more safe to run for the Irish Coast, being homeward bound from America?

The Answer I made, I believe, was, that I would sooner run for the South-west Corner of Ireland, because I could run with greater Safety in consequence of there being no Current there such as there is in entering the Channel. There is a Current runs out from the French Coast called Rennell's Current, and even with frequent Soundings it is difficult to know whether we are to the North or the South of Scilly in thick hazy Weather.

Would

Would you prefer running by your Soundings to the South-west Coast of Ireland than running for the English Channel? *Captain G. Evans,
R.N.*

The Soundings are more extensive and a better Guide in running for the Channel than to the South-west of Ireland; but I should think the Facility of making the South-west Corner of Ireland would greatly counterbalance the Advantage of the Soundings in a Seaman's Estimation.

Have you any other Reason to assign than that of the Current you have alluded to?

The Current is the principal Thing that sets us out in our reckoning, particularly in our Latitude; and in running for the Channel every thing depends upon having the Latitude correctly and escaping the Scilly Islands. We have no Means of ascertaining the Effect of the Current unless we can get Observations.

Do you think you are in Danger of being thrown out of your reckoning by the Current in St. George's Channel?

The Current does not set so strong on the South-west Coast of Ireland. The Land is bold, there are no Rocks at any Distance from it, and a Ship may with Safety run for the Land.

Have you ever been in the Command of a Vessel running up the English Channel a considerable Distance before you made the Land?

I have frequently, and as Master of a Frigate brought her up the Channel without seeing the Land till I made Portland Lights.

Might you not run with Confidence up the Channel if you knew the Latitude, even though the Weather was thick, so as to prevent your making the Land?

If I had Observations, so as to enable me to know my Latitude, I always ran for the Channel with great Confidence; but I allude to approaching the Channel in thick Weather, when we have not had an Observation for several Days. At those Times I should sooner approach the South-west Coast of Ireland than the Bristol Channel.

Is there not smooth Water in the Western Harbours of Ireland with the Wind at any Point from North to South?

There is always smooth Water inside the Harbours with the Wind in any Direction. In the Offing, getting out from the Coast, the Water is smooth with the Wind from North to South round by the East in many of them; but round by the West it creates a Sea on the Coast, the Harbours themselves being perfectly smooth when we are in them, at all Times.

You speak now of Valentia and Beerhaven?

Yes.

Any others?

All the others on the Coast I have mentioned as having examined.

Do you conceive the Smoothness of the Water in one of those nearly Land-locked Harbours, when you are in the Harbour, has any thing to do with the Difficulty of Egress from those Harbours, when there is a Gale of Wind blowing from the Westward?

No; the Smoothness of the Water in the Harbour has nothing to do with the Difficulty of getting out; but I drew a Report upon the Facilities of getting out of those Harbours, and the Impediments to be met with in each.

You can run out of any of them with a South-west Wind, cannot you?

With a South-west Wind we must beat out of some, we cannot run out of all of them with that Wind.

How much further Westward is Valentia than Tarbert in the Direction of New York?

By the Chart Valentia is Thirty-three Miles West, shortening the Distance to New York by Fifty Miles.

You are acquainted with the Harbour of Falmouth?

I am.

Captain G. Evans,
R.N.

Would a powerful Steam Vessel, such as you propose for crossing the Atlantic, have any Difficulty in getting out of Falmouth Harbour at any Period when it was prudent to put to Sea?

None whatever.

Can you state from your own Knowledge what Length of Time it would require for such a Steam Vessel to proceed from Falmouth to the Longitude of Cape Clear?

That Question I can answer only by taking the Average Rate for a Steamer to go, the Average Rate I should take for a Steamer being the same as I have taken for the same Vessel crossing the Atlantic, Seven Miles and a Half an Hour.

Do not you think the Progress would be more rapid in the Channel than in the Atlantic on the Average?

The Vessel is in the Atlantic after getting outside of Falmouth, and exposed to the Power of the Atlantic Sea till she gets into the Longitude of Cape Clear. The Average would apply there as much as to going across any Part of it; it would take about Twenty-four Hours, taking the Average I have stated.

Do you consider there are any Circumstances connected with that Part of the Voyage which would make the Average greater or less than for the remaining Part of the Voyage across to Halifax?

I cannot see any Circumstance, except taking Advantage in starting of having one Tide in their Favour leaving the Channel.

Do you think from the Winds that prevail, and the State of the Sea caused by these Winds, it would take longer to make that Passage than any other Part of the Voyage?

Certainly not; on the contrary, I think they might be able to perform that Part of the Voyage quicker than across the Atlantic the other Part of the Way, for the Reason I stated.

The Harbour of Falmouth having been mentioned, are you of opinion that a Sailing Vessel can beat out of Falmouth Harbour in moderate Weather, though the Wind may blow right in; that there is Space enough to enable such Vessels as those carrying the Mails to beat out?

Yes; I have seen them beat out often.

The Witness is directed to withdraw.

Committee adjourned.

APPENDIX.

(Papers delivered in by the First Lord of the Admiralty, a Member of the Committee.)

No. 1.

STEAM BOAT PASSAGES between FALMOUTH and MALTA, 1832.

Vessels Names.	Months.	Days between Falmouth and Lat. 43.	Days between Falmouth and Malta.	
Meteor - -	April	2½	11	The Letter <i>r</i> denotes Re- turn Passage.
Meteor - -	May	2½ <i>r</i>	13 <i>r</i>	
Meteor - -	July	4	14½	
Columbia - -	July	2	—	
Columbia - -	July	2¼ <i>r</i>	—	
Columbia - -	August	3½	—	
Columbia - -	August	2½ <i>r</i>	—	
Columbia - -	September	3½	16	
Columbia - -	October	4 <i>r</i>	14¼ <i>r</i>	
Columbia - -	June	3½	—	
Columbia - -	June	3	—	
Columbia - -	February	4	14	
Columbia - -	May	3	13½	
Columbia - -	August	- -	15	
Firebrand - -	March	3	2¼	
Firebrand - -	April	- -	15 <i>r</i>	
Firebrand - -	May	3¼	12½	
Firebrand - -	June	- -	13¼ <i>r</i>	
Firebrand - -	July	3	—	
Firebrand - -	July	2½ <i>r</i>	—	
Firebrand - -	September	- -	12 <i>r</i>	
Firebrand - -	October	3½	—	
Firebrand - -	October	3 <i>r</i>	—	
Firebrand - -	January	2	—	

No. 2.

STEAM BOAT PASSAGES between FALMOUTH and MALTA, 1835.

Vessels Names.	Months.	Days between Falmouth and Lat. 43.	Days between Falmouth and Malta.	
Firefly - -	Dec. 34	2 $\frac{1}{4}$	15	The Letter r denotes Return Passage.
r Firefly - -	Jan. 35	3 $\frac{1}{4}$	13	
Firefly - -	November	3	13	
r Firefly - -	December	3	13	
Tartarus - -	October	3 $\frac{1}{2}$	14	
r Tartarus - -	November	3	14	
Tartarus - -	January	2 $\frac{1}{4}$	13	
r Tartarus - -	February	3	19	
Tartarus - -	July	2 $\frac{1}{2}$	11 $\frac{1}{4}$	
r Tartarus - -	August	2 $\frac{1}{4}$	12	
Tartarus - -	April	3 $\frac{1}{4}$	13	
r Tartarus - -	May	2 $\frac{1}{4}$	9 $\frac{1}{4}$	
African - -	September	3 $\frac{1}{4}$	14	
r African - -	October	4	19 $\frac{1}{4}$	
African - -	March	5 $\frac{1}{4}$	15	
r African - -	April	7 $\frac{1}{4}$	19	
African - -	June	3 $\frac{1}{4}$	14	
r African - -	July	3	15	
Firefly - -	February	4 $\frac{1}{2}$	12	
r Firefly - -	March	3 $\frac{1}{2}$	14	
Firefly - -	May	3	12	
r Firefly - -	June	3	13	
Firefly - -	August	2 $\frac{1}{4}$	11	
r Firefly - -	September	2 $\frac{1}{4}$	13	
African - -	December	4	16	
r Blazer - -	August	3	14 $\frac{1}{2}$	

No. 3.

COPIES of the several REPORTS which have been received from His Majesty's CONSULS in the Northern Ports of FRANCE relative to the Number of LETTERS FORWARDED in any One Year from those Ports to the UNITED STATES OF AMERICA.

(1.)

Consul MARSHALL to JOHN BIDWELL Esquire, dated Calais, 12th May 1836.

Sir,

I HAVE had the Honour to receive your Circular Despatch dated 5th Instant, conveying to me the Directions of Lord Palmerston that I should use my utmost Endeavours to obtain an accurate Account of the Number of Letters forwarded in any One Year from the Ports within this Consulate to the United States, and I regret to find that it will not be possible for me to obtain the Information required.

There is no direct Transmission of Letters from the Ports of this Consulate to the United States, but the Letters for that Destination are forwarded by Way of Hâvre de Grace. No Account of the Number of such Letters is kept at these Post Offices; they are all put into the Bag for Hâvre, and brought into a general Account of Postage.

The Director of the Posts assures me he is totally unable to give the Information desired upon this Subject, and that he does not believe that it could be given correctly even by the Postmaster General in Paris.

John Bidwell, Esquire.
&c. &c. &c.

I have, &c.
(Signed) SAM. G. MARSHALL.

(2.)

Consul HAMILTON to JOHN BIDWELL Esquire, dated Boulogne, 10th May 1836.

Sir,

IN answer to your Circular Letter of the 5th Instant, I have the Honour to state to you, for the Information of Viscount Palmerston, that no Account is kept of the Number of Letters forwarded to the United States from this Port, but the Director of the Post Office here calculates that from 300 to 400 may have been the Number forwarded from hence during the Year 1835.

John Bidwell, Esquire.
&c. &c. &c.

I am, &c.
(Signed) WM. HAMILTON.

(3.)

Consul GORDON to Viscount PALMERSTON, dated Hâvre, 19th June 1836.
(With One Enclosure.)

My Lord,

REFERRING to Mr. Bidwell's Despatch of 5th May last, I now have the Honour to enclose a Copy of a Letter I this Moment have received from M. Conte to His Excellency Lord Granville, stating that the Number of Letters sent from Hâvre to the United States of America during the Year 1835 were 110,000.

Viscount Palmerston,
&c. &c. &c.

I have, &c.
(Signed) ARCH. GORDON, Consul.

(Enclosure.)

My Lord,

Paris, le 17 Juin 1836.
V. E. a désiré connaître le Nombre de Lettres expédiées du Hâvre pour les Etats Unis d'Amérique dans le courant de l'Année 1835.

Je regrette que le Depouillement que ce Travail a exigé ait pris autant de Temps, et de n'avoir pu satisfaire plutôt aux Désirs de Votre Excellence.

Le Montant de ces Lettres est de 110,000.

À. S. E. Lord Granville,
&c. &c. &c.

J'ai l'Honneur, &c.
Le Maître de Requêtes, Directeur de l'Admⁿ des Postes.
(Signé) CONTE.

(4.)

Consul PERRIER to Viscount PALMERSTON, dated Brest, 28th May 1836.
(With One Enclosure.)

My Lord,

In reply to the Despatch (Circular) from the Foreign Office dated the 5th of this Month, I have the Honour to enclose an Account of the Number of Letters forwarded from the Ports within this Consular District to the United States during the Year 1835.

No Accounts are kept at the different Post Offices of the Number of Letters sent annually to each Foreign Country. They are all included under One general Head: "Lettres à l'Etranger."

The Information in the enclosed Return is not therefore taken from official Sources. It is the Result of Inquiries amongst the Merchants, compared with the Numbers supposed by the Post Office Clerks to have passed through their Hands.

The Statements of each being very nearly the same, this Account may be considered accurate.

Viscount Palmerston,
&c. &c. &c.

I have, &c.
(Signed) ANTH^y PERRIER.

(Enclosure.)

Account of the Number of Letters forwarded to the United States from the Ports within the Consular District of Brest during the Year 1835.

Ports.	Year.	Number of Letters.
Brest - -	1835	38
Morlaix - -	1835	7
Quimper - -	1835	2
Lorient - -	1835	20
St. Brieux - -	1835	4

Brest, 28th May 1836.

(Signed) ANTH^y PERRIER,
Consul.

(5.)

Consul WHITE to Viscount PALMERSTON, dated Granville, 30th June 1836.
(With One Enclosure.)

My Lord,

AGREEABLE to the Commands conveyed to me in your Lordship's Circular of the 5th Ultimo, respecting the Number of Letters forwarded in the Year 1835 from the Ports within this Consulate to the United States of America,—

I have the Honour to report to your Lordship, that no separate Account is kept at this Post Office of the Number of Letters forwarded to the United States from the Port of Granville.

From the Port of Cherbourg I beg leave to enclose the Reply of the Director of the Post Office to Mr. Vice Consul Le Jolis.

From the Port of St. Malo it is reported to me that Fifty Letters have been forwarded to the United States within the Year 1835, and from St. Servan 140 Letters.

Viscount Palmerston,
&c. &c. &c.

I have, &c.
(Signed) ARTHUR WHITE.

(Enclosure.)

Monsieur,

Cherbourg, le 21 Juin 1836.

J'ai l'Honneur d'observer à Mons^r le Vice Consul de Sa Majesté Britannique, que ne gardant aucune Note de Nombre des Lettres qui sont expédiées de Cherbourg aux Etats Unis, il serait impossible de donner le Renseignement demandé en ce qui concerne la Correspondance adressée aux Etats Unis d'Amerique. J'observerai encore à Monsieur le Vice Consul, qu'un Renseignement de la Nature de celui qu'il desire ne pourrait dans tous les Cas lui être donné par un Agent des Postes de France sans une Autorisation speciale de Mons^r le Directeur Général de cette Administration.

Je le prie d'agréer l'Assurance de mes Sentimens de Consideration.

Le Directeur des Postes,
(Signé) J. LE ROUX.

À Mons^r Le Jolis,
Vice Consul de S. M. B. à Cherbourg.

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TO

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CUBITT, WILLIAM, Esq., Evidence of, - - - - -	- - - - -	15 to 19.

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D.

DANUBE and RHINE, as to a Railway to connect, - - -	Cubitt, -	18.
(See Fisheries.)		
DEEP SEA FISHERY is not carried on for Want of Capital, -	Bald, -	24. 25.
(See Names, &c. of Steam Vessels — Steam Vessels — Soundings.)		
DISTANCES of PORTS from each other :—		
— Azores to New York is about 2,400 Miles, -	Bald, -	40
— to West Coast of Ireland is about 1,296 Miles, -	Bald, -	40.
— Halifax to Western Ports of Ireland is about 2,500 Miles, -	Bald, -	33. 36.
— to St. John's is 700 Miles, -	Bald, -	33. 36.
— to Quebec is 600 Miles, -	Ld. Aylmer, -	50.
— Limerick to Carrigaholt is Forty-five Miles, -	Williams, -	77.
— New York to West Ports of Ireland, by Way of Liverpool, is about 3,400 Miles, -	Bald, -	40.
— to the Azores is about 2,400 Miles, -	Bald, -	40.
— touching at the Azores, to Ireland, is 3,699 Miles, -	Bald, -	40.
— Quebec is 600 Miles from New York, -	Ld. Aylmer, -	50.
— St. John's, Newfoundland, to Halifax, is 700 Miles, -	Bald, -	36.
— Western Ports of Ireland to Halifax is about 2,500 Miles, -	Bald, -	36.
— to St. John's is 1,855 Miles, -	Bald, -	33. 34. 36.
DOCK, one is now forming at Galway, - - -	Bald, -	41.
DUBLIN, as to forming a Railway from, to Valentia, - -	Burgoyne, -	5. 6. 7.
— to Galway, - - -	Vignoles, -	43.
— Railway from, to Kingstown, is finished, - -	Burgoyne, -	6.
	Bald, -	21.
	Vignoles, -	43.
DYNLLAEN in NORTH WALES to BIRMINGHAM, as to forming a Railway from, and Cost of, being 135 Miles, having in view a Communication with Ireland, which could be passed in Nine Hours, -	Vignoles, -	44 to 46.

E.

(See Correspondence.)

ENGLISH and IRISH CORRESPONDENCE with America passes through Liverpool, - - -	Vignoles, -	42. 43.
ERIE CANAL in America was executed by the Government, -	Vignoles, -	47.
EVANS, Capt. GEORGE, R.N., Evidence of, - - -	- - -	77 to 83.
	- - -	85 to 86.
	- - -	88 to 90.

F.

FALMOUTH and the most Western Port of Ireland, Longitude between, is Five Degrees Five Minutes, - - -	Cubitt, -	18.
— Difficulty of getting to the Westward of, owing to Channel Winds, - - -	Evans, -	82. 83.
— Facilities and Difficulties of getting out of, and from the West Coast of Ireland, - - -	Otway, -	26.
— in bad Weather is easier reached than Ports on West Coast of Ireland on a Home Voyage, - - -	Plumridge, -	62.
FALMOUTH and MALTA, Number of Steam Boat Passages between, in 1832 and 1835, - - -	Appendix, -	91. 92.
FALMOUTH PACKETS carry out Government Despatches, which are forwarded by Halifax or New York, and Mode of Conveyance over Land, - - -	Ld. Aylmer, -	50. 51.
— go quicker between England and New York than between England and Halifax, - - -	Ld. Aylmer, -	51.
— can beat out of Harbour with the Wind blowing right in, - - -	Evans, -	90.
FISHERIES on the West Coast of Ireland, - - -	Bald, -	23. 24. 25.
— Deep Sea, are not carried on for Want of Capital, on Coast of Ireland, - - -	Bald, -	25. 26.
— Reasons why not pursued, - - -	Bald, -	24.
— on North American Shores, Number of French employed on, are 22,000, - - -	Bald, -	23.
— Number of Americans who fish there are 30,000, - - -	Bald, -	23.

General Heads.	Names of Witnesses and Page of Evidence.
FISHERIES on the Coast of Labrador, and Depth of Water,	Bald, - 24.
— of Holland, Number of Persons employed on, in } 1668, was 168,000, - - - - - }	Bald, - 24.
— Chart of, - - - - -	Evans, - 85.
Fogs are frequent on the Coast of Ireland,	Bowles, - 60.
(See <i>St. John's</i> .)	
— on the Coast of St. John's are generally in May and } June, - - - - - }	Brooking, - 87.
FRANCE, as to Railroads contemplated in, - - - -	Cubitt, - 18.
FRANKLIN, Capt. Sir JOSEPH, Evidence of, - - - -	- - - 26 to 31.
(See <i>Fisheries</i> .)	
FRENCH, Number of, who fish on the Shores of the British } Colonies is about 22,000, - - - - }	Bald, - 23.
(See <i>Coals—Turf</i> .)	
FUEL, Steamers should be built to carry more Coals than at } present, - - - - - }	Franklin, - 29.

G.

GALWAY, a Railway is proposed from Dublin to, - - -	Bald, - 21.
— Bay, Soundings of, - - - - -	Bald, - 40.
— a Dock is now forming at, - - - - -	Bald, - 41.
— its Water Power is equal to 3,164 Horses, - - - -	Bald, - 41.
GLASGOW CANAL, Iron Boats go on, at the Rate of Ten Miles } an Hour without Locks, - - - - }	Bald, - 39.
GOVERNMENT DESPATCHES are received at Quebec by Way of } Halifax, sometimes by New York, by the Falmouth } Packets, - - - - - }	Ld. Aylmer, - 50.

H.

HALF BILLET STATIONS to any Amount may be had in } Ireland, - - - - - }	Ld. Strafford, 15.
HAMBURGH MERCHANTS are anxious for a Communication } between West Coast of Ireland and America, - }	Vignoles, - 42. 43.
HAMBURGH and America, Intercourse between, - - -	Vignoles, - 41.
— Docks are constructing at, for American Trade, -	Vignoles, - 41.
— Steamers pass from, to Havre, to meet American } Packets, - - - - - }	Vignoles, - 41.
HARBOURS ON WEST COAST of IRELAND, most of them can } be departed from in a South-west Wind, - }	Evans, - 89.
— have always smooth Water with the Wind in any } Direction, - - - - - }	Evans, - 89.
HAVRE PACKETS go to New York and Boston, - - - -	Vignoles, - 42. 43.
HAYNES, Captain HENRY, R. N., Evidence of, - - - -	- - - 51 to 57.
(See <i>Fisheries</i> .)	
HOLLAND, Number of Persons of, employed in the Fisheries, } in 1668, was 168,000, - - - - }	Bald, - 24.
HORSE POWER, TONNAGE, and NAMES of STEAMERS. (See <i>Names, Tonnage, and Power of Steam Vessels</i> .)	

I. & J.

(See <i>Western Ports of Ireland—South-western Ports of Ireland—North American Colonies</i> .)	
IRELAND, Ports of, Western or South-western, would be of } great Advantage as Points of Communication with } North American Colonies, - - - - }	Burgoyne, - 4. 5.
— Difficulty of getting into Ports of, from Sea—Danger } of the Coast and Soundings, - - - - }	Plumridge, - 63. 64.
— would be benefited by a Western Port of, being made } a Point of Communication with North American } Colonies, - - - - - }	Burgoyne, - 4.
— Ports on South-west Coast of, are superior to Channel } Ports for Packets or Troops going to the West } Indies, - - - - - }	Burgoyne, - 12. 13.
— as to its Capabilities as a Depôt for Troops, - - -	Visc. Beresford, 13. 14.
— is capable of great Improvements by Roads, Railways, } and Canals, - - - - - }	Cubitt 15. 16. 17.
— has more Facilities for Railways than England, -	Cubitt - 15.

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IRELAND, good Pilots are much wanted on the Coast of, -	Franklin, - 28.
Headlands on the South-west of, are favourable for } observing Vessels and making Signals, - - }	Haynes, - 53.
Fishing Banks on the Coast of, - - -	Bald, - 23.
Price of Labour in, enables public Works to be } executed cheaper than in England, - - }	Cubitt, - 16.
IRISH and ENGLISH Correspondence with America passes } through Liverpool, - - - }	Vignoles, - 42. 43.
IRON BOATS on Canals, Speed of, is about Ten Miles per } Hour without Locks, - - - }	Bald, - 39.
(See Steam Vessels.)	
IRON STEAMERS, Advantages of, over those built of Timber, Williams, - 73.	
are £25 per Cent. dearer than those made of Timber, Williams, - 73.	
their Effect on the Compass, - - - Williams, - 73.	
the Garryowen and the Lansdown, are of 100-horse } Power each, - - - }	Williams, - 73.
JOHN'S, ST. (See St. John's.)	

K.

KINGSTOWN and DUBLIN RAILWAY is finished, - - -	Vignoles, - 43.
KYAN'S PATENT is used to prevent Dry Rot in Steamers, - -	Williams, - 74.

L.

LABOUR, Wages of, in Ireland. (See Wages.)	
(See Fisheries.)	
LABRADOR, Fishing Bank on the Coast of, and Depth of } Water at, - - - }	Bald, - 24.
LIGHTHOUSE, the most westerly, of Europe, is Skellig in } Ireland, - - - }	Cubitt, - 19.
on the Isle of Aran, - - - -	Bald, - 40.
LIMERICK, Water Power of, is equal to 35,590 Horses, -	Bald, - 41.
to Carrigoholt is Forty-five Miles, - - -	Williams, - 77.
is a desirable Port for Passengers if a Railway is made } from Dublin to, - - - }	Williams, - 76.
LIST of Steam Boat Passages between Falmouth and Malta } in 1832 and 1835, - - - }	Appendix, - 91. 92.
LIVERPOOL RAILWAY, when completed, will accelerate Com- } munication with North American Colonies, - }	Burgoyne, - 4.
is a critical Port to depart from in a Western Gale, -	Williams, - 75. 76.
LONGITUDE between Falmouth and the most Western Port of } Ireland is Five Degrees Five Minutes, - - }	Cubitt, - 18.

M.

MAIL ROADS in Ireland are nearly as good as in England, -	Burgoyne, - 3.
MAILS could be conveyed cheaper from Limerick to North } American Colonies than from Liverpool, - - }	Williams, - 76. 77.
in Ireland travel nearly as fast as in England, - -	Burgoyne, - 3.
to North America, as to conveying them by Steam } Vessels from the West Coast of Ireland, - - }	Milne, - 64. 65.
are sent to America, according to the Season, either } to New York, Bermuda, or Halifax, by Packets to } America and back, - - - }	Milne, - 65.
MALTA and FALMOUTH, List of Steam Boat Passages between, } in 1832 and 1835, - - - }	Appendix, - 91. 92.
MANCHESTER RAILWAY, Quantity of Goods carried on, as } compared with the Canal, - - - }	Bald, - 39.
MANUFACTURING INTERESTS of England and Scotland would } be benefited by a Railroad across Ireland, - - }	Cubitt, - 18.
MAUD, Captain the Honourable FRANCIS, Evidence of, - -	- - - 67. to 68.
MAYO, Trigonometrical Survey of, - - -	Bald, - 21.
MILITARY STORES, as to a Depôt for, in a Western Port of } Ireland, - - - }	Burgoyne, - 4.
MUTTON ISLAND, a Breakwater is forming at, - - -	Bald, - 21. 22.

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N.

NAMES, TONNAGE, and POWER of STEAM VESSELS :—				
—	Clarence of 100-horse Power,	-	-	Bald, - - 41.
—	Garryowen Iron Steamer is 100-horse Power,	-	-	Bald, - - 41.
—	Glasgow is 160-horse Power,	-	-	Bald, - - 34.
—	Lansdown Iron Steamer is of 100-horse Power,	-	-	Williams, - - 73.
—	Lightning is 100-horse Power,	-	-	Evans, - - 80.
—	Liverpool is 160-horse Power,	-	-	Bald, - - 34.
—	Manchester is 200-horse Power,	-	-	Bald, - - 34.
—	Monarch is 872 Tons and 200-horse Power,	-	-	Bald, - - 34.
—	Regenerator is 300-horse Power and 850 Tons —	-	-	Bald, - - 35.
	cost £26,000,	-	-	
—	Shannon is 500 Tons and 190-horse Power,	-	-	Bald, - - 34.
—	Thames is 513 Tons and 160-horse Power,	-	-	Bald, - - 34.
—	Sutherland is 560 Tons and 225-horse Power,	-	-	Bald, - - 34.
—	United Kingdom is 528 Tons and 200-horse Power,	-	-	Bald, - - 34.
(See <i>St. John's</i> .)				
NEWFOUNDLAND,	Coals can be had at,	-	-	{ Haynes, - - 55.
				{ Bowles, - - 60.
NEWPORT HARBOUR,	Chart of,	-	-	Evans, - - 85.
NEW YORK to Western Ports of Ireland,	Passage may be	-	-	} Evans, - - 80.
	made in Twenty-three Days,	-	-	
—	Price of Coals at, is from 20s. to 25s. per Ton,	-	-	Williams, - - 70.
(See <i>Ireland—Western Ports—Correspondence</i> .)				
NORTH AMERICAN COLONIES,	Advantages of Communication	-	-	} Burgoyne, - - 3. 4. 5.
	with, from a Western Port of Ireland,	-	-	
—	Communication from the Western Ports of Ireland,	-	-	} Vignoles, - - 47. 48.
	if established, Correspondence of Europe would	-	-	
	pass through,	-	-	
—	Communication with, will be accelerated by the	-	-	} Burgoyne, - - 4.
	Liverpool Railway,	-	-	
—	Communication with, would be increased by forming	-	-	} Burgoyne, - - 4. 5.
	Railroads from Dublin to Western Ports; and	-	-	
	probable Cost of,	-	-	
—	Shores of, are fished by the Americans and French,	-	-	Bald, - - 23.

O.

OTWAY, Vice Admiral Sir ROBERT WALTER, Evidence of,	-	-	-	-	25 to 26.
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P.

PACKETS, AMERICAN. (See *American Packets*.)

(See *West Coast of Ireland—South-west Coast of Ireland—*
Ireland.)

PACKET STATION, as to establishing of, on the West Coast	-	-	-	} D. of Wellington, 12.
— of Ireland,	-	-	-	
— would be best at a Port Southward of the Shan-	-	-	-	} Plumridge, - - 64.
— non,	-	-	-	
— and Railway Communication considered,	-	-	-	Cubitt, - - 17. 18.
— Advantages of establishing of, on the West Coast	-	-	-	} Otway, - - 25. 26.
— of Ireland, as to Communications with North	-	-	-	
— American Colonies,	-	-	-	
PACKET COMMUNICATION with America is principally by	-	-	-	} Bald, - - 38.
— American Vessels,	-	-	-	
PACKETS, Sailing, go at the Rate of Thirteen Miles an	-	-	-	} Evans, - - 81.
— Hour,	-	-	-	
— between England and America are generally from	-	-	-	} Bald, - - 37.
— 500 to 600 Tons Burden,	-	-	-	
— on the Post Office Establishment, as to Survey	-	-	-	} Evans, - - 86.
— of,	-	-	-	
PAPER on the probable Advantages of sailing to North	-	-	-	} Burgoyne, - - 9. 10.
— American Colonies from a Western Port of Ireland,	-	-	-	
— with Letters and Passengers,	-	-	-	
PARIS, contemplated Railway from, to the English Channel,	-	-	-	Bald, - - 40.
PASSENGERS in Time would prefer going by Limerick rather	-	-	-	} Williams, - - 76.
— than by Liverpool to North American Colonies,	-	-	-	
PILOTS, Want of, who understand the Western Coast of	-	-	-	} Franklin, - - 28 to 31.
— Ireland,	-	-	-	
PLUMRIDGE, Captain JAMES HANWAY, R. N., Evidence of,	-	-	-	- - - 61 to 64.

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Names of Witnesses and Page of Evidence.

PORTS, Distance of various, from each other. (See *Distance of Ports.*)

— Survey of. (See *Survey of Ports.*)

— North of Bantry and Beerhaven, Dangers of, - - -

POST, how conveyed between Halifax and Quebec, - - -

POST OFFICE PACKETS, as to Survey of, - - -

Evans, - - 78. 79.
Ld. Aylmer, - 51.
Evans, - - 86.

Q.

QUEBEC. (See *Canada.*)

R.

RAILWAY to Manchester, Quantity of Goods carried on, as compared with the Canal, - - -

— in contemplation between Hull and Birmingham, - - -

— from Liverpool would, when finished, increase the Communication with the North American Colonies, - - -

— as to forming One from Dynllaen, North Wales, to Birmingham, which could be passed in Nine Hours, - - -

— the Eastern Counties, from London to Chelmsford, Colchester, Ipswich, Norwich, and Yarmouth— a Line from this to Harwich would keep up the Communication with the Continent by means of Steamers, - - -

— as to the best Line of, to West and South-west Coast of Ireland to Dublin; and Cost of, - - -

— across Ireland would be a great Advantage, as to Communication with North American Colonies, - - -

— would attract Americans to England, in their Way to the Continent, - - -

— would benefit Manufacturers of England and Scotland, - - -

— if formed from Dublin to Western Ports of Ireland, would accelerate Communication with North American Colonies, - - -

— forming in Ireland, - - -

— from Dublin to Kingstown, - - -

— from Dublin to Blacksod, Valentia, or Beerhaven, would be a great Expense, and would not shorten the Sea Voyage, - - -

— to Galway, Advantages and Cost of, - - -

— to Valentia, would cost about Three Millions, - - -

— to Valentia might be made nearly direct, - - -

Bald, - - 39.
Vignoles, - 46.
Burgoyne, - 4.
Vignoles, - 44. to 46.
Vignoles, - 46.
Vignoles - 43. 44. 46.
Cubitt, - 16. 17.
Bald, - - 39. 40.
Cubitt, - 18.
Burgoyne, - 4. 5. 9. 10.
Bald, - - 38.
Vignoles, - 43.
Bald, - - 38. 39.
Burgoyne, - 6.
Bald, - - 21. 22. 25.
Burgoyne, - 5.
Bald, - - 22.
Cubitt, - 19.

(See *Paper.*)

RAILWAYS, Advantages of, - - -

— as to carrying Mails, - - -

— and Packet Stations considered, - - -

— Cost of, in Ireland, is about £15,000 per Mile, - - -

— their Advantages, as Adjuncts to other Communications with North American Colonies, - - -

— in France, as to, - - -

— to connect the Rhine and the Danube, - - -

— from Quebec to Boston, would be a desirable Line of Communication with North America, - - -

— American, how constructed— Cost of, is about £1,500 per Mile, - - -

— People give Land for, - - -

RELIEF TROOPS, great Facility of providing Accommodation for, in Ireland, - - -

RHINE and DANUBE, as to a Railway to connect the, - - -

ROADS, MAIL. (See *Mail Roads.*)

ROCKALL BANK, Sounding of, - - -

Burgoyne, - 5. 6.
Burgoyne, - 5. 6.
Cubitt, - - 17. 18.
Burgoyne, - 5.
Cubitt, - 19.
Cubitt, - - 15.
Cubitt, - - 18.
Cubitt, - - 18.
Ld. Aylmer, - 50.
Vignoles, - 46. 47.
Burgoyne, - 5.
Ld. Strafford, 15.
Cubitt, - - 18.
Bald, - - 23.

S.

SAILS, as to using of, with Steamers, - - -

SHANNON, Soundings of, - - -

— its Navigation is 180 Miles, - - -

Bald, - - 36. 37.
Williams, - 73.
Evans, - - 81. 82.
Bald, - - 40.
Bald, - - 41.

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SHANNON, Survey of, - - - - -	Evans, - - 79.
Improvements of, - - - - -	Williams, - - 77.
Steamers on the, - - - - -	Bald, - - 41.
has no Difficulty for Steam Navigation,	Williams, - - 77.
River, '50,000 Tons of Goods are annually sent to } Dublin by the, - - - - - }	Bald, - - 41.
Names of Harbours in the, - - - - -	Evans, - - 78.
SKELLIG is the most westerly Lighthouse of Europe, - - - - -	Cubitt, - - 19.
SOUNDINGS seaward in the Atlantic and West Coast of } Ireland from America, - - - - - }	Bald, - - 40.
to the Bay of Galway, - - - - -	Bald, - - 40.
from the Shannon to America, - - - - -	Bald, - - 40.
of Valentia Harbour, - - - - -	Bald, - - 40.
of Beer Haven - - - - -	Bald, - - 40.
of Blacksod - - - - -	Bald, - - 40.
<i>(See Falmouth—Western Ports of Ireland.)</i>	
SOUTH-WESTERN PORTS OF IRELAND offer a more certain Com- } munication with Colonies of North America than } Falmouth, - - - - - }	D. of Wellington, 11. 12.
are superior to Channel Ports for Packets and Troops } going to the West Indies, - - - - - }	D. of Wellington, 12.
probable Advantages of, as a Communication with } North American Colonies, - - - - - }	Franklin, - - 26 to 29.
SOUTH-WESTERN COAST OF IRELAND is safer than the Approach } to the Land's End, - - - - - }	Evans, - - 88. 89.
St. JOHN'S, NEWFOUNDLAND, Winters at, are very uncertain } as to Ice on the Coast, - - - - - }	Maude, - - 67.
Coals may be had at, - - - - -	Bald, - - 37.
as to forming a Depot for Coals at, - - - - -	Haynes, - - 55.
Port of, is generally open to Vessels, - - - - -	Howles, - - 60.
Fogs on the Coast of, are generally in May and } June, - - - - - }	Brooking, - - 86. 87.
Port of, is often impeded, but not closed, by Ice- } bergs in May and June, - - - - - }	Bald, - - 37.
Drift Ice passes, from February to March, - - - - -	Brooking, - - 86.
Coal Mines at, - - - - -	Brooking, - - 87.
<i>(See Names, &c. of Steam Vessels—Soundings—Coals—Distances of Ports.)</i>	
as to Application of, to establish a Communication } with North American Colonies, - - - - - }	Franklin, - - 29.
Cost of, is about £25,000 each, - - - - -	Bald, - - 34.
Construction of, is not perfect, and they require } much Improvement, - - - - - }	Haynes, - - 54.
Improvements made in, give increased Speed and } Saving of Fuel - - - - - }	Williams, - - 69. 70.
Expense of, per Week, exclusive of Coals, - - - - -	Bald, - - 34.
can go at the Rate of Twelve Miles per Hour, - - - - -	Williams, - - 81.
generally go at the Rate of Ten Miles per Hour, - - - - -	Bald, - - 34.
could pass from Falmouth Harbour to Cape Clear in } 24 Hours, - - - - - }	Haynes, - - 55.
might cross the Atlantic at the Rate of Seven Miles } per Hour, - - - - - }	Milne, - - 67.
Time in which they make the Passage to North } American Colonies, - - - - - }	Evans, - - 90.
make the Voyage from Ireland to America in about } Fifteen or Sixteen Days, - - - - - }	Williams, - - 81.
Rate of Progress in a Gale of Wind, - - - - -	Burgoyne, - - 6.
perform the Voyage from Dublin to Bourdeaux in 152 } Hours, - - - - - }	Franklin, - - 29.
List of Passages made by, from Falmouth to Malta } and back, in 1832 and 1835, - - - - - }	Williams, - - 72.
Average of Passages by, ought to be more than by } Sailing Packets, - - - - - }	Bald, - - 33.
longest Voyages of, - - - - -	Appendix, - - 91. 92.
Consumption of Coals by, are about 10 lbs. per } Horse Power per Hour, - - - - - }	Haynes, - - 55.
for 200-horse Power, would be Eighteen Tons } in Twenty-four Hours - - - - - }	Bald, - - 33.
between London and Bourdeaux is 115 Tons, - - - - -	Bald, - - 34.
on board large, is from Twenty-four to Twenty- } seven Tons per Day, - - - - - }	Evans, - - 82.
	Bald, - - 32.
	Milne, - - 66.

General Heads.	Names of Witnesses and Page of Evidence.
STEAM VESSELS, Calculation of the Consumption of Fuel by, seldom carry more than Fifteen or Sixteen Days } Coal, - - - - - }	Bald, - 36. Franklin, - 29.
Difficulty of their carrying Fuel for long Voyages, - as to Supply of Coal necessary for, - in the Channel use more Coals than in the open } Sea, - - - - - }	Burgoyne, - 10. Burgoyne, - 6. Williams, - 71.
the best Coals for, is from Llangennech in Wales, - the greater the Power of, the greater the Velocity } and Saving of Fuel, - - - - - }	Bald, - 23. Bald, - 35.
may cross the Atlantic from the West Coast of Ire- land to St. John's with 275 Tons of Coals, - } to cross the Atlantic should be of 1,000 Tons } Burden, - - - - - }	Bald, - 35. Evans, - 81. 82.
to cross the Atlantic should be of 700 or 800 Tons } Burden, - - - - - }	Milne, - 66.
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REPORT

FROM

THE SELECT COMMITTEE

APPOINTED TO INQUIRE INTO

THE EXISTING FACILITIES

FOR

INTERCOURSE between the UNITED KINGDOM and
the Colonies of NORTH AMERICA,

AND THE

EXPEDIENCY AND MEANS OF IMPROVING THEM;

AND TO REPORT TO THE HOUSE;

WITH

THE MINUTES OF EVIDENCE,

AN APPENDIX, AND INDEX.

1836.