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The History of the Great Northern Railway

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First published in 1903 by Methuen & Co. Ltd.

This edition first published in 2018 by Routledge
2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN
and by Routledge
711 Third Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

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A Library of Congress record exists under ISBN: 5017253

ISBN 13: 978-1-138-60221-2 (hbk)
ISBN 13: 978-1-138-60223-6 (pbk)
ISBN 13: 978-0-429-45996-2 (ebk)

EDMUND DENISON, ESQ., M.P.

"FATHER" OF THE GREAT NORTHERN RAILWAY COMPANY

(HOLDING IN HIS HAND A COPY OF THE ACT OF INCORPORATION)

From a painting by Pickersgill, R.A.

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THE HISTORY

OF

THE GREAT NORTHERN RAILWAY

1845–1902

BY

CHARLES H. GRINLING

A NEW ISSUE

WITH AN INTRODUCTION AND AN ADDITIONAL CHAPTER

METHUEN & CO.
36 ESSEX STREET W.C.
LONDON
1903

Taylor & Francis
Taylor & Francis Group
http://taylorandfrancis.com

PREFACE TO FIRST EDITION

IN writing this book my prime object has been to give a complete account of the origin and development of the Great Northern Railway Company from its inception to the year 1895, a period, roughly speaking, of fifty years. In so doing, however, I have necessarily had to give much information with regard to other railways of Northern England and Scotland, and so I am not afraid to claim that the book forms a fifty years' record of the fortunes of all the great trunk systems connecting London and the North—a record hardly any part of which has previously been presented to the public. The style of presentation I have adopted will, I hope, at once satisfy by its accuracy and thoroughness readers already acquainted with the subject-matter, and attract "the general reader" by its continuous thread of narrative and strong dramatic interest.

As regards the facts given, I have spared no pains to insure correctness and comprehensiveness. Without seeking access to the private archives of the Great Northern Company, and so placing myself under obligations which could have been met only by a sacrifice of my impartiality, I have, nevertheless, been able to obtain information of the most intimate and authentic character with respect to all the chief events with which my History deals. Moreover, I have had most valuable assistance, which I acknowledge with great gratitude, from a number of the men mentioned most prominently in my narrative. To Lord Grimthorpe, Lord Colville of Culross, K.T., Sir Henry Oakley, Mr. Richard Johnson, and Mr. Archibald Sturrock—the five men now living whose connection with the

Great Northern undertaking has been longest and most valuable—I beg most respectfully to tender my special thanks, and I also take this opportunity of making grateful acknowiedgment for the help rendered me by Mr. B. S. Brundell (whose very long connection with the Great Northern Railway has been terminated by death since I commenced this work), Mr. James Alexander, Mr. William Latta, Mr. Henry Walker, and my brother, Mr. W. J. Grinling. The numerous other officials of the Great Northern Company who have afforded me assistance will not, I hope, think that my appreciation of their kindnesses is less because I do not mention them by name.

It is very important that it should be clearly understood, however, that this work is not "official" in any sense of the word. For every fact given, and for every opinion expressed, I, the author, am alone responsible.

Finally, I dedicate what may be worthy in the work to the memory of my dear father, Mr. William Grinling, who served the Great Northern Company faithfully for over forty years.

CHARLES H. GRINLING

LONDON, 1898

INTRODUCTION TO A NEW ISSUE

THE new chapter covering the events of the history of the Great Northern Railway between the years 1895 and 1902, which I have added to this book in its new issue, embraces a critical period in British railway history. In no other period of similar length since the invention of railways have so many new influences been at work affecting their profitable conduct as business undertakings. The scheme of my "History," with its necessary subordination of the general to the particular, has not permitted that in the new chapter itself I should dwell at any length upon those events and movements which have made the turn of the century so memorable in railway annals. One is at present too close to these matters to judge how far their character is ephemeral and how far permanent. In a few years' time it will be possible to view them in their proper perspective and to give them their due place in the body of this narrative, should a further edition be called for. At present it seems wiser to say what I have to say on the railway question of the hour in an introductory chapter to this new issue.

The prevailing depression in the value of British railway property dates from the second half of the year 1899, and is attributable to two main causes—the coal "boom," which greatly increased the cost of working the lines; and the war, which contributed to the same result by its effect upon the labour market, but which has been far more serious in its influence on the money market, both depressing the prices of all stocks and making new capital difficult to raise. Neither

the money market nor the fuel market have yet fully recovered from these exceptional influences, but the practical certainty that they must do so in the long run is, in the language of the Stock Exchange, "a bull point for Home Rails." But, of course, it may be a long time before money and coal are simultaneously so cheap as they were in the years 1896 and 1897.

What has helped perhaps more than anything else to make people depressed about the future of the railway industry of this country is that its recent "bad times" synchronised with a period of great national prosperity, when almost every business, except that of "railroading" (as the Americans call it) was making increased profits. Prices were high all round, and a period of high prices is notoriously "good for trade." But the railway companies were left out in the cold for a very simple reason. Whilst everybody else was putting up prices against them, they were unable to raise their own prices against anyone. They were bound hand and foot by the Railway and Canal Traffic Act of 1894, perhaps the most uncommercial measure ever put upon the statute-book of a commercial country. The prosperity of the country about the year 1900 was such that a moderate increase in railway rates and charges could have been borne by almost all traders without hardship, and by the exuberantly prosperous coal trade without the very slightest inconvenience. The year 1872, as my "History" shows, was a similar year to 1900 as regards high prices for coal and all other railway materials, and also for labour. But in that year, as I record on page 280 of this work, the Great Northern dividend reached its high-water mark, whereas for 1900 it was practically at its lowest.

Why was it that the railway dividends were undiminished by the coal famine in 1872, but suffered so severely from the similar conditions of twenty-eight years later? The answer is, that the companies put up their rates at the earlier period, and so were able to participate in the general prosperity. In 1900 they wanted to do the same, but the Act of 1894 barred the

way. Not a rate could be raised without the liability of expensive and tedious litigation before the Court of Railway Commissioners. The Scotch companies tried it, and failed to convince the Commissioners that the increases they made were "reasonable" according to the artificial and arbitrary standard of "reasonableness" which that Court has set up. One hardly knows which is the more unjust to the railway shareholder—the provisions of the Act itself, or the way in which the Commissioners have interpreted its requirements.

All sorts of explanations have been given of the recent decline in railway dividends, but taking the Great Northern as a typical case, the cause of the shrinkage is simple enough. The chairman of the Company put the matter in a nutshell in one or two of his speeches, from which I quote in my new chapter. From causes beyond the control of the managements the cost of working suddenly increased, and the companies were powerless to act upon the ordinary commercial principle of meeting increased cost of production by putting a higher price on their product. When their charging powers were revised under the Act of 1888 a margin between the maximum and ruling rates was purposely left to meet just such a sudden rise in working expenditure as occurred in 1900; but at the beginning of 1893 the railway authorities were tempted by some of the less discreet amongst their number into using this margin in an uncalled-for way; the traders in panic flew to Parliament for relief, and the Act of 1894 was rushed through the Legislature. The effect of that Act has been practically to stereotype the rates in force in 1892 as the maximum charging powers of the companies. Thus, when the coal "boom" came they were powerless to cope with it. This is the simple story of the recent railway crisis, if crisis it can be called.

But it must not be supposed that the railway authorities sat still at this time of adversity, dozing with hands folded until the discontent of the shareholders, clamorously voiced by the news-

papers, compelled them to wake up. On this point I can claim some advantage for the treatment of railway matters by the historical method. One finds out in that way in what order events actually happened, and this is a very useful corrective after a period of heated controversy, wherein cause and effect are apt to become obscured. During the past two years we have heard a great deal about British railway companies "finding salvation" in American methods, and a group of people—including a rhetorical member of Parliament, an astute financier, and a writer in a weekly newspaper—have given the world, or such fraction of it as would listen to them, to understand that if they did not actually discover America over again, they were certainly the first persons to suggest that there were lessons for us to learn from American railways, which, if taken to heart, would prove a panacea for all the ills the railway shareholder was heir to. "Mark, now, how a plain tale shall put 'them' down!" In February, 1900, at least a year before the movement associated with the names of Messrs. Burdett-Coutts and Spens was either born or thought of, the question of the adoption of American methods was discussed at some length at a half-yearly meeting of the Great Northern Company. Then the chairman, Mr. Jackson (now Lord Allerton), made the statement on behalf of the Board (which I quote in my new chapter) that "this was not a new subject brought for the first time to their notice." It appeared that the chairman of the Lancashire and Yorkshire Company had already referred to the matter in one of his half-yearly addresses, and in answer to a shareholder who called his attention to this, Mr. Jackson gave the views of the Great Northern Board, which I have abridged in my chapter, but will quote in full here. He said:—"It is not necessary to have enormous waggons, and there are difficulties in detail with regard to them, and it is not very easy to see how those are to be overcome, having regard to the conditions prevailing in this country; but we are building heavier engines, putting larger boilers on our engines and work-

ing them at a higher pressure, which is equivalent to increased power; and our locomotive engineers are busily engaged in turning out heavier engines. I do hope in that direction we shall effect economies. Of course, it must be borne in mind that you must have not only heavier engines, but heavier train loads; and that depends upon the arrangements of the traffic department. The average, I am afraid, is sometimes reduced by what they call 'special trains,' which are of great urgency; but we are quite conscious of the great importance of the point Mr. Coltman has raised. I believe it is one of the most important that could be raised at a meeting of this kind."

With the exception of the question of "ton-mile" statistics, this utterance of the Great Northern chairman, made in February, 1900, covers in a succinct form the whole ground of the subsequent newspaper agitation in favour of American methods, and —what is still more noteworthy—it expresses the conclusions at which practically all competent observers, who have compared American with British conditions, have arrived. If any further evidence be needed that the Great Northern authorities —and again I would point out that the Great Northern is a typical English railway—have not been neglectful of the trend of progress towards improved methods of railway operation, it is to be found in the latest speech delivered by Lord Allerton—that which he made at the Company's half-yearly meeting on February 19th, 1903. This speech lies outside the period of my new chapter, so that it is the more desirable I should quote it here:—"We have heard a great deal lately about improved methods of working—about bigger engines, heavier loads, and larger waggons. The subject is not a new one for the Great Northern Board. We have been considering it for years. I have already mentioned that we have been replacing during the past few years every engine that has been broken up by one of larger type. We ordered some time ago a number of 30-ton waggons, and delivery of a portion of them we have already got. We are building a number of 20-ton waggons.* We have

* See illustrations on pp. 448-451.

enlarged the capacity of quite a considerable portion of our existing stock of waggons, and you see the beginning, at all events, of the operation of those causes in the half-year's accounts. But the question does not entirely rest with the railway companies. We have been doing our best for some time past to induce our traders to help us to introduce the economies which can be effected from the use of larger waggons. I have referred to the larger loads and the diminished miles, and in order to show you that we have been at work at it for some time, I would like to give you these figures, which are a comparison of the year 1899, when the train mileage had reached its maximum, with the year 1902. Compared with 1899, the gross engine miles (which include shunting and all the purposes other than train miles) for 1902 show a decrease of 2,117,000 miles. The train miles show a decrease of 1,341,659 miles. Notwithstanding that decrease of 1,300,000 train miles, our gross Great Northern earnings show an increase of £206,560. Now I think this is clear evidence that the efforts we have been making to improve the working have been carried out so far successfully by the officers throughout the service."

The compilation of ton-mile and passenger-mile statistics is a suggested measure of reform which the Great Northern authorities have not so far seen their way to adopt. Both the new general manager of the Company, Mr. Oliver Bury—who, by the way, is a relative of the Mr. Edward Bury mentioned in Chapters V. and VI. of this "History"—and its new accountant, Mr. Lewis Edwards, have had experience of this form of railway statistics in South America; and in the speech from which I have just quoted, the chairman, Lord Allerton, declared himself to be "an enthusiast for statistical information in connection with the railways for administrative purposes." But, as I put the matter in an article I contributed recently to the columns of *The Times*,* "Working as he must do a regular train service for goods as well as passengers—a service analogous in

* 20 February, 1903.

many respects to postal facilities—the English manager naturally derives his chief assistance in the direction of economy from his train-mile averages, coupled with the daily returns which he has sent to him from every station, showing the average waggon-loads. Ton-mile returns would in no wise increase the efficiency of this system of checking, for they would not be available for weeks after the event, whereas the actual waggon-loads are recorded daily, and average figures on this basis can be worked out in a few hours. If neither the habits of our traders nor the physical conditions of our lines can without prohibitive expense and inconvenience be modified to suit a wholesale system of railway transportation, where is the use of the companies going to the expense of compiling statistics, the lessons of which they know beforehand, but cannot put into practice?"

So "after all"—to return to Lord Allerton's speech of February, 1903—"statistics will not help you. The real remedy is closer union and more real disposition and willingness to work together, and to try, as Sir Alexander Henderson" (chairman of the Great Central Railway) "said, to 'put our horses together,' in order that we may pull a common load with the greatest ease to every company and to every shareholder in every company." Here we come down to the very bed-rock of the railway question. Taking the Great Northern once more as a typical British railway—though, perhaps, in this matter of the effects of competition it is an object-lesson rather than a type—we find that the dividend of this Company has steadily declined from seven per cent. in the "seventies" to about three-and-a-half per cent. at the present day. When all allowances have been made for mistakes of policy—and I have not attempted to shut my eyes to these in my new chapter any more than in the original book—one yet is compelled to seek for some more general cause, weighing with special heaviness upon the Great Northern, which has so continuously depressed the trend of its dividend. Undoubtedly that cause is

competition. The zenith of the Company's prosperity in 1872 synchronised with the time when the rivalry of the Midland's line to London first began to make itself felt, and as that competition became more and more acute the Great Northern dividend declined. Ten years later the Great Eastern got through to Yorkshire, Lancashire, and the North; and in yet another decade the Great Central line to London was sanctioned by Parliament; whilst all the time the London and North Western was encroaching from the same side. The Great Northern, as my "History" shows, was itself originally an invader of North Western and Midland territory; in fact, its promoters set the ball of railway competition rolling, and "those who play at bowls must expect rubbers." Nevertheless, competition when it exceeds a certain limit—hard to define—may do harm to those engaged in it without benefiting anyone else.

Co-operation—the other leading plank in the railway reform programme of the hour—is no new thing. It is as old as competition, and competition is as old as, and a little older than, the Great Northern, which was the first great competitive line. This "History," in fact, is to a large extent a record of the play of competition and co-operation between the great trunk lines to the north. Fifty years ago there was the same dread of "ruinous competition" amongst shareholders, and the same urgent call to the directors not to fight but to "co-operate," and so far as they could they responded to that demand. All this may be read in detail in Chapter VII. and the following chapters of this book. One might suppose, to hear some people talk, that the companies had done nothing all their lives but tear at one another's throats. On the contrary, I find the chief mistake of the Great Northern's policy to have been that during the last thirty years its attitude to its neighbours has been unduly pacific, particularly in respect to the construction of "joint" lines. The moral of its history seems to me to be that it is neither aggression nor co-operation which

suits best an undertaking hard-pressed by competitors, but simply "minding one's own business" and letting the others do their worst.

The vice of a competitive railway system from the point of view of railway policy is that it gives an exaggerated importance to those places which happen to be the centres of the rivalries of the lines. These, of course, are generally the places richest in traffic; but probably there are other fields which will better repay cultivation, and the railway policy that "pays" finds these out and keeps them to itself. The Great Northern had such a field in its London suburban district; but it allowed its suburban business to grow up haphazard, and spent on competitive extensions far from its own main line the money so badly wanted at the London end. On the other hand, the invasion of the Midland coalfield was a genuinely good stroke of Great Northern policy, which has always more than paid its way. As British railway enterprise is at present carried on, it is impossible to lay down any hard and fast rules as to when competition is or is not advisable in the interests of the shareholders. A certain amount of wastefulness is inherent in the system, however much the companies may mitigate this by their "pools" and traffic arrangements. The only real remedy for the evils of competition is monopoly, whether it take the form of a "Railway Trust" in private hands or the nationalisation of the lines. But probably the remedy would be worse than the disease.

A development that may bulk largely in future editions of this book is the conversion of the railways from steam to electric traction. At present this is quite in the experimental stage, and the Great Northern authorities have, at the time of writing, not announced any intention of taking a hand in the move. The change must of necessity be a very costly one, and the advantages are not absolutely clear, except in the case of the underground lines, where the importance of getting rid of smoke is paramount. When the Great Northern and City,

and Great Northern, Piccadilly and Brompton "tubes" are opened for traffic a great many of the suburban and short-distance passengers now carried between Finsbury Park and King's Cross by the Great Northern will be diverted underground; but it may be taken for granted that these lines will not stop at a "dead-end" at Finsbury Park, when the suburban districts beyond are crying out for better communication with the Metropolis. There is therefore a certainty of further developments in this quarter in the near future, and possibly it may take the form of the electrification of some of the Great Northern's suburban branches.

But it is no part of the province of this work to attempt to forecast the future. I am content to point out that the subject of my narrative tends to become of increasing, rather than diminishing, interest as the years go on, and to commend to my readers a study of its past, so that they may follow its future development with knowledge and with discernment. Few industrial undertakings have a higher record for probity in public service than has the Great Northern Railway Company. Those who have the present charge of its destinies cannot fail, as they read its history, to be inspired by the sentiment, *Noblesse oblige.*

CONTENTS

THE HISTORY

OF THE

GREAT NORTHERN RAILWAY

CHAPTER I.

IN THE REIGN OF KING HUDSON—ANCESTRY AND BIRTH OF THE HERO—1833-1844

THE Stockton and Darlington Railway, the pioneer of the public railways of the world, was opened, as every schoolboy should know, on 27 September, 1825, and about this same date, when the first short epidemic of "railway fever" prevailed, numerous surveys were made for similar undertakings in other parts of England. Amongst these was one made by the Messrs. Rennie for a line northwards from London, which they proposed should follow the valley of the Lea nearly as far as Ware, and thence pass by the valleys of the Rib and Quin and "the towns" of Braughing and Barkway to Cambridge. Here their original survey stopped, but in 1827 they extended it in a direct line northwards through Lincoln to York. By this time, however, the railway fever had quite subsided, having resulted in the incorporation of one important public company only—the Liverpool and Manchester, and it was not until the successful opening in September, 1830, of this, the first line constructed in England for the conveyance of passengers, that kindred projects again began to find favour. Then a proposal for a London and Birmingham Railway, also first made in 1825, was revived in the latter town, and, the services of George Stephenson and his son having been secured as engineers, a Bill for it was successfully passed through the House of Commons in the session of 1832. Being then thrown out in the Lords, it was revived in 1833, together with one for a Grand Junction Railway, which the Stephensons and Joseph Locke had in the meantime surveyed; and, these both passing into law in that year, a chain of railway communication became authorized from London, *viâ* Birmingham, to Manchester and Liverpool.

In 1833 also the London and Greenwich Railway was authorized, and schemes were set on foot for London and Essex, London and Dover, Grand Southern, London and Southampton, Great Western, and Grand Northern lines. The last-named was projected and surveyed by Mr. Nicholas Wilcox Cundy, and comprised a main line from London to York, *viâ* Bishop Stortford, Cambridge, Lincoln, Gainsborough and Selby, and branches to Norwich, Nottingham, Sheffield, Leeds, and Hull, the total length of the main line being 190 miles.

In York meanwhile a "Railway Committee" of the Corporation had been deliberating for twelve months already upon various plans for constructing a line from their city, and a young linen-draper, George Hudson by name, had produced considerable sensation by putting down his name for the greater part of the shares in a "York and West Riding" project. This he had favoured in preference to an alternative proposal for making a line from York to Doncaster, the advantages of which had been presented to the Committee by a deputation from the latter town consisting of Messrs. Edmund Denison and Robert Baxter.

In the neighbourhood of York a line from Leeds to Selby was already approaching completion, and in the Midlands, where the Leicester and Swannington coal line had been open since July, 1832, a project was making good progress for the construction of a Midland Counties Railway, "to connect the towns of Leicester, Nottingham, and Derby with each other and with London." Indeed, the Parliamentary notices for this were actually given in the autumn of 1833, but subsequently the Bill had to be withdrawn for lack of financial support. In the summer of 1834, however, the London and Southampton Railway, seventy-six miles in length, and several other smaller undertakings, were authorized, and this encouraged the promotion of a number of new schemes, several of which proposed to fill the blank still presented by the railway map on the eastern side of England.

In September, 1834, the prospectus was issued of the "Eastern Counties Railway—from London *viâ* Colchester to Norwich and Yarmouth," and about the same time Mr. James Walker (one of the engineers, it may be remembered, who had championed fixed engines against Stephenson's locomotives at the famous Rainhill trials, and who had since constructed the Leeds and Selby line) was employed by a party of gentlemen, headed by Mr. Handley, M.P. for Lincolnshire, to survey a Northern and Eastern Railway from London to York and Norwich. Early in 1835, too, Mr. Joseph Gibbs, a clever and sanguine engineer, who had made a considerable reputation in drainage works, projected a line to start from Whitechapel, London, and to run *viâ* Dunmow, Cambridge, Sleaford, and Lincoln to York,

and this was submitted in the summer of 1835 to a Committee formed in London, to which the title of "Great Northern Railway Company" was provisionally given.

The second epidemic of railway fever was now raging, and all parts of the country were scenes of activity in railway projection. The London and Birmingham directors had made up their minds that it was desirable to extend the communication by their line north-eastwards as well as north-westwards, and so, on their behalf and that of local parties in the Midlands and in Yorkshire, George Stephenson was surveying lines from Birmingham to Derby, and Derby to Leeds, the former to be in connection not only with the London and Birmingham, but also with a projected line from Birmingham to Gloucester. At the same time, too, Mr. Vignoles was making a new survey for the Midland Counties line, which was also to connect with the London and Birmingham, viz., at Rugby; while the Railway Committee at York, with George Hudson as its leading spirit, having abandoned their projected West Riding line because of the difficult character of the country, were debating whether they should join with the Northern and Eastern or the Great Northern parties in promoting a direct line through the flats of Lincolnshire to the Metropolis.

It chanced, however, that Hudson paid a visit to Whitby during this summer of 1835, and there secured an introduction to George Stephenson, who happened also to be visiting that place. Then the York draper learnt something of the surveys which the engineer had already in hand for carrying a chain of railways from London to Leeds, and on his return to his native town he advised his Committee that before they pledged themselves either to Gibbs' or Walker's plans, the advice of Stephenson should be called in. The result was that they decided, instead of joining in the promotion of a new direct railway to London, to content themselves with the much smaller, and therefore much more easily practicable, scheme of a link line from York to connect with the Derby and Leeds at Normanton, and, as the latter had now been christened the North Midland Railway, the new project of the York Committee received the appropriate title of the York and North Midland. At the same time a Great North of England Railway Company was formed to carry on the chain of communication from York to Newcastle.

Bills for all the lines above mentioned came before Parliament in the session of 1836, when they all met with some measure of success, except that of Mr. Gibbs. He was a really able engineer, and his "report to the York and Norwich Committee of the Great Northern Railway Company," which is still extant, shows that he conceived his

project in an enlightened and far-sighted spirit. But full of its national importance, he took no pains to conciliate private interests, and he had also to meet the hostility of the strong party who were supporting the rival Northern and Eastern scheme. The result was that his "Great Northern Railway Bill," being opposed by landowners on second reading in the House of Commons, was then summarily rejected by ninety-nine votes to eighty-five.

The Northern and Eastern Bill, on the other hand, was referred, without opposition, to a Committee, and before this Mr. Gibbs also was allowed to appear to explain the merits of his alternative project; but both parties found themselves strongly opposed by the London and Birmingham and Midland interests, the representatives of which claimed that their united undertakings would provide a route amply convenient for the through passenger to York and the North. This view, backed as it was by the great authority of George Stephenson, prevailed, with the result that the Midland Counties, Birmingham and Derby, North Midland and York, and North Midland Bills all passed; while the Northern and Eastern was cut down into a line from London to Cambridge only. The Eastern Counties Bill having no pretensions to provide a trunk line to the North, but proposing simply to connect London with Colchester, Norwich, Yarmouth, and the adjacent country, was allowed to pass in its complete form as promoted.

In 1837 the mania for railway construction gave way to panic—in modern slang, a "slump" followed the "boom"—and even the companies which had obtained powers found it hard to get their undertakings realized. In 1838, however, the London and Birmingham line was opened, and in the following year, by way of the Grand Junction and North Union, through communication north-westwards from the Metropolis was established as far as Preston; so that one night in September of that year Thomas and Jane Welsh Carlyle, returning home from Scotsbrig, were able to take a train at Preston, and, after "an excellent breakfast with deliberation to eat it" at Birmingham, were "safe landed at Euston Square soon after one o'clock." In the same year, too, the Midland and Counties, Birmingham and Derby, and York and North Midland lines were all opened, and the North Midland, though a line through very difficult country, was completed by the Stephensons in the spring of 1840. So, on the 1st of July in that year, Hudson, who in the meantime had become Lord Mayor of York, had the satisfaction to see the first passengers leave York Station for a through journey by rail to London, their route being by Normanton, Derby, and Rugby, at each of which places a change of train had to be made, and the total distance being 219 miles.

Meanwhile the question how best to carry the chain of communication further northwards into Scotland was being hotly discussed, and the terms "East Coast," "West Coast," and "Inland" routes had already become familiar. The Great North of England Railway Company had been compelled by financial difficulties to cut down its undertaking to a line from York to join the Stockton and Darlington at Croft Bridge, but George Hudson hoped that this, with the York and North Midland, would eventually become the trunk line from London to Newcastle and Edinburgh.

As things were, however, the Scotch traffic was leaving the York road to go by Birmingham to Preston, and thence by boat or coach *viâ* Kendal; moreover, a line was nearly completed from Preston to Lancaster, and several routes had been surveyed for carrying this on through Carlisle to Glasgow and Edinburgh. Railway projection elsewhere was now entirely at a standstill, but so keen was the interest in this subject of "communication with Scotland" that in August, 1839, a special Commission of the Board of Trade was appointed to consider it. The Commissioners were instructed not only to compare the merits of the routes north of York and Lancaster, but to include in their report "the relative merits of the two lines from London to York by Derby and Rotherham and by Cambridge and Lincoln." Thus the question of a "Great Northern Railway" once more came to the front.

Mr. James Walker had now ceased to be the Northern and Eastern engineer, but in reply to an invitation from the Commissioners he sent in plans showing the extension he had formerly proposed of that line northwards from Bishop Stortford through Peterborough and Lincoln to York. Mr. Gibbs, who had meantime been busy constructing the London and Croydon Line, also received an invitation to send plans, and this time he abandoned his "Dunmow route" and adopted what the Commissioners described as "a modification of the Barkway route," originally proposed by Rennie, as far as Cambridge, and thence by Sleaford and Lincoln to York as before. The total distance by Gibbs' route was 185 miles; by Walker's, 193 miles.

The Commissioners, however, did not find it necessary to weigh the respective merits of these two routes very carefully, because they came to the conclusion that neither of them should as yet be made.

"If this subject were now brought forward for the first time," they said in their report (which was not published till March, 1841), "and the relative merits of the existing line by Derby and Rotherham were to be weighed against the proposed route by Cambridge and Lincoln, we should have no hesitation after a full consideration of the properties of both in awarding the preference to the latter as a main trunk line; but

as the former has been completed and has at this time by no means an overwhelming traffic, it does not appear to us it would be expedient to construct at the cost of probably more than four millions another line passing by Cambridge and Lincoln merely for the sake of shortening the distance for the through passenger to York and to the north of that city. Looking, however, to the highly productive district to the eastward of the Derby and Rotherham line wholly unprovided with railways, and the unusually favourable character of the country for their construction, we are of opinion that the period is not far distant when a new line will be formed, passing near Cambridge, Peterborough, and Lincoln, and that this line will in all probability be combined of parts selected from the different projects which have at various times been brought forward."

On the respective merits of the East Coast and West Coast routes between the north of England and Scotland the report of the Commissioners was of an equally non-committal character. In the belief that at present one line of railway only could be formed between the two countries they felt "bound to give the preference to that from Carlisle by Lockerbie, Beattock, Lanark, and Hamilton to Glasgow, with a branch from Thankerton, or Symington, to Edinburgh," but they noted so many points in favour of the rival East Coast route through Darlington, Newcastle, and Berwick, that George Hudson was not in the least afraid to refer to their report when (on 30 April, 1841) he presided over a meeting of representatives of six neighbouring railway companies, which he had summoned at Newcastle to consider what steps could be taken to carry on the Great North of England line. Thanks to the enterprise of Sir Hesketh Fleetwood in developing the port which bears his name, "West Coast" passengers could now leave Euston at daybreak, and, travelling by railway *viâ* Birmingham and Preston and by "a noble steamer" from Fleetwood to Ardrossan, could reach Glasgow by the Ayr railway, and even Edinburgh by coach, in time for breakfast the next morning. So the necessity for improving the rival "East Coast Route" had become urgent, unless it was to be deprived of the most profitable part of the through traffic with Scotland. The difficulty was, however, that except Hudson and the Stephensons, who were keenly interested in making a line to Edinburgh by Newcastle and Berwick, and Joseph Locke, whose mind was set on making the railway he had already more than once surveyed from Carlisle northwards, there were very few people at this time who really thought it worth while to establish through railway communication with Scotland at all. "What more can any reasonable man want?" asked the *Railway Times*, after pointing out the wonders of the new Fleetwood service. "If he were to travel the whole way by rail at

the rate of twenty miles an hour, he could but arrive two or three hours earlier, before breakfast was ready or anyone up to bid him welcome."

When even the organ of the railway interest could talk in this strain, it will be inferred that in 1841 zeal for railway extension had sunk to a very low ebb. In the session of 1840 not a single railway Bill had been passed, and in 1841 one only, and that for a short branch line; and the general impression was that when the lines then in course of construction were completed the railway system of the country would

GREAT NORTH OF ENGLAND RAILWAY TIME TABLE.

The hours of Arrival and Departure are published monthly in Bradshaw's Railway Time Tables, No. 27, Brown-street, Manchester, price 3d

Corrected to JULY 1st, 1841.

STATIONS.	SOUTH TRAINS. (DARLINGTON TO YORK.)					Sundays
	1	2	3	4	5	6
	a.m.	a.m.	p.m.	COACH	p.m.	COACH
Coaches leave NEWCASTLE	....	5·15	7·15	10·45 WAIT. 11·30	1·30	10·45 WAIT. 11·30
Trains leave DARLINGTON	6·15	9·30	12·45	3·30	6·0	3·30
Croft	...	9·36	12·51	3·40	6·6	3·40
Cowton	6·30	9·51	1·6	3·52	6·21	3·52
NORTHALLERTON	6·48	10·11	1·26	4·10	6·41	4·10
THIRSK	7·8	10·33	1·48	4·30	7·3	4·30
ALNE, for Easingwold	7·36	11·3	2·18	4·58	7·33	4·58
Shipton	7·51	11·20	2·35	....	7·50	....
Arrive at YORK	8·15	11·45	3·0	5·37	8·15	5·37
HULL	p.m. 12·15	....	6·50	10.5	....	....
MANCHESTER	1·0	p.m. 4·40	....	10·0	....	10·0
LEEDS	a.m. 11·0	2·30	5·0	8·30	....	8·30
NORMANTON	9·55	1·25	4·46	7·29	....	7·29
ECKINGTON	....	2·55	....	....	....	....
SHEFFIELD	11·15	2·45	6·30	8·45	....	8·45
DERBY	p.m. 12·45	4·15	8·30	10·9	....	10·9
NOTTINGHAM	2·15	5·15	9·35	....	....	....
LEICESTER	2·40	6·0	10·10	12·0	....	12·0
BIRMINGHAM	4·30	6·45	....	a.m. 1·0	....	a.m. 1·0
LONDON	7·45	11·15	....	5·0	....	5·0

STATIONS.	NORTH TRAINS. (YORK TO DARLINGTON.)							Sundays
	1	2	3	4	5	6	7	8
Trains leave		MAIL.	....	....	....	a.m. 6·0	p.m. 4.15	p.m. 4·0
BIRMINGHAM	This Train runs on Mondays only.	a.m. 12·40	....	....	a.m. 6·45	10·15	p.m. 1·0	a.m. 12·40
LEICESTER		1·24	....	....	7·45	10·35	1·45	1·24
NOTTINGHAM		....	....	....	7·30	10·50	2·30	....
DERBY		3·19	....	....	9·30	p.m. 12·45	3·30	3·19
SHEFFIELD		....	a.m. 6·0	....	10·45	1·50	4·30	....
NORMANTON		5·44	7·26	....	p.m. 12·26	3·14	6·0	5·44
LEEDS		....	7·25	a.m. 9·30	1·35	3·30	....	....
MANCHESTER		....	....	7·0	a.m. 11·30	....	....	....
SOWERBY BRIDGE		....	6·20	....		....	....	....
HULL		....	6·0	8·9	....	2·0	....	....
YORK	a.m. 5·0	7·20	9·30	11·30	p.m. 3·30	5·0	8·15	7·20
Shipton	5·17	....	9·45	11·45	3·45	5·12	....	....
ALNE, for Easingwold	5·36	7·46	10·2	p.m. 12·2	4·2	5·26	8·41	7·46
THIRSK	6·10	8·14	10·33	12·33	4·33	5·54	9·9	8·14
NORTHALLERTON	6·36	8·35	10·56	12·56	4·56	6·15	9·30	8·35
Cowton	7·0	8·54	11·17	1·17	5·17	6·34	9·49	8·54
Croft	7·13	....	11·29	1·29	5·29	6·45	....	....
Arrive at DARLINGTON	7·30	9·20	11·45	1.45	5·45	7·0	10.15	9·20
THENCE BY COACH Arriving at NEWCASTLE	....	p.m. 1·20	p.m. 3·30	5·30	9·30	11·0	....	p.m. 1·20

First and Second Class Carriages are attached to all Trains; and Third Class Carriages to Nos. 1, 3, and 5, North Trains, and to Nos. 2 and 5, South Trains.
Time is allowed at York for refreshment at the Station.

No Table of a previous date can be depended on.

not only be finished, but would even be in excess of profitable operation. Special objection was taken to the two parallel west and east lines, the Manchester and Leeds, and the Manchester and Sheffield, which had been sanctioned like nearly all the other larger schemes during the "mania" of 1836–7, and as the former was now open to a junction with the North Midland and York and North Midland at Normanton, many people were disposed to doubt whether it was worth while to finish the latter at all. Meanwhile, with the opening of the Great North of England from York to Croft Bridge, a considerable improvement was made in the communication north and south, and from 1 July, 1841, a time-table was published, of which we reproduce a part in facsimile, which showed a through communication between

London and Newcastle in seventeen hours, the route being by rail throughout from Euston Square to Darlington and thence northwards by coach.

Even this, however, was far from satisfying George Hudson, and in September, 1841, he called another conference of neighbouring railway directors at Newcastle, with the result that in the following month an arrangement was come to, by which six companies undertook to lease the Great North of England at a 6 per cent. guarantee, and to find the money for carrying the line northwards through Durham to Gateshead. A Bill for this was accordingly deposited under the title of the "Darlington and Newcastle Junction Railway" in November, 1841, and Hudson became chairman of the new company, when it was incorporated on the 18th of June of the following year. The terminus was to be at Gateshead, because a bridge over the Tyne was considered too onerous an undertaking at present. Indeed, it was not thought likely that either this or the completion of the West Coast route, for which Joseph Locke was now making a new survey, would ever be carried out, except by Government aid.

Not only were very few new companies formed at this time, but the existing ones were generally afraid or unable to make tributary branches. Thus the North Midland Company was urged by Robert Stephenson in 1842 to make a short line from Swinton or Wath to serve the South Yorkshire coal-field, and give a railway communication to Barnsley and Doncaster, but the directors could not make up their minds that such an extension would be profitable; and, when the London and Birmingham Company did venture to project a branch—from Blisworth to Northampton and Peterborough—so strong was the feeling of the landowners against it that it was carried through the House of Lords in 1843 by a majority of one vote only. Meanwhile moralists in search of an argument against excessive railway construction could point to the experience of the Midland Counties and Birmingham and Derby Companies, a rate-war between which for London traffic was being carried on with such vigour that the directors of the former had recourse, in the summer of 1843, to a *mandamus* from the Queen's Bench to compel the Birmingham and Derby Company to equalize its fares. In this, the first "war" of its kind in English railway history, Mr. James Allport, manager for the Birmingham and Gloucester Railway at Hampton Junction, played a leading part.

This was the condition of affairs between these two companies, when the directors of the North Midland—the line which carried the traffic of both northwards from Derby—suggested an amalgamation under one management of the three railways radiating from that town. The

originator of the proposition was George Hudson, who had joined the North Midland directorate early in this year, 1843, after taking the leading part on a committee of inquiry into its affairs; and the reforms he had then introduced had so much enhanced his already great reputation, that he was now able easily to persuade the shareholders of the three companies to agree to this "Great Midland Amalgamation," a Bill for which was accordingly deposited for the session of 1844. The man who ten years before had been an obscure linen-draper at York, was now freely spoken of as "the Railway Napoleon."

During this autumn of 1843 the money market in London was in a remarkably easy state. The amount of bullion in the Bank, which two years before had been as low as four and a half millions, had trebled itself in amount. The rate of discount was $2\frac{1}{2}$ per cent., and Consols were above par. Money was very abundant, and the investments in foreign securities, in which it had until recently found full employment, had suddenly become extremely unpopular owing to "repudiations" on the part of several South American States. Hitherto the London brokers had left railway shares severely alone, and the lines so far constructed in England had been promoted not by financiers, but by solid commercial men—bankers, manufacturers, and merchants—who were interested in them, not as investments primarily, but as likely to improve trade in general, and their own businesses in particular. But, now that other fields of investment was proving unfruitful, the attention of "the City" began to turn to railway promotion; it was discovered to be a branch of speculative finance from which 10 per cent. dividends might be hopefully expected—for were not the London and Birmingham, Grand Junction and York, and North Midland paying this, and the Stockton and Darlington 15 per cent. ?—and so, all at once as it seemed, a condition of most intense apathy in regard to railway projection gave way to one of keen interest, rapidly passing through enthusiasm to a new and overpowering mania.

City men who studied the railway map of England in the autumn of 1843, could not fail to be struck by the fact that there was an immense blank as yet unreached by rails on the eastern side of England. The Eastern Counties line had now got as far as Colchester, and the Northern and Eastern to Bishop Stortford, but northwards of these places, throughout the counties of Huntingdonshire, Cambridgeshire, Norfolk, and Lincolnshire, there was not a yard of railway laid down from the Ouse to the Humber, and the only new line authorized to come near this district was the London and Birmingham branch, from Blisworth to Peterborough. On the map, therefore, there seemed ample room for a new trunk line between London and York, which would not

only give the local accommodation, but form part of a through route to Darlington, Durham, Newcastle, and Scotland; and so it came about that in the later months of 1843 a committee was formed in London, of which Major William Amsinck and Mr. James Farquhar, of the firm of Messrs. Johnston, Farquhar, and Leech, solicitors, were the leading

MAP OF THE RAILWAY SYSTEM BETWEEN LONDON AND YORK IN 1843.

Reproduced from "Bradshaw's Guide," by permission of Messrs. Henry Blacklock & Co., Manchester.

spirits, to promote a "Direct Northern" railway, for which Sir John Rennie—who, as we know, had already plans for a line from London to York on his office shelves—and Mr. Gravatt were instructed to make a survey.

But the success of railways had not only changed the attitude of the City, it had changed that of the landed interest also; and so, during the winter

of 1843-4, a strong desire arose among the landowners and farmers of the eastern counties to secure some of the benefits which other districts were enjoying from the new method of locomotion. One great want of this part of England—a want which was, of course, most keenly felt in the winter months—was that of cheaper fuel; for though there were collieries open at this time in Leicestershire, Nottinghamshire, and Derbyshire, the nearest pits with which the eastern counties had practicable transport communication were those of South Yorkshire and Durham, and this was of so circuitous a character, that even in places situated on navigable rivers or served by a canal, the price of coal often rose as high as 40*s.*, or even 50*s.*, a ton. In remoter places, to which it had to be carted ten, twenty, or even thirty miles along bad cross-roads, coal even for house-firing was a positive luxury quite unattainable by the poorer classes. Moreover, in the most severe weather when the canals were frozen, the whole system of supply became paralyzed, and even the wealthy had not seldom to retreat shivering to bed for lack of fuel.

This state of things was, of course, stoically borne, while there appeared no remedy for it; but in 1843, when the railway system was firmly established and praise of it began to be on every lip and in every newspaper, even the slow-moving inhabitants of Lincolnshire and the neighbouring counties began to take interest in railway promotion. Naturally enough, one of the first expedients which suggested itself was to seek assistance from "the Railway King," and so in February, 1844, Sir John Beckett, of Gainsborough, wrote formally to George Hudson, suggesting on behalf of himself and some of his neighbours that the North Midland Company should make a branch to their town. About the same time Sir Isaac Morley, an influential resident of Doncaster, came into communication for a similar object with Captain Laws, the energetic manager of the Manchester and Leeds Company; while a party of merchants trading in Sheffield, Worksop, and Retford projected yet a third west to east line to run to Gainsborough and Lincoln in connection with the Manchester and Sheffield Railway, which was now at last approaching completion. Meanwhile the larger landowners of Lincolnshire, the Earl of Winchilsea, the Earl of Yarborough, Earl Fitzwilliam, and Mr. Charles Chaplin of Blankney, were taking more interest in getting a north and south line through the county, and for this two projects were set on foot, the one suggested to Earl Fitzwilliam by an enterprising engineer named Rendel, and the other fathered by a committee, of which Mr. Chaplin was the leading spirit, and for which Mr. James Walker was persuaded rather reluctantly to re-survey his line of 1835. Moreover, Walker's former rival, Mr. Gibbs, also took

the field again, and in this month of February, 1844, when all the above schemes seem first to have taken definite shape, he showed his "Great Northern" plans to a number of gentlemen, including Mr. Francis Mowatt, an East Indian director, and Mr. Edmund Denison, of Doncaster, M.P. for the West Riding of Yorkshire. The latter gentleman, as we have already noted, had twelve years before advocated a line from York to Doncaster as an instalment of a through route to London down the eastern side of England, and he now promised to support Mr. Gibbs' "Great Northern Railway," provided it was brought rather more to the west, so that his constituents in the West Riding and his neighbours at Doncaster might be better served by it.

In the year 1837, when England was suffering, as we have already noted, from the reaction from the first epidemic of "railway mania," stringent regulations against the promotion of bubble companies were adopted by Parliament. The chief of these were that a *bonâ fide* "subscription contract" must be proved by the promoters, and that one-tenth of the capital required must be deposited with Government authorities at the same time that the Bill for incorporation was presented to Parliament. This, of course, made it necessary for every new railway scheme to obtain very respectable support before its promoters could hope to pass the Standing Orders Committee, and indeed it had been one of the prime causes of the stagnation in railway promotion, which we have noted as prevailing in the years 1838 to 1843. Even in the spring of 1844—a "spring" when the fancy of investors all over the country was "lightly turning" to thoughts of railway speculation—the heavy deposit required was thought to press very heavily upon quite honest projectors. At any rate it compelled them to go to considerable expense in advertising their schemes in the newspapers and through the post, in order that they might obtain the signatures of intending shareholders, to whom "scrip," *i.e.*, the title deeds to shares when the company was incorporated—was issued in return for the 10 per cent. deposit preliminarily required.

Of the group of Lincolnshire projects just noticed the first to be put before the public was that fathered by Captain Laws and Sir Isaac Morley—the Wakefield and Lincoln, the prospectus of which appeared on 19 February, 1844. This was quickly followed on 22 February by that of Mr. Walker's resurrected line, now christened the Cambridge and York, the Provisional Committee of which included the Earl of Winchilsea, Mr. Chaplin, and Mr. George Hussey Packe, of Caythorpe, near Grantham. Proposing as it did to

complete a second through route between London and the north in connection with the Northern and Eastern Railway, this project aroused instant opposition from the established companies, and in its issue of 2 March the *Railway Times* declared it to be its duty to them to "protest against and denounce this newest of reckless speculations and all concerned in its concoction." Immediately, also, the Midland directors woke up to the necessity of meeting actively the new competition which threatened them, and on 5 March the North Midland Board—the Amalgamation Bill was not yet passed, and so each of the three Derby companies still carried on its affairs separately—decided to promote a branch from their railway at Swinton to Doncaster, Gainsborough, and Lincoln, as proposed to Mr. Hudson by Sir John Beckett and other parties. Shortly afterwards the Midland Counties Board decided to make a branch in the same direction from Nottingham, passing through Newark to Lincoln, and these were advertised together as the "Lincolnshire Junction Railways," with Mr. Robert Stephenson as engineer.

Meantime, on 7 March, the prospectus of the Sheffield and Lincoln Railway had been published, and on the 13th of the same month the Northern and Eastern and Eastern Counties Boards, which, thanks mainly to the exertions of Mr. George Parker Bidder, were just on the verge of being amalgamated into one interest, decided to promote an extension to Lincoln "in such direction as would best serve the important towns and ports of Wisbeach, Spalding, and Boston." Next, on 4 April, Major Amsinck issued a map and prospectus of the "Direct Northern Railway," surveyed by Sir John Rennie and Mr. Gravatt—"a line to commence near King's Cross and pass through Chipping Barnet, Biggleswade, St. Neots, Huntingdon, and Peterborough to Lincoln, and thence by Gainsborough, Thorne, Snaith, and Selby to York," and this on 15 April obtained wide notoriety by being prominently referred to in the "money article" of the *Times*. Finally, on 17 April, the advertisement columns of the same newspaper contained the preliminary notice of Mr. Gibbs' revived and modified project, headed:

"GREAT NORTHERN RAILWAY.

"From London to York, through Hitchin, Biggleswade, Huntingdon, Stamford, Grantham, Newark, Gainsborough, and Doncaster, joining the Leeds and Selby and York and North Midland Railways near South Milford, with branch lines to Bedford and Lincoln, and a junction with the Manchester and Sheffield Railway."

The notice stated that "a detailed prospectus with names of the Provisional Committee" would be ready in a few days, and that in the

meantime further information might be obtained on application to Messrs. Baxter, Rose, and Norton, solicitors, 50, Mark Lane, London.

Thus by the middle of April there were four north and south and three west and east lines in the field, every one of which proposed to enter Lincolnshire; and thus "threatened," as a contemporary writer put it, "with no less than seven different lines of railroad, with all the infernal machinery connected therewith," it was no wonder that the people of Lincoln became excited and full of party feeling on behalf of one or other of the projects. Probably because it had been first in the field, the Wakefield and Lincoln became the most popular line, securing a vote of the Town Council in its favour; and early in April its promoters still further improved their position by announcing their intention to extend their railway along the banks of the Witham to Boston, where they talked of making a junction with one of the Eastern Counties extension lines. Seeing that a large number of Lincoln people were shareholders in the Witham Navigation (which connects the city with the Wash, and was in 1844 by far its most important channel of conveyance), this proposal to construct a parallel, competitive railway would, if it had stood by itself, have been a most unpopular one; but the Wakefield promoters boldly disarmed opposition, and at the same time enlisted new support, by arranging a union of interests with the Navigation Company, under which the shareholders in the latter were guaranteed a permanent 6 per cent. dividend, while at the same time the public were promised a reduction of the water tolls. A similar arrangement was also made with Mr. Richard Ellison, the proprietor of the Fossdyke, another canal which connects Lincoln with the Trent at Gainsborough, while the canal interests, on their part, undertook to give land for the construction of the railway, which for the greater part of its course from Gainsborough was to be constructed along their banks.

Meanwhile the public announcement of the Direct Northern and Great Northern projects had had an immediate effect upon the councils of the Cambridge and York, and on 16 April—the day after the Direct Northern was noticed in the *Times*—they had passed a resolution intimating that a continuance of their line to London through Peterborough might become desirable. It was "urged" on them—so they explained afterwards—"by the northern interests that the public should not be subjected to the fifteen miles additional distance involved in the Cambridge route, when a more direct route through the centre of Hertfordshire, Bedfordshire, and Huntingdonshire could be obtained," and moreover, Mr. Whitbread of Bedford, who had now joined the Committee, had pointed out that

local railway accommodation was badly needed in these counties. So on 23 April, Mr. Walker was definitely requested to continue his surveys right through to London. This important move soon became known to the Eastern Counties directors, with the result that they, having failed to effect a union with the Wakefield and Lincoln party, instructed Robert Stephenson, on 30 April, to continue his northward survey to Gainsborough and Doncaster. Thus there were now four schemes in the field for complete north and south trunk lines.

On 3 May, 1844, the first prospectus of the "London and York Railway" was issued. It stated that Mr. Walker had recommended that "the line of railway should commence at London, near King's Cross, and proceed in the direction of Barnet, Hatfield, Hitchin, Biggleswade, St. Neots, and Huntingdon to Peterborough, where it would join the line originally projected between Cambridge and York," and this new line, the prospectus added, had "the hearty concurrence and support" of the landowners affected. In evidence of this the Committee list now published included among many other new names those of Wm. Astell, M.P. for Beds, an East Indian director, his son Mr. John Harvey Astell, the Hon. O. Duncombe, of St. Neots, M.P. for the North Riding of Yorkshire, and Mr. Francis Pym, of the Hazells, Beds. This new and more formidable development of the scheme did not, of course, lessen in any degree the hostility already provoked towards it, and the duty it had imposed upon itself of denouncing the "wild project" was once more cheerfully taken in hand by the *Railway Times*. "Was it because the undertaking was not huge enough for public support," it asked, "that Cambridge as a starting point had been dropped—that seat of learned travellers deserted—the large traffic of taking students to and from the colleges removed from the table of estimates, and despised in comparison to proceeding direct to so celebrated and extensive a city as St. Neots." This addition to the original scheme of "fifty miles more of railway, with a new terminus into London through some 100 furlongs of house property, was," it declared, "a further sign of the extraordinary caution exercised" in bringing out the scheme, and the public might next expect to hear that York Minster had been "scheduled for removal to make room for a proper station" at the northern end.

Meanwhile the promised "detailed prospectus" of the "Great Northern" line did not appear, and the reason was that, almost immediately after its preliminary notice had been made public, the Cambridge and York—now London and York—Committee had appointed a deputation of their body to endeavour to arrange a union with the other parties of promoters who were occupying the

same field. The result was that, on 17 May, a conference was held at the offices of the London and York solicitors in Parliament Street, Westminster, at which the Earl of Winchilsea, the Hon. O. Duncombe, Messrs. J. H. Astell, Chas. Chaplin, G. H. Packe and others represented the London and York Committee, and Messrs. Edmund Denison and Francis Mowatt the Great Northern. At this meeting a resolution was unanimously passed that the two committees should unite, and "that the efforts of all should be exerted to form a railway between London and York, to be called the 'London and York Railway,'" and at the next meeting of the London and York General Committee on 7 June, Messrs. Denison and Mowatt attended, and the former spoke "in highly laudatory terms" of the united undertaking. Thus the separate "Great Northern" project was dropped, and the name vanishes for a time from these pages. The Direct Northern party, however, still preferred to remain independent, claiming that their project had been first in the field, and on 18 May—the very day when the union of the London and York and Great Northern was announced in the press—Major Amsinck issued a counter advertisement announcing that Sir John Rennie and Mr. Gravatt had completed their surveys, and that a committee was being formed to carry out the railway they recommended, which would "form the most direct line between London and York."

Five days later—23 May—the titular "London and York" Committee sustained a loss by the resignation of their engineer, Mr. James Walker, who had found that the task of surveying and constructing a complete trunk line to the north was incompatible with his many other engagements. Thus the "Committee of Direction," which was now formed as a delegation from the General Committee, with Mr. William Astell, M.P., as chairman, and Messrs. Edmund Denison, M.P., and Francis Mowatt as vice-chairmen, had as its first duty to choose a new engineer for their combined and reconstituted undertaking. For this position the most obvious claimant was Mr. Gibbs; but the committee appear to have thought that for an undertaking of such magnitude a chief engineer of acknowledged eminence was required, and with this view a deputation was sent to Mr. Joseph Locke to ask him to undertake the work. The invitation was a tempting one to a man of ambition like Locke; but under ordinary circumstances he would probably have at least hesitated to accept it, because as engineer to the Grand Junction Company and projector of the just christened "Caledonian Railway," he had prior interests and engagements which it would obviously not be easy to reconcile with the position of engineer to the new eastern trunk line. But it happened that just at this time the Boards of the

Grand Junction and London and Birmingham Companies were at loggerheads, and so the former seem actually to have encouraged their engineer to take up the new enterprise, because it was likely to prove a formidable rival to Euston Square. However this may be, Mr. Joseph Locke did accept the invitation, and at once threw himself into the London and York plans with great energy.

On 11 June a new prospectus of the undertaking appeared, headed by a list of names "unequalled," according to *Herapath's Railway Journal*, "for extent and respectability," and it at once created an "extraordinary degree of sensation" (though at this time new railway prospectuses were appearing almost daily), for no new company, it was averred, had ever come out with such strength as this before. The prospectus stated that the two main objects of the undertaking were to shorten the distance between London and the northern parts of the kingdom, and to connect a population of one and a half million in Yorkshire with a population in London of about equal amount. The facilities to be provided for the transmission of corn, malt, flour, cattle, and wool were enlarged upon, and it was pointed out that Yorkshire, Derbyshire, and Nottinghamshire coals, Yorkshire manufactures and London goods would "find a ready market along the whole line." "The railway," said the prospectus further, "will give the farmers and graziers in the counties of Nottingham, Lincoln, Northampton, Bedford, and Hertford daily opportunities of sending their fat cattle to Smithfield in a few hours without the great loss now invariably sustained by travelling for days together on a turnpike road," and "the market gardeners of Biggleswade will be enabled to send their produce fresh to the London market in about two hours." A few days later an elaborate "first estimate of income" appeared in the newspapers, compiled by Mr. Robert Baxter, a solicitor of Doncaster, who, it may be remembered, had accompanied Mr. Denison on his deputation from that town to the York Railway Committee twelve years before; and this purported to prove that the traffic would from the first be sufficient to pay a dividend of "upwards of 9 per cent." on £4,500,000 —the amount of capital asked for. "In the language of Dominie Sampson," said the *Railway Times*, "and almost bursting with excitement, we can only say 'Prodigious!'"

Meanwhile, the Midland Amalgamation Bill had received the Royal assent, and at the first meeting of the united Boards, which was held early in June, Mr. Hudson had been, as a matter of course, elected chairman of the new "Midland Railway Company." This had extended the dominions of the York monarch southwards as far as Rugby; and, northwards, he had just become chairman of a newly-

incorporated Leeds and Bradford Company, the practical object of which was to extend the Midland rails to the latter town. He was also on the Provisional Committee of the North British Railway, from Berwick to Edinburgh, the Bill for which had just passed the Commons after a hard fight; and, if this passed the Lords—as it was almost sure to do—only the link between Gateshead and Berwick would remain to be authorized to make the "East Coast Route" from York to Edinburgh complete. Meantime the works of the Newcastle and Darlington Junction Railway had been pressed on with extraordinary vigour, and by the middle of this June—a full fortnight before Hudson had promised—the twenty-seven miles of new line from Darlington to Washington, and the new terminus at Gateshead, were ready for opening. The occasion was made one of great ceremonial, and at 5.3 a.m. on 18 June a special train—precursor and prototype of many "racing trains" to the north—left Euston Station with George Stephenson and other eminent men on board, and reached Gateshead at 2.35 p.m., having covered the 303 miles in nine hours thirty-two minutes—"a feat unparalleled in the annals of railway travelling in the kingdom." Moreover, at the dinner which Hudson gave in the afternoon at Newcastle to a company of three hundred, the completion of the route through to Edinburgh, with bridges over the Tyne and Tweed, was spoken of as the matter of but a few more years.

Mr. Glyn, the London and Birmingham chairman, was to have attended this ceremony, but at the last moment he was detained in town to meet the chairman of the Grand Junction, so that the unfortunate differences between their two companies might be arranged. This was accomplished and a peace concluded, of which Hudson immediately took advantage to arrange a united plan of campaign against the London and York, "the Ishmael of railways," as Mr. Hutchinson, the Midland Quaker director, had just christened it. Hudson now recognized that Parliament could not be expected to resist the public demand for a new through route on the eastern side of England, and that the best policy for the established companies, therefore, was to combine to supply this themselves in such a way as would least damage their existing property. The Eastern Counties Company had just obtained powers for an extension to Peterborough, and its directors had, as we know, instructed Robert Stephenson to survey further extensions to Lincoln, Gainsborough, and Doncaster; but these towns Hudson regarded as belonging legitimately to his kingdom. Accordingly, he now proposed that his companies should fully occupy the district north of the Ouse by the York and North Midland making a branch to Doncaster, while the Midland extended

its Swinton and Nottingham branches beyond Lincoln to Boston, Spalding and March, and that the Eastern Counties should come to March also by a deviation of its authorized Peterborough extension, thus making a through "East Coast" route by Cambridge, Ely, March, Boston, Lincoln, and Doncaster to the north. To this arrangement the Shoreditch Board was induced to agree by being promised a half share of the through traffic with York and places north of that city.

Further, in order to fill up the eastern side of the country more completely, and yet at the same time to avoid the making of any through route to the north more direct than the existing one *viâ* Rugby and Derby, the Railway King suggested that the Midland and Eastern Counties systems should be joined at Peterborough as well as at March, by the former making a new branch from its main line somewhere near Leicester through Oakham and Stamford; and in this he succeeded in securing the acquiescence of the London and Birmingham directors, though to some small extent it threatened the traffic of their Blisworth to Peterborough branch, already in course of construction. But Euston Square in return, it was arranged, should be allowed to embrace Bedford in its dominion by making a branch thither from Bletchley, while the Eastern Counties, which also had had designs on Bedford, was to stop short at Hertford and Biggleswade.

Such were the terms of the "great and valuable alliance" between the established companies which the *Railway Times* announced in its issue of 13 July, 1844, and which—in the language of that newspaper—"spread peace in the railway kingdom from Yarmouth to Holyhead." Thus the two projects for a main trunk railway on the eastern side of England—the London and York and Direct Northern—besides having to fight for supremacy between themselves, had now ranged against them the united forces of the existing companies, commanded by a leader whose ability and influence were everywhere acknowledged—George Hudson, the Railway King.

CHAPTER II.

HOW "FIVE KINGS" ISSUED AN EDICT TO "STRANGLE THE MONSTER INFANT AT ITS BIRTH"—1844-1845.

ALL through the month of June, 1844, application for "London and York" scrip flocked in to the office of the Committee at Lothbury from all sides. In the previous month of May, on the motion of Mr. W. E. Gladstone, the President of the Board of Trade, the amount of deposit required by Government had been reduced from 10 to 5 per cent. of the capital, on the ground that it was "undesirable to oppress speculation" at a time of commercial buoyancy, and this measure—a very ill-timed one as events proved—made the issue of the London and York scrip an easier task than it might otherwise have been. On the other hand, the Committee had to exercise all possible care to prevent persons subscribing to their share contract who might subsequently prove unable to pay the further calls on the shares.

Meantime, Mr. Locke and a deputation of the directors were out inspecting the country, with Messrs. Walker and Gibbs' plans in their hands, in order to decide finally upon the route of the line. The main point at issue was whether it should run across the fens, as proposed by Mr. Walker, or be brought more to the westwards in order to serve "the towns" (*i.e.*, Grantham, Newark, Retford, and Doncaster) as in the later plans which Mr. Gibbs had prepared at the instance of Mr. Denison; and on this question a rather sharp difference of opinion had arisen at the Committee, which it had been agreed Mr. Locke's arbitration should decide. Pending his decision the directors who accompanied the engineer found some difficulty in meeting the pressure which was brought to bear upon them in the various towns they visited; but, fortunately, in Mr. Denison, who by force of character had already made himself the leader of the party, the Committee had a representative who could be perfectly candid, and yet, at the same time, win not only respect but support. At a meeting held at Peterborough on 1 August, under the presidency of Earl Fitzwilliam,

he did not hesitate to say bluntly that he would not consent to sacrifice the interests of the general public for the benefit of any town on the route. "Our main object," said he, "is to shorten the distance between London and Yorkshire. If a line through Peterborough is best for the general public, Peterborough shall have it, but, if not, it shall pass outside the town." Nevertheless, resolutions in favour of the London and York were passed both at the Peterborough meeting and at another held at Huntingdon on the following day.

A few days later Mr. Locke made his report, which was adopted by the direction, and on 22 August, 1844, an advertisement of the route of the proposed railway was published in the *Times*. It stated that the London terminus was to be "at King's Cross, near the New Road," and that the line was to pass "by Crouch End, Hornsey, Colney Hatch, between Whetstone and East Barnet, near to Potters Bar, west of Hatfield Park to Hatfield, by Welwyn, Hitchin, Henlow, Biggleswade, Sandy, with a branch to Bedford, by Tempsford, St. Neots, on the west side of Huntingdon, by Peterborough, east of Stamford, by Grantham and Stubton to Beckenham with a branch 4½ miles to Newark, by Doddington with a branch 4½ miles to the city of Lincoln, by the village of Lea to Gainsborough, by Misson, Tinningley, and Cantley to Doncaster, thence on to York." Thus the scrip-holders and the public learnt that Mr. Walker's "Fens" line, which, as we have seen, had been the basis of the original "London and York" undertaking, had practically been abandoned in favour of the "towns" line, which Mr. Gibbs had adopted at the instance of Mr. Denison.

North of Doncaster, however, the route was still, it will be seen, left very vague, and this was because the important question as to whether or not the new company should seek an independent access to York and to the West Riding had not yet been decided. Mr. Gibbs' plans, it may be remembered, had contemplated that the trunk line should terminate by "joining the York and North Midland and Leeds and Selby Railways at their junction near South Milford," and this undoubtedly was the most economical arrangement by which access to York and Leeds could be secured. On the other hand, there was much to be said in favour of making the new system independent throughout of existing railways and competitive interests. In this dilemma the London and York promoters came into communication, through Mr. Denison, with Captain Laws, the manager of the Manchester and Leeds Company, who was also, as we know, the leading promoter of the Wakefield, Lincoln, and Boston project; and as this line, as planned by its engineer, Mr. Cubitt, was to cross the route of the London and York at Doncaster, and so practically constitute

branches from it to Wakefield on the one side, and to Lincoln and Boston on the other, Mr. Denison proposed that the two bodies of promoters should unite their interests, and that in that way the London and York should obtain access to the West Riding. Captain Laws, on his part, was feeling rather sore that his undertakings had been left out of account in the plans which King Hudson had laid, in conjunction with the London and Birmingham and Eastern Counties directors, for the occupation of Lincolnshire and the eastern side of England. The result was that on 30 August, at Normanton, he and Mr. Denison came to an arrangement under which it was agreed that the London and York plans should be enlarged to embrace the objects of the Wakefield and Boston Committee, and that the latter should be dissolved and five of its members placed on the London and York direction, its scrip being taken over by the latter so as to form an additional half a million of capital for the amalgamated undertaking. This important alliance, to which the Manchester and Leeds directors fully consented, was announced by an advertisement dated 10 September, 1844, and its immediate effect was to send up the London and York scrip, which had been a good deal depressed since the announcement of the Hudsonian combination, to a premium on the Exchange.

The question of access to the West Riding having been thus decided in favour of an independent branch from Doncaster to Wakefield, the Committee at once decided in favour of a through line to York also, and Mr. Locke was informed of this, and requested to continue his surveys accordingly on 4 September, just as he was about to start for Paris on business connected with the Paris and Rouen Railway. Since the adjustment of the disputes between the London and Birmingham and Grand Junction Companies, however, Locke had been subjected to a good deal of pressure to induce him to give up his connection with an undertaking so hostile to the interests of the existing companies, and the London and York Committee on their part had been warned that he would before long yield to that pressure. Nevertheless, they were hardly prepared for a letter which they received from him on 20 September, dated from Paris three days before, in which he summarily resigned his position as their engineer on the ground that he had not been properly consulted as to the alterations of the route which the new alliance with the Wakefield, Lincoln, and Boston involved. The Committee, in their reply (which bears unmistakable evidence of having been composed by Mr. Denison), did not hesitate to dismiss this reason as a mere excuse and to charge Locke with having designed his action in order to embarrass as much as possible the undertaking whose interests he had been engaged to

serve, and it appears that they had good ground for this allegation, though Locke indignantly denied it.

However, whether it was the outcome of a plot or not, the secession of the eminent engineer did not, thanks to Mr. Denison's energy, embarrass the new undertaking at all seriously. The vice-chairman at once put himself into communication with Mr. William Cubitt, the engineer to the Wakefield, Lincoln, and Boston project, and in an advertisement dated "Monday morning, 23 September, 1844," the Committee was able to announce simultaneously the resignation of Locke and the appointment of Cubitt as engineer-in-chief to the undertaking. The late Mr. Brundell, of Doncaster, is my authority for a story that "Mr. Edmund Denison drove off post-haste very late at night to Cubitt's house at Clapham Common, roused the engineer out of bed, and there and then through the window—Cubitt being in his nightcap —arranged with him to undertake the engineership of the line."

There was need of all possible haste in completing the plans of new lines, because Parliament, alarmed at the prospect of being overwhelmed in its next session with railway bills, had already taken extraordinary measures to secure their preliminary examination "with a view to its information and assistance in forming a judgment" upon them. With this object the Board of Trade had been directed to institute an inquiry into the merits of competing projects, and accordingly on 20 August, 1844, a notice had been issued signed by Lord Dalhousie (who had just succeeded Mr. Gladstone as President of the Board), General Pasley, Captain O'Brien, and Messrs. G. R. Porter and S. Laing (afterwards Chairman of the Brighton Company). This announced that the Board had decided to examine, in the first instance, the London and York Railway projects, the projects for an east and west line between Lincolnshire and the West Riding, and the schemes for completing the railway communication between England and Scotland. So far, however, the London and York Committees had kept up well in the running. On the very day after the issue of this notice—21 August—Messrs. Astell, Denison, and Locke had formally laid the preliminary plans of their undertaking before the "Five Kings"—as the Board of Trade officials were soon nicknamed, and on 4 September Messrs. Denison and Locke had had another interview to announce the coalition with the Wakefield, Lincoln, and Boston—the very matter on which Locke afterwards complained he was not properly informed. Now, on 27 September, Messrs. Denison, Mowatt, and Baxter called upon Lord Dalhousie again, in order to inform him of the resignation of Locke, and of certain changes since made in the plans.

On 23 September, 1844—the same day that the appointment of Mr. Cubitt as engineer to the London and York Railway was announced—a new rival to that undertaking appeared in the field. The reader may remember being informed in the preceding chapter that at the time when Mr. Charles Chaplin was engaged in forming the "Cambridge and York" Committee with Mr. Walker as its engineer, another engineer, Mr. Rendel, was also surveying a north and south line through Lincolnshire, for which he had gained the powerful interest of Earl Fitzwilliam. But, as we have seen, Mr. Chaplin's party proved the stronger, developing, as has been described, into the London and York undertaking, and this Earl Fitzwilliam himself had supported at the meeting at Peterborough already noted. So nothing more had been said about Mr. Rendel's scheme until the end of August, when the route decided upon by Mr. Locke had been published, and it had been found that under the influence of Mr. Gibbs' Great Northern plans, the course through Lincolnshire, originally recommended by Mr. Walker, had been almost wholly abandoned in favour of a more westerly "towns line." Then grave dissatisfaction had arisen in the minds of some of the Lincolnshire gentlemen, particularly at the proposal to place Lincoln on a branch instead of on the main line, and the result had been that Mr. Handley, late M.P. for Lincolnshire, who, as the reader may perhaps remember, had promoted a north and south line, *viâ* Lincoln, as early as 1835, and one or two other members of the London and York Committee, had seceded from the party, and with the countenance and support of Earl Fitzwilliam had revived Mr. Rendel's "Cambridge and Lincoln" project. This was the new rival to the London and York, and a preliminary notice of it was issued, as just stated, on 23 September, 1844, the course proposed being *viâ* St. Ives, Ramsey, and Peterborough.

Almost simultaneously with the formation of this "cave" amongst their own party, the London and York Committee received a new and violent attack from their older rivals, the Direct Northern. This party came out at the end of September, 1844, for the first time with a full prospectus, wherein they charged the London and York Committee with having "appropriated seventy miles" of the Direct Northern line as laid out by Sir John Rennie and Mr. Gravatt and published in a map issued by Major Amsinck in April, 1844. Nevertheless they claimed that the railway now proposed by them from King's Cross to York, *viâ* Huntingdon, Stamford, Lincoln, Gainsborough, and Selby to York would be twenty miles shorter than the London and York line. Moreover they gave an "estimate of income,"

modelled on that prepared for the London and York by Mr. Baxter, which showed a dividend of 9½ per cent. on a capital of four millions, *i.e.*, one-half per cent. more than that previously claimed for the rival undertaking. This, of course, called for a reply from the London and York, which Messrs. Denison and Baxter were able to make trenchant and lively reading; but the energetic Major Amsinck was not silenced, for on the very same day, 3 October, he issued a new manifesto, replying to the London and York reply.

Meantime Mr. Cubitt had been busy going over the country to see how he could best combine his own Wakefield, Lincoln, and Boston plans with the London and York line as laid out by Locke. The latter had suggested just before his retirement that the London and York should include a branch from Peterborough to Boston in its undertaking, and this was now adopted by his successor in conjunction with the Wakefield, Lincoln, and Boston project, which, it will be remembered, was to run along the banks of the Witham and Fossdyke from Boston to Gainsborough in accordance with the agreement with the canal interests. Beyond Gainsborough, however, Cubitt decided to alter the line which the smaller Committee had adopted by diverting the first part of it so as to make it rejoin the London and York "towns line" at Bawtry, and this enabled him to utilize some surveys which he had made for another small Committee — the Sheffield, Chesterfield, and Gainsborough—which was now persuaded to follow the example of the Wakefield party and abandon their independent project in favour of an alliance with the London and York. This necessitated the adoption by the latter of an additional branch from Bawtry to Sheffield, while from Doncaster to Wakefield the western section of the Wakefield, Lincoln, and Boston line formed another branch of about the same length. Thus amended and enlarged the complete undertaking of the London and York Committee became:

1. A main line from London to York . . . . 186 miles.
2. A "loop" line from Peterborough *viâ* Boston and Lincoln to Bawtry . . . . . 86 ,,
3. A branch line from Bawtry to Sheffield . . . 20¾ ,,
4. A branch from Doncaster to Wakefield . . 20¼ ,,
5. Minor branches to Bedford, Stamford and "spurs," making a total of 327½ miles—truly "a leviathan undertaking," beside which the 112 miles of the original London and Birmingham Railway or even the 171½ miles of the Great Western system—then, as now, the longest English railway under one management—looked very small indeed. Mr. Cubitt's estimate for the construction of the whole was six and a half millions, and as five millions of London and York and Wakefield

scrip had now been taken up, the Committee decided not to issue any more, but to take over what little had been sent out by the Sheffield, Chesterfield, and Gainsborough party, and to rely for the rest upon the exercise of borrowing powers.

One great advantage of this enlargement of plans was that it enabled the Committee to make its peace with the people of Lincoln, many of whom had been alienated from its cause by the former decision to place their city upon a branch from Doddington. For now Lincoln was offered in one scheme a through north and south communication *viâ* Peterborough and Bawtry, and a good connection westwards with both Wakefield and Sheffield, and when Mr. Baxter explained this at a great meeting held in the city on 5 October, a resolution was passed in favour of the London and York by a large majority, despite an announcement by the Cambridge and Lincoln that they now had the support of King Hudson for their scheme. At this meeting the Doncaster solicitor was bold enough to denounce the great railway potentate in no measured terms, and Hudson, though he affected to despise Baxter as "a gentleman little known in the railway world," was roused to reply to him at great length at a Midland meeting a week later. On the same day as the Lincoln meeting, similar gatherings at Grantham and Huntingdon pronounced in favour of the London and York and against the Direct Northern, and on October 10th at Newark, and on the next day at Retford resolutions in the same sense were passed. Nevertheless, on 17 October Major Amsinck was able to announce through the press that all the Direct Northern scrip had been taken up.

The great epidemic of railway mania was now raging, and every day's newspapers brought new projects to light. Among those announced during this October, 1844, were the Great Grimsby and Sheffield Junction Railway, the Great Grimsby Extension Dock Company, the Wakefield, Pontefract, and Goole, and the Lincoln, York, and Leeds; and all these, together with the London and York, the Direct Northern, the Cambridge and Lincoln, the Sheffield and Lincoln, and the extensions of the Midland, York, and North Midland, and Eastern Counties systems, were duly deposited by 30 November. The result was that in a group headed, "Scheme for extending railway communicaiton between London and York, etc.," the Board of Trade officials had to place projects involving the construction of upwards of 1,200 miles of railway—"an amount not much less than that of the railways already in existence in the kingdom," and proposing a capital expenditure altogether of upwards of £20,000,000. Of course the London and York, with its 328

miles, was by far the largest single scheme. The Direct Northern simply proposed a main line only from London to York, 185 miles in length; the proposed Midland extension from Swinton *viâ* Lincoln and Boston to March, was no more than 124 miles, and the Cambridge and Lincoln 83. The latter was now definitely supported by Hudson, but it was freely stated that he was using it only as a weapon against his more formidable adversaries, and did not intend that it should be made even if the powers for it were obtained.

London 22 May 1844

My Dear Sir

I was obliged by your Letter and am quite glad to hear so favorable an account of your proceedings —

You may incur any reasonable or moderate expence in printing &c. which yourself and Mr Seely may think necessary

Yours truly

Geo Hudson

AUTOGRAPH LETTER OF MR. GEORGE HUDSON, "THE RAILWAY KING," TO AN AGENT IN LINCOLN AUTHORIZING EXPENDITURE IN OPPOSITION TO THE PROPOSED "LONDON AND YORK RAILWAY."

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Full plans and sections of the various projects having been now deposited, the details of them were open for discussion, and a wordy warfare about gradients, earthwork, tunnels, bridges, etc., now commenced in the railway press and elsewhere. The works of the London and York were, as Mr. Cubitt afterwards said in the witness-box, "large but not difficult," involving about fourteen and a half million cubic yards of earthwork, fourteen tunnels, about 420 bridges, some of which, however, were very small affairs, a viaduct at Welwyn, 1490 feet long and 89 feet in greatest height, and forty-two stations, including the terminus at King's Cross. This was to cover ten acres

for passenger accommodation and forty-nine acres for goods and coal, but Mr. Cubitt declared that he could build a thoroughly useful station for between £50,000 and £60,000—about the amount which the London and Birmingham had paid for its *archway* at Euston Square.

For the site of the passenger terminus which fronted on the old St. Pancras Road the Small-pox and Fever Hospitals and several streets of small houses had to be removed, but with this exception the carrying of the line out of London involved next to no destruction of house property, as it emerged into open and completely rural country within a mile of King's Cross. Nevertheless the first section of the line out of London promised to be by a good deal the most costly portion of the system. The prior occupation by the Eastern Counties Railway of the only level route by which a line could leave London for the north had compelled both the London and York and Direct Northern engineers to lay their routes through a country formed of a series of ridges and valleys, and Mr. Cubitt's sections for the first twenty-three miles showed an almost unbroken series of tunnels, cuttings, and embankments, no less than eight of the fourteen tunnels, the highest embankment and the deepest cutting on the system being all in this portion of the line. Indeed, had the new railway been laid out on the same principle which had governed Stephenson and Brunel in laying out the London and Birmingham and the Great Western lines, namely, that a practically level line must be secured, the amount of earthwork involved in getting through what are now called "The Northern Heights of London" would have been colossal. Fortunately, however, great advances had been made in the building of locomotives since the days when those two great lines had been built—even the short incline of 1 in 66 out of Euston, for which a stationary engine had long been used, was already being "negotiated" by a single locomotive, and so Mr. Cubitt was able to adopt 1 in 200 as the "characteristic" gradient of the new trunk line; that is to say, where a better gradient than this could not be secured without additional expense, he was content that the trains should have to face a rise of this degree. But even 1 in 200 was too stringent a ruling gradient to be adhered to in the neighbourhood of the London terminus. So, after the line had been carried beneath the Regent's Canal, a rise of 1 in 108 had to be tolerated for a distance of a mile and a quarter in order to reach the higher level at Holloway, from which again the line continued to rise with a very long stretch of 1 in 200 until its summit level was reached at Potters Bar, thirteen miles from King's Cross.

From Potters Bar Mr. Cubitt was able to keep on high ground

for another thirteen miles to Stevenage, where, however, a long fall of about six miles of 1 in 200 began; and, after that, from Arlesey to beyond Peterborough he was able to secure a practically level run of nearly fifty miles, save for a longish rise and longer fall (both 1 in 200) near Abbotts Ripton, sixty-three miles from King's Cross. Between Peterborough and Grantham the choice of the "towns" line in preference of that through the Fens had compelled the engineer to penetrate some heavy country, involving three miles of 1 in 176 north of Corby immediately succeeded by a tunnel, 1352 yards long, at Great Ponton—the longest tunnel on the line—and after that came a long fall of 1 in 200 down to Grantham; but thence to Doncaster the works were fairly easy, the most onerous being the bridge over the Trent at Newark. The loop, too, was very easy of construction except for bridges, and about half of it could be laid level without any serious earthwork at all.

Thus we see that except its largeness there was nothing about the London and York undertaking to daunt even the little-tested engineering skill of 1845, and so its opponents had only one really vulnerable point to attack. This was the great costliness of the undertaking, which, they alleged, must be largely in excess of the capital estimate, and at the Midland meeting on 20 January, 1845, George Hudson, with the assistance of figures furnished to him by Robert Stephenson, put the matter in the apparently conclusive form of a rule of three sum. "If," asked he, "the London and Birmingham Railway, with 14,000,000 cubic yards of earthwork, four and an eighth miles of tunnels, and no viaduct longer than 500 feet, cost £5,000,000, how much will the same length, namely, 112 miles, of the London and York cost from London to Grantham, with 13,000,000 cubic yards of earthwork, four and three-quarter miles of tunnels, and a viaduct at Welwyn, 1490 feet long and 89 feet high?" The answer, of course, was "not less than £5,000,000," whereupon Hudson, not knowing—for, indeed, it had not yet been publicly announced—that the capital estimate of the London and York had been increased by Cubitt from five millions to six and a half, declared triumphantly that "these juvenile promoters" would have "spent every shilling of their capital by the time they had arrived at Grantham," and that, in short, "if it were united with that humbug, the Atmospheric, the London and York would be the most complete thing in the world."

Allowing for Cubitt's addition, however, and for the advances in engineering science since the making of the London and Birmingham, this criticism of the London and York capital estimate was worth very little, as the sequel was to prove, and Hudson did his best to rob it of

all effect on impartial minds by his reckless language with regard to the gradients and financing of the new railway. "I challenge them," he said, "to leave London with twenty carriages, and I will beat them to York" (*i.e.*, by the Midland route); "and what is more, I don't believe they will get there at all on a thick, foggy day, when the rails are greasy." Moreover, after the meeting, coming across Mr. Denison on the platform at Derby station, he went so far as to assert that the London and York would not have got capital to take them as far even as Grantham, "if they had got it honestly." This sneer had reference to the coalition with the Wakefield and Lincoln party, in which, as we know, Mr. Denison had been prime mover; but though reminded warningly of this latter fact, the Railway King repeated his charge of dishonesty. Thereupon Denison called him "a blackguard" to his face, and then turned his back upon him, and when Hudson endeavoured to explain that it was to the Committee he had referred and not Mr. Denison personally, the only reply he received was, "Hudson, I 've done with you; go away!"

The Parliamentary session had now begun, and during February the Board of Trade presented its reports on several of the groups of railway schemes submitted to it; but that on the London and York group —which was unanimously admitted to be the most important—was still delayed. It was generally believed, however—even in the opposition camps—that when it came it would be in favour of the London and York line, and this belief prevailed until early in March, when all of a sudden the current rumour changed, and the Cambridge and Lincoln and Direct Northern parties showed unaccountable signs of confidence. On Saturday, 8 March, though no official announcement had yet been made, it was positively stated in the City that the London and York was to be reported against, so positively that large sales of London and York, and purchases of Direct Northern and Cambridge and Lincoln scrip were made, and on the following Monday, in response to some sort of official invitation, the precise nature of which was never disclosed, the Direct Northern party sent word to the "Five Kings" that they were willing to combine with the Cambridge and Lincoln by making the northern part of their line from Lincoln to York only. On the following day, Tuesday, 11 March, it was officially announced that the report of the Board was to be in favour of this combination and against the London and York *in toto*.

The excitement and surprise produced throughout the country was intense. Feverish sales or purchases of scrip were at once effected; the most extraordinary rumours as to the origin of the "Five Kings'" judgment were afloat; and the publication of the text of their report