"late one-half of the rumours which are afloat, and which are fully "credited too, by the most intelligent and discreet members of the "bar, we should draw a picture as appalling as anything to be found "in the books of the prophets Amos and Micah."* If amalgamation produces a system and a body of men capable of so great scandals, save us from such a curse.

In the next place, of the nine European countries (including Wurtemburg in Germany), mentioned in the report as possessing legal professions, amalgamation holds in five; and if to the four remaining we add Great Britain, there is an end of the precedent, without even considering the great relative importance of those five to the rest of Europe.

The present system has the sanction of two thousand years. It is the result of natural growth. It has outlived all dynastic changes. It flourished under the Roman Empire, the Carlovingian kings, and the French Empire and Republic; and it is part of the historical development and social life of England and Ireland. From the time of Sir John Davis, the Irish have utilized it, and "there is no reason to believe that they are dissatisfied with it," or wearied of a profession which O'Connell, Holmes, Sheil, Curran, Whiteside, and Butt were proud to adorn. Who are its assailants? Certain members of the other branch of the legal profession—I am too well convinced of the good sense, good feeling, and pride in their honorable path of life, to believe that the solicitors of Ireland will join in the attack—whose motto would appear to be "take all, give nought," and who, instead of approaching the bar for redress of any grievances, if such there be, prefer to take a "hostile" course, to pose before the public as its champions, and cast a slur upon a profession of which they appear to be envious, and which might reply in sorrow and in truth—"First cast out the beam out of thine own eye, and then shalt "thou see clearly to cast out the mote out of thy brother's eye."

IV.—*American Railways.* By Charles Eason, Jun., M.A.

Read Tuesday, 23rd February, 1886.

AMERICAN railways have attracted a great deal of attention during the past twelve months. The fall in the prices of stocks, the decrease of dividends, the bankruptcies of some companies, the war of rates and the general decrease in earnings, have all indicated a more than ordinary disturbance in the economic condition of the companies. The capital invested in these undertakings, is very large—the stocks and bonds amounted to about 1,000 millions of pounds sterling in 1880, and to not less than 1,450 millions in 1883. Such a field for investment must obviously comprise securities of widely different character, and it is important to ascertain how the good may be distinguished from the bad.

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* *North American Review*, Jan. 1867, pp. 148-176.

It will be my aim in this paper, first to exhibit a summary view of the railways as a whole; second, to show from an examination of the accounts of some leading lines, the peculiarities of the financial circumstances of American railways; and third, to review the control exercised over rates in the different States of the Union.

General View of the Railway System of the United States.

Sources of Information.

The central government of the United States has no control over the railways. Certain companies have received grants of land and money from the national treasury, and are on this account subject to some control as to the keeping of their accounts; and as to the arrangements entered into with other companies—a report upon their lines is issued annually by the Commissioner of Railroads. Many of the States have special laws affecting the railroads within their own borders, and require statements of account to be furnished in specified forms; but such regulations differ from state to state. Thus, there is no provision in America for an annual publication of railway statistics, such as the railway returns issued by the Board of Trade for the United Kingdom. This want is to a large extent supplied by the private enterprise of Messrs. H. Poor and Company. Their *Railway Manual* contains all the information that can be procured from the companies; but the returns being made up in all sorts of ways by different lines, the summaries cannot extend to more than a few facts stated in the most general form. We have not however, exhausted our means of information. The Census of the United States, taken by the authority of the central government, comprises information on a vast number of topics, and includes among them a detailed account of every railway—describing:—(i.) its physical characteristics, *i.e.* dates of construction, mileage, grades and curves, composition of track, etc., and (ii.) statistics of traffic as to quantity and value of work done, and earnings; (iii.) financial condition—liabilities and assets; (iv.) rolling stock; (v.) employes; and (vi.) accidents.

These figures are for the year ending 30th June, 1880, but these general features of the railway system of a country are not subject to sudden variation, and we may therefore use them with confidence for our purpose.

TABLE I.—Growth of the Railway System.

Year, Dec. 31.	*Miles open.	*Increase of Mileage.	Percentage increase in ten years.		Population per mile of road.	Year.	†Miles.	Increase.	
			Mileage.	Population.				†Number.	Per cent.
1839	2,265	2,265	—	32·7	6,194	1879	86,280	4,721	5·8
1849	7,310	5,045	222·7	35·9	2,705	1880	93,454	7,174	8·3
1859	27,420	20,110	275·1	35·5	1,087	1881	103,242	9,788	10·5
1869	43,510	16,090	58·7	22·6	784	1882	114,838	11,596	11·2
1879	84,965	41,455	95·3	30·1	571	1883	121,592	6,754	5·9

* The figures in these columns are from the Census Report, p. 290.
† The figures in these columns are from Poor's *Railway Manual* for 1884, p. civ.

The construction of railways in the United States commenced about 1830, at the end of which year 40 miles had been built; in 1839, 2,265 miles were in operation, or in the proportion of one mile to 6,194 persons; in the ten years ending 1849, 5,045 miles were constructed; and in the following decade 20,110. Construction slackened during the Civil War, so that only 16,090 miles had been added by the end of 1869; but in the ten years preceding the census of 1880, construction went on very rapidly, 41,455 additional miles being opened. From 1879 to 1882 the process of extension has gone on with still greater rapidity, reaching its culmination in that year, when over 11,000 miles were opened.

Thus the railway system of the United States is still in process of formation, while that of the United Kingdom is practically complete. The increase of mileage in the United Kingdom in the ten years, 1869-79, was 16·8 per cent. compared with an increase of 95·3 per cent. in the United States, and since 1879 the increase has averaged only 234 miles per annum.

The United States Census distributes the railways into six groups. Group I.: New England States, viz.—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut. Group II.: Middle States, viz.—New York, Pennsylvania, Ohio, Michigan, Indiana, Maryland, Delaware, New Jersey, and District of Columbia. Group III.: Southern States, viz.—Virginia, West Virginia, Kentucky, Tennessee, Mississippi, Alabama, Georgia, Florida, and North and South Carolina. Group IV.: Central Western States, viz.—Illinois, Iowa, Wisconsin, Missouri, and Minnesota. Group V.: Louisiana, Arkansas, and Indian Territory. Group VI.: Western Trans-Mississippi States, viz.—Nebraska, Kansas, Texas, Colorado, California, Nevada, Oregon, and The Territories.

Increase of mileage in each group in the six months, from January 1st, to June 30th, 1880, was as follow:—Group I., 4 miles to 5,945; group II., 360 miles to 28,042; group III., 113 miles to 14,203; group IV., 517 miles to 22,446; group V., 95 miles to 855 miles; group VI., 1,749 miles to 13,474 miles. Thus the only group which can be considered to have a complete system is the New England group. The railways of this group resemble those of the United Kingdom more closely than any other of the United States railways.

The length of line on the 30th June, 1880, was 87,801—4,562 miles being double, and 83,239 single. The total length of all lines, including third and fourth pairs of rails and sidings, was 108,070 miles. This length of track was composed of 37,329 miles of steel rails, and 70,741 miles of iron rails.

There are twenty-one different guages, yet uniformity of guage practically exists. The guage from 4 feet 9⅝ to 4 feet 8 inclusive, may be considered standard, as rolling stock is interchanged without objection. The total mileage of track of standard guage is 89,701 miles, or 83 per cent. of the whole; and of the 12,282 miles of five-foot guage, 12,137 are in the southern group of states (group 3). In group 1 there are only 93 miles out of 8,103 which are not of the 4 feet 8½ inch guage. The three-foot guage can not be considered a violation of the principles of uniformity of guages, as it is only adopted in localities for which it is specially suitable.

TABLE II.—Mileage and Guage.

	Miles.
Single, ...	83,239
Double, ...	4,562
Total,	87,801
	Miles of Track.
Main Line, ...	87,801
Second Track, ...	4,562
Third and Fourth Track and Sidings, ...	15,707
Total Track,	108,070

Composition of Track.	Miles.	Per Cent.
Steel Rails, ...	37,329	35
Iron „ ...	70,741	65

GUAGE. Width of Guage.	Miles of Track.	Per Cent.
4 feet 8½ inches, ...	71,403	66·3
4 „ 9 „ ...	12,335	11·4
Sundry from 4 ft. 8 in. to 4 ft. 9⅝ in. ...	2,366	2·2
Of the above guages combined with others,	3,597	3·3
Total of Standard Guages; ...	89,701	83·0
3 feet, ...	5,190	4·8
5 feet, ...	12,282	11·4
All others, ..	897	0·8
	108,070	100·0

The total capital of the railways of the United States on 30th June, 1880, was £1,000,904,333, consisting of funded debt, *i.e.*, mortgage bonds answering to our debentures £478,183,080; preferred stock, £60,894,388; and common stock, £461,826,865. The

TABLE III.—Capital of all Railways.

	Of United States Year ending June 30, 1880.	Per cent.	Of United States 1883.	Of the United Kingdom, Year end'g Dec. 31, 1883.	Per cent.
	£		£	£	
Common Stock,...	461,826,865	46·0	741,612,117	293,437,106	37·0
Preferred Stock,	60,894,388	6·0		*295,561,021	38·0
Funded Debt, ...	478,183,080	48·0	691,008,076	195,923,185	25·0
	1,000,904,333	100·0			100·0
Unfunded Debt,	84,240,179		66,474,069		
Total, ...	1,085,144,512		1,499,094,262	784,921,312	

*Including guaranteed.

percentages were, funded debt, 48 per cent.; preferred stock, 6 per cent.; and common stock, 46 per cent. In the United Kingdom the percentages of the different classes of capital were—debenture stock, 25 per cent.; preferential and guaranteed stock, 38 per cent.; ordinary stock, 37 per cent. Important practical consequences follow from the proportions of the various classes of capital. Public opinion, in regard to the success or failure of a railway, is determined to a great extent by the simple fact that the line pays a dividend upon its share capital. But the smaller the percentage of capital subject to interest, the greater the likelihood of some dividend being paid on the share capital.* Thus, if we refer to Table X., we see that the proportion of capital upon which no dividend is paid is twice as great (19·53 per cent.) in the United States as in the United Kingdom (9·66 per cent.). A large percentage of interest bearing capital has another very important consequence, viz., that it renders the line more susceptible of becoming bankrupt or falling into a receiver's hands, or being wound up as the case may be. A loss of earnings which in the case of a line with 25 per cent. of bonds, would only involve a diminution of the dividend, might in the case of a line with 50 per cent. of bonds, involve the appointment of a receiver. Now the defaults which have occurred on American lines have been one of the causes of the prevalent distrust of American railway securities. Thus a practical means of improving the credit of American railways would be by raising further capital, when required, by the issue of shares instead of bonds.

So far, we have been considering only the results from different proportions of share and bond capital, without regard to whether the shares are preferred or ordinary.

The difference between English and American railways is even more marked in this respect. In the United Kingdom rather more than half the share capital consist of guaranteed and preference shares; while in the United States only about 13 per cent. of the stock is preferred. If we go back to 1857 we find that the percentage of interest bearing capital in the United Kingdom was the same as at present, viz., 25 per cent.; but the proportions of ordinary and preferred stocks were then 75 and 25 per cent. Thus, since 1857 the English companies have considered it more beneficial to raise capital by the creation of preferred stock. A too large creation of preferential stock has disadvantages. It renders the ordinary stock more exposed to variations of dividend,† and the

* For instance, let there be two companies, each having a capital of £10,000,000 and net receipts of £4,000,000, but the capital consisting of bonds and stock in different proportions, as follows :—

	A.	Per cent.	B.	Per cent.
Bonds, ...	£5,000,000 ...	50 ...	£2,500,000	25
Stock, ...	5,000,000 ...	50 ...	7,500,000	75
Net receipts, ...	400,000 ...	— ...	400,000	
Interest charges at 5 per cent., ...	250,000 ...	— ...	125,000	
Margin of earnings,	150,000 ...	— ...	275,000	

Thus, if the net receipts decreased one-half, Line A would pass into the hands of a receiver, while Line B would simply pay a reduced dividend.

† For instance, let there be two companies, each having £7,500,000 of stock, but having different proportions of ordinary and preferential stock :—

	C.	D.
Preferential stock, ...	£5,000,000	£2,500,000
Ordinary ,, ...	2,500,000	5,000,000
Available for dividend,... ...	275,000	275,000
Preference dividend at 5 per cent.	250,000	125,000
Balance for dividend on ordinary stock, ...	25,000	150,000

Thus, a fall of £40,000 in net receipts would put company C into the list of companies paying no dividend on ordinary stock, while it would only reduce the dividend of company D; and an increase of £50,000 in the net receipts would treble the dividend of company C, but only increase that of company D by one-third.

company more liable to the discredit of not paying full dividend on preference shares and also impairs the control of the line by the ordinary shareholders, who are most interested in its successful management.

It is not clear to me why the American lines have created so little preferred stock: for example, the Pennsylvania railway company has no preferred stock. Now, this company would find the same advantages from raising capital by means of preferred stock, as are obtained by, say, the London and North Western. The advantages are (1) as against the issue of debenture stock it has the advantage of giving additional security to the payment of interest upon the existing debentures, and (2) as against ordinary stock, it has the advantage of not tending to reduce the dividend upon the ordinary stock, which a creation of ordinary stock would have unless the capital expended yielded the full rate of dividend already being paid upon the ordinary shares. Thus, suppose £1,000,000 of capital to be required. The net revenue yielded will in no way be affected by the mode in which the money is raised, whether, let us say, by debentures at 3½ per cent., or preference stock at 4 per cent., or ordinary stock on which a 7 per cent. dividend is being paid. Let us suppose that the expenditure yields a net revenue of £30,000. In case 1, the debenture interest is increased by £35,000, there is £5,000 less for division among preference and ordinary shareholders, and the margin of earnings over interest is diminished to this extent. In case 2, the preference stock requires an additional £40,000 per annum. Thus the sum available for ordinary shareholders is diminished by £10,000; but, on the other hand, the margin of earnings over interest is increased by £30,000. In case 3, the margin over earnings is increased as in case 2; but the net revenue is deficient by £40,000 of the sum required to pay 7 per cent dividend upon ordinary stock, and the dividend must therefore be diminished. The course to be adopted in any particular case must depend upon the proportions of the capital already existing, and the dividends that are being paid. Taking the case of the Pennsylvania railway, a preference stock would be the best, for the proportion of bonds is large enough, and as it is not likely that the new capital will earn 8 per cent., the creation of preference stock would tend to maintain the dividend. It is an obvious objection that a new stock might be less marketable on account of its novelty, custom having a great deal of influence in such matters; but the essential soundness of the policy would soon be perceived by investors. It is a *sine qua non* of a sound issue of preference stock that a dividend should have been for some time steadily paid upon ordinary stock, otherwise the *preference* is one in name only.

The traffic receipts of the American railways for the year ending 30th June, 1880, were £116,090,119, made up from different sources as follows:—passengers, £28,820,342; express, *i.e.*, carriage of parcels, £1,765,652; mails, £2,094,562; freight, £83,229,152; and unspecified, £180,411. The figures for the railways of the United Kingdom are shown in Table IV. The receipts classed as express are those given in the Board of Trade returns as excess luggage, parcels, carriages, horses, dogs, etc.

TABLE IV.—EARNINGS OF ALL RAILWAYS.

	Of United States Year ending June 30, 1880.	Per cent.	Of United States 1883.	Of the United Kingdom, Year end. Dec. 31, 1883.	Per cent.
	£		£	£	
Passenger, ...	28,820,342	24.83	41,367,451	25,742,452	37·74
Express, ...	1,765,652	1·52		3,025,355	4·43
Mails, ...	2,094,562	1·80		740,926	1·09
Freight, ...	83,229,152	71·69	108,901,966	38,701,319	56·74
Unspecified, ...	180,411	0·16			
Total Traffic,	116,090,119	100·00	150,269,417	68,210,052	100·00
Other Receipts, ...	16,168,959		11,153,139	2,852,218	
Gross Total, ...	132,259,078		161,422,556	71,062,270	

The proportion of goods traffic in the United States (71·697 per cent.) is much larger than in the United Kingdom (56·74 per cent.). As goods traffic is more fluctuating than passenger, this is one cause why the fluctuations of the dividends are greater in the United States. In addition to the traffic receipts, the American lines received over £16,000,000 from other sources, viz., rents for use of roads, £10,708,742; and interests, dividends, receipts from ferries, horse railroads, elevators, etc., £5,460,217. The receipts from passenger traffic (24·83 per cent.) include 16·94 per cent. from local and 7.89 per cent. from through passengers. The receipts from goods traffic, (71·69 per cent.) include 40·26 per cent. from local and 31·43 per cent. from through freight.

TABLE V.—STATISTICS OF TRAFFIC.

Tons of Freight carried, ...	Tons, 290,897,395		
,, ,, carried 1 mile	Ton miles, 32,348,846,693		
Average distance carried, ...	Miles, 111		
Receipts from Freight Traffic, ...	£83,229,152		
,, ,, ,, per Ton mile, ...		1·29 cts. ...	·63d.
Cost per Ton mile, ...		0·76 cts. ...	·37d.
Net Receipts, ...		0·53 cts. ...	·26d.
Passengers carried, ...	No. 269,583.340		
,, ,, 1 mile, ...	Passenger miles, 5,740,112,502		
Average Distance carried, ...	Miles, 21		
Receipts from Passenger Traffic,...	£28,820,342		
,, per Passenger mile, ...		2·51 cts. ...	1·23d.
Cost ,, ,, ...		1·71 cts. ...	·84d.
Net Receipts, ,, ,, ...		0·80 cts. ...	·39d.

Table V. exhibits the total work done by the railways of the United States, and the receipts, cost, and net earnings per ton mile, and per passenger mile. To ascertain the profit upon passenger and goods traffic it is necessary to know how much of the working expenses belong to each class of traffic. Most companies do not report operating expenses separately for freight and passengers. The total specified expenses for passengers amounted to £4,512,248, and £10,306,138 for freight. This gives a proportion of 70 per cent. for freight and 30 per cent for passengers; and it is by applying these percentages to the total expenses that the results in this table are arrived at. The average receipts from freight are 1·29 cents per ton mile; but for fifteen of the principal trunk lines the receipts per ton mile are only 1·05 cents, the receipts on individual lines being as follows:—Pennsylvania, and Baltimore and Ohio, each ·89 cents; New York Central, ·86 cents; Erie, ·84 cents; Michigan Central and Wabash, each ·80 cents; Lake Shore and Michigan Southern, ·76 cents; Central Pacific, 2·49 cents; Union Pacific, 1·99 cents; Atchison Topeka and Santa Fé, 2·09 cents; Chicago, Milwaukee, and St. Paul, 1·72 cents; Chicago and North Western, 1·47 cents; Chicago and Rock Island, 1·21 cents; and Chicago Burlington and Quincy, 1·11 cents. The receipts per passenger mile on the same lines are nearer the general average. The western lines are highest. Atchison and Topeka, 6·06 cents; Union Pacific, 3·20 cents; and Central Pacific, 3·03 cents. The North-western lines are—Milwaukee and St. Paul, 3.02 cents; Rock Island, 2·81 cents; North-western, 2.60 cents; and Burlington and Quincy, 2·40 cents. The trunk lines are—Wabash, 2·71 cents; Pennsylvania, 2·42 cents (these being higher than some in preceding group); Michigan Central, 2·16 cents; Lake Shore, 2·14 cents; Baltimore and Ohio, 2·06 cents; Erie, 2·04 cents; New York Central, 2.00 cents

TABLE VI.—CLASSIFICATION OF FREIGHT.

Article.	Tons.	Article.	Tons.
Coal, ...	89,622,899	Stone, Lime, Cement, Clay, and Sand, ...	9,000,322
Merchandise and Miscellaneous, ...	58,295,918	Petroleum, ...	7,714,892
Grain, ...	42,003,504	Flour, ...	7,449,717
Lumber and other Forest Products, ...	25,474,349	Provisions, ...	7,099,525
Manufactures, ...	17,733,566	Cotton, ...	3,958,395
Pig, Bloom, and Railroad Iron, ...	11,663,372	Unspecified, ...	66,717
Live Stock, ...	10,814,219	Total, ...	290,897,395

Table VI. gives some indication of the character of the freight carried; but it is not to be taken as giving actual weight carried, as, though one and the same ton may have been carried by several companies, the totals are obtained by adding the tonnage reported by each company.

The working expenses of all railways in the United States amounted, in 1880, to £70,560,024, or 60·78 per cent. of the traffic receipts. This sum includes all expenses, and therefore includes the cost of earning the other receipts, amounting to £16,168,959; but the expenditure for the United Kingdom, as given in Table VII., does not include steamboat, canal, and harbour, expenses, of £1,324,956, which include the cost of earning the "other receipts" for the United Kingdom, £2,852,218. The largest item of expense on the U. S. railways is maintenance of way,

TABLE VII.—WORKING EXPENSES OF ALL RAILWAYS.

	Of the United States, Year ending June 30, 1880.	Per cent.	Of the United Kingdom, Year ending Dec. 31, 1883.	Per cent.
	£		£	
Maintenance of Way, ...	17,859,845	15·38	6,743,798	9·89
Locomotive Power, ...	17,610,108	15·17	9,331,267	13·68
Rolling Stock Repairs, ...	6,630,875	5.71	3,310,826	4·85
Traffic Expenses, ...	16,115,357	13·88	11,213,164	16·44
	58,216,185	50·14	30,599,055	44·86
General Charges, ...	4,114,361	3·55	1,623,741	2·38
Taxes, ...	2,656,764	2·29	2,600,105	3·81
Compensation, ...	691,253	0·60	444,973	0·65
Legal, ...	491,581	0·42	373,185	0·55
Miscellaneous, ...	4,389,880	3.78	402,547	0·59
Total, ...	70,560,024	60·78	36,043,606	52·84

£17,859,845, or 15.38 per cent., which exceeds the corresponding percentage for the United Kingdom by 5·49 per cent. Locomotive expenses come next, £17,610,108, or 15·17 per cent., which is 1.49 per cent. more than in the United Kingdom. The principal items are—fuel, 5·66 per cent.; wages, 4·69 per cent.; and repairs, 3·76 per cent. Traffic charges amount to £16,115,357, or 13·88; which is 2·56 per cent. less than the United Kingdom. Repairs of rolling stock amount to £6,630,875, or 5·71 per cent., an excess of ·86 per cent. over, the percentage for the United Kingdom, repairs for freight and passenger cars being 3·89 and 1·82 per cent. The total of these expenses is 50.14 per cent. in the United States, and 44·86 in the United Kingdom. The larger percentage of expenditure upon maintenance of way would appear to be in part due to charging to working expenses some expenditure upon lines open for traffic, which in England would be charged to capital account.

The miscellaneous expenditure probably includes most of those expenses which are incurred in earning the "other receipts," and if these were deducted the percentage would probably not be very different from that for the United Kingdom.

Accidents.

The number of accidents to persons in the year was 8,215, of which 2,541 were fatal; 61 passengers and 260 employes were killed through causes beyond their control, and 82 passengers and 663 employes were killed through their own carelessness; 331 passengers and 1,004 employes were injured through causes beyond their control, and 213 passengers and 2,613 employes through their own carelessness.

The net receipts for all railways amounted to £45,530,095. Adding the receipts from other sources £16,168,959, there was available

TABLE VIII.—NET RECEIPTS AND THEIR APPROPRIATION.

Net Receipts.		Appropriation.	
	£		£
Traffic Receipts, ...	116,090,119	General Expenses of Lesser Companies, ...	375,969
Working Expenses, ...	70,560,024	Interest on Funded Debt,	25,288,462
Net Receipts, ...	45,530,095	" " Floating "	1,807,559
Other Receipts, ...	16,168,959	Rentals, ...	10,358,144
			37,830,134
		Dividend on Preferred Stock, ...	1,378,653
		Total Fixed Charges, ...	39,208,787
		Dividends on Common Stock, ...	12,731,416
		Surplus, ...	9,758,851
Amount available for distribution, ...	61,699,054		61,699,054

for payment of interest, dividends, etc., £61,699,054 Rentals and interest absorbed £37,830,134; dividends on preferred stock, £1,378,653; and on common or ordinary, £12,731,416, and there remained a suplus of £9,758,851. The payments in the United Kingdom in 1883 were—interest, £8,254,643; dividends on preferred and guaranteed stock, £12,601,797; and on ordinary stock, £13,725,933. Here we see very striking differences in (1) The relative amounts of interest and dividends, and (2) The undivided surplus. The figures do not correspond exactly, for the payments of interest and dividends for the United Kingdom are calculated from the known rates of interest and dividend paid. Thus, rentals are not given as a separate item, but appear in their ultimate form as dividends or interest as the case may be. For example: the Dublin, Wicklow and Wexford Railway paid £36,000 in 1883 as rental to the Dublin and Kingstown Railway Company, which paid 4 per cent. on the loans, and 9½ per cent. on the stock of that company. Such a payment would appear as rental in the United States table, but in the United Kingdom table in its ultimate form of dividend and interest. This prevents an exact comparison of the percentage of the appropriation of net receipts under different heads; but the tables clearly show that the interest charges absorb a much larger percentage in the United States than in the United Kingdom. The percentage in the United Kingdom is only 24 per cent., but the percentage in the United States cannot be less than 60 per cent. The effect of this large proportion of interest charges has already been referred to sufficiently in connection with the statistics of capital.

We have now to consider the significance of the large undivided surplus of earnings. The English railways divide all their earnings. There are no figures to show this for all the lines; but taking twenty companies, I find that the balances carried forward at end of 1882 amounted to £313,633, and at end of 1883 to £303,624; thus these companies divided £10,009 more than their net earnings in 1883. It must be observed that the surplus of £9,758,851 is not the total of the balances carried forward by the American companies, but only the total of the *addition* to these balances in 1880. What, then, are the advantages of carrying forward these large balances, and how are they employed? They are required to give additional security to the bondholders, and are rendered necessary by the excessive proportion of interest bearing capital, and consequent interest charges. They are employed as capital, but as they do not bear interest, whatever they yield goes to increase the surplus for interest and dividend. The value of this protection can only be estimated by examining the facts regarding the principal companies, as recorded in their annual reports.

Examine the case of the Baltimore and Ohio railway—It has an income balance of £9,152,696. It has expended on way and equipment £2,333,898 more than the amount of its capital, and it has purchased stocks and bonds of various companies to the amount of £5,474,552. The earnings from this expenditure are included in the general earnings of the company. How far is this surplus a guarantee that the company will continue to pay interest upon its stock? Should the net earnings of the company be insufficient to pay the regular dividend on the stock, can it have recourse to the surplus to maintain the dividend? To do so, the company must issue fresh bonds or stock to repay the advances made from income to pay for capital expenditure. Suppose that it issues bonds for £250,000 at 5 per cent. The interest charges will be in future increased by £12,500. But this creation of capital will not increase the earning power of the company, as the money has been already spent. In the next year it will therefore be necessary to create further capital, and thus year by year the interest charges would grow, the margin of earnings over these charges would diminish. Instead of issuing fresh capital, the company could obtain the money to maintain the dividend by selling some of the securities in which the income balance had been invested. But there would be serious objections to this course. If the company sold securities on which they were receiving interest or dividend, the effect would be to diminish their net revenue by as much as if they created new capital. Yet other securities would not be saleable except at a sacrifice. In either case the sale of securities would diminish the company's interest and control in the lines to which they belong. Does it follow then that the accumulation of a large income balance does not strengthen the financial condition of a company? No; but the effect is shown in the maintenance of the earning power of the line, and in the power of the line to maintain its earning power in the face of competition of other companies. The value put upon the permanent way in a company's balance-sheet is perfectly nominal; the true measure of value is the net revenue that the company can earn. In deciding upon the appropriation of net revenue and the method of providing the capital for further expenditure, whether on lines open for traffic, making new lines, or investments in securities of other lines, the

TABLE IX.—FINANCIAL CONDITION: BALANCES OF CAPITAL AND INCOME ACCOUNTS, ETC.

Name of Company.	Amount of Income Balance at end of 1883.	How applied.		Surplus‡ Earnings, year 1883.	Total Capital.	Capital Expenditure.	
		*Permanent Expenditure charged to Capital Acct.	† Securities, *i.e.*, Stocks and Bonds of other companies.			On Road and Equipment.	On Securities.
	£	£	£	£	£	£	£
Atchison, Topeka, and Santa Fé, ...	1,150,896	377,986	964,142	104,427	16,560,050	7,570,126	9,367,910
Baltimore and Ohio, ...	9,152,696	2,333,898	5,474,552	371,164	8,929,659	11,208,896	—
Central Pacific, ...	4,995,798	3,878,026	50,951	Def. 85,323	29,101,066	30,642,653	—
Chicago and N. Western, ...	1,837,424	Cr. 35,779	2,140,337	152,251	28,475,247	28,439,468	—
Chicago, Burlington, and Quincy, ...	3,016,086	2,976,738	—	516,687	29,411,947	27,345,982	5,042,703
Chicago, Milwaukee, and St. Paul, ...	1,015,816	475,284	232,396	291,934	28,743,449	29,218,733	—
Illinois Central, ...	1,020,418	134,470	1,127,434	31,382	13,429,000	13,563,471	—
Lake Shore and Michigan Southern, ...	990,336	Cr. 853,130	1,995,022	11,135	18,893,200	17,469,720	570,351
Michigan Central, ...	1,132,704	967,771	27,740	33,310	7,162,841	8,130,612	—
Missouri Pacific, ...	1,012,903	1,083,626	—	85,880	11,371,425	7,990,188	4,464,863
New York Central, ...	3,225,440	2,326,351	699,583	157,228	27,885,106	30,211,457	—
New York, Lake Erie, and Western, ...	1,424,071	782,323	640,694	129,995	32,217,307	32,999,630	—
Pennsylvania, ...	2,722,637	1,182,328	—	283,709	32,666,586	14,782,571	19,066,343
Philadelphia and Reading, ...	122,038	Cr. 1,600,954	—	449,012	26,275,192	11,403,245	13,270,993
Union Pacific, ...	1,651,024	Cr. 330,668	—	252,375	38,556,477	31,478,328	6,747,481

* This column is the difference between the total capital and the total expenditure, charged to capital account. The letters 'Cr.' mean that the capital received exceeds the expenditure.

† Not included in capital expenditure.

‡ That is, amount of the addition to income balances in 1883. 'Def.' means deficit.

important point for consideration is what will be the effect upon the net revenue. If the additional expenditure will yield net revenue sufficient to pay the interest upon the sum expended, there is no reason why it should not be provided for by the issue of an additional capital. If it is provided for out of income, the additional net revenue would become available for payment of dividend upon the existing stock, and the rate of dividend would increase. But it may happen that competition may so reduce rates that the earning power of the capital may diminish, so that the yield on total expenditure may not be increased. In this case, if the expenditure had been provided for by creation of fresh capital, the dividend must diminish, but if provided for out of income the rate of dividend may be maintained, and this has been the case with the Baltimore and Ohio railroad. The sum required to pay 10 per cent. interest upon common stock, 6 per cent. on preferred, and all interest upon bonds was somewhat *less* in 1882-3 than in 1873-4. The same dividend (10 per cent.) was paid in both years, though in the interval £2,723,864 of surplus income had been expended upon the lines, or invested in securities of other lines. Thus all this expenditure has been necessary to maintain the earning power of the line, and it does not in any way constitute a reserve available to meet loss of earning power in the future.

It is necessary to consider what is meant by earning power. It may be that the capital expended has really added to the earning power of the line—that is to say, has increased its capacity for carrying traffic, and it may be that the increased traffic has been obtained, but the net revenue may have remained stationary in consequence of a decline in the rates of carriage, and it may well be that it was recognition of the liability to a loss of profit from this cause, which led the company to devote surplus income to permanent expenditure. The company adopting such a policy has a clear advantage over a rival company which has no surplus income, and has to obtain the funds for capital expenditure by the creation of additional capital. This latter company may be gradually driven into default from competition with a strong company adopting this policy.

But it will be well to ask what has been done by other companies. Let us take the accounts of the Pennsylvania Railway. Comparing the years 1874 and 1883, we find stock increased £4,780,070. Funded debt increased £2,031,813. Total increase £6,811,883. Interest paid on Funded debt, increased £146,869. Sum paid as dividend, increased £131,742. Total increase £278,611, or 4 per cent. on the increased capital. Hence the rate of dividend on stock decreased from 10 per cent. in 1874 to $8\frac{1}{2}$ per cent. in 1883. The income balance increased in the same period £918,308.

Next let us examine the corresponding facts for the New York Central. Between 1874 and 1883 we find no increase of stock, but an increase of £2,302,498 in Funded debt, increase in interest paid, £140,838, and rate of dividend and amount paid as dividend unchanged. Thus the increased capital has been accompanied by a corresponding increase in net earnings. In the same period

£2,275,380 had been applied to capital expenditure out of surplus earnings, but while in 1874 the undivided surplus of earnings amounted to £515,294, in 1883 it amounted to only £35,805. Thus, but for the large expenditure out of revenue, the net earnings would not have been maintained. In the four years since 1880, the earnings have fallen short of the sum necessary to pay the 8 per cent. dividend, and hence the dividend has now been reduced, and it is necessary to raise capital to pay for capital expenditure which has been defrayed out of the surplus income.

Next let us examine the account of the Illinois Central Railway. Here we find that between 1874 and 1883 there was no change in the stock, and the alteration in the Funded debt, was unimportant. The dividend paid was 8 per cent. in 1874, and 10 per cent. in 1883. In these comparisons all references to branch lines are omitted. It is the effect upon the remuneration of the capital of the main line which is the subject of comparison.

In these four instances we can distinguish different methods of dealing with expenditure on permanent additions to way and equipment, such expenditure, that is to say, as is invariably charged to capital account in the United Kingdom.

(1) Charged to revenue.
(2) Provided for out of surplus revenue, but added to capital account.
(3) Provided for by issue of stock.
(4) Provided for by issue of bonds.

When a new line is built it is undoubtedly right to charge the cost to capital account, and provide for the cost by the issue of fresh capital; but a continual outlay also takes place upon lines already open for traffic—a second line of rails is laid, or additional sidings are constructed, or new stations are built, or wooden bridges are replaced by stone or iron, and all these expenditures ought to increase the permanent value of a line, and therefore in principle they may rightly be charged to capital account, and provided for by issue of capital. Such is the invariable practice in the United Kingdom.

The first method is adopted by the Illinois Central Railway. In the four years ending last December, it expended £560,230 upon permanent construction in Illinois, and charged it to revenue in addition to the ordinary expenditure of the year. Mr. John Dunn, of the President's office, says—

> "Our experience has been that these permanent expenditures do not lead to any such increase in the earning capacity as to justify the increased charge (which would be the consequence of providing for the expenditure by the issue of fresh capital), but only enable us to operate more economically; which is an absolute necessity, looking to the gradual and steady reduction which has taken place, and is still taking place, in the rates of transportation."

The Chicago and Alton Railway follows the same practice, and charged to revenue £307,169 spent upon permanent improvements in the four years 1881–4.

The second method is the one followed by very many American lines. But it is necessary to distinguish between a mere temporary provision for such expenditure out of revenue, and a settled policy not to raise capital for such expenditures. Very many English companies have incurred capital expenditure beyond the amount of capital raised, and therefore may to some extent be said to have provided for such expenditure out of revenue; but this is only a temporary expedient. It is always intended to issue capital against such expenditure. Not so with the American lines—the Baltimore and Ohio for example. It has kept unappropriated a large balance of earnings, and has employed it in defraying permanent expenditures. The difference between this practice and that of the Illinois Central is that in the one case the fact of the expenditure having been made is kept permanently recorded, and the nominal value of the line is correspondingly increased, while in the other the amount of the expenditure is written off the balance; in both cases the line gets the benefit of the expenditure without any increase in the burden of capital, but in the latter case, there appears to remain some reserve of value available in the future, but as we have seen, this is apparent only.

The second, third, and fourth methods are adopted in various degrees by all companies. Thus, the Pennsylvania increased the expenditure charged to capital by £9,662,831 in the nine years ending 1883, and in the same period increased its stock £4,780,070, and its funded debt £2,031,813, and raised by "Trust Certificates" £1,828,600; total £8,640,483. The rest it has taken from surplus earnings—having increased its income balance £918,308.

TABLE X.—Profit upon Capital Stock.

——	Of the United States, 1880.	Per cent.	Of the United Kingdom 1883.	Per cent.
	£		£	
No Profits,	102,107,604	19·53	56,899,605	9·66
Not exceeding 5 %	184,072,580	35·20	383,191,329	65·06
Above 5 %, not exceeding 10 „	124,312,844	23·78	147,316,690	25·01
„ 10 „ „ 15 „	95,871,404	18·35	44,067	0·01
„ 15 „ „ 20 „	13,474,757	2·58	1,546,436	0·26
„ 20 „	2,882,064	0·56		
	522,721,253	100·00	588,998,127	100·00

This table shows the amount of stock upon which no dividend was paid, and the amount of stock receiving different rates of dividend. Out of the total of £522,721,253 of stock (common and preferred) in the United States in 1880, £102,107,604, or 19.53 per cent., received no dividend. This is double the percentage of stock which received no dividend in the United Kingdom in 1883. In the United States 35.20 per cent. of the stock received dividend of 5 per cent. and under—the corresponding percentage in the United

Kingdom being 65.06 per cent.* The proportion of stock receiving above 5, and not above 10 per cent., was about the same; but the amount of stock receiving above 10 per cent. in the United Kingdom is quite insignificant, while in the United States over 20 per cent. of the stock appeared in this class in 1880. The year 1880 was an exceptionally prosperous one for the United States Railways. In fact, the United States Census year almost coincided with the most prosperous period for trade in that country during the past decade.

The extraordinary fall in the dividends and prices of the stocks of many American railways during the past two years, has led to a widespread distrust of all railway stocks. Thus the dividend of the New York Central Railway was 8 per cent. up to 1883; it fell to $7\frac{1}{2}$ in 1884, and to $3\frac{1}{2}$ in 1885, and is now being paid at the rate of 2 per cent. per annum. The Lake Shore and Michigan Southern paid 8 per cent. from 1880 to 1883, 7 per cent. in 1884, and nil in 1885. The Michigan Central paid $6\frac{1}{2}$ per cent. in 1881, nil in 1882, 5 per cent. in 1883, 3 per cent. in 1884, and nil in 1885. The Central Pacific paid 6 per cent. from 1880 to 1883, 3 per cent. in 1884, and nil in 1885. Union Pacific paid 6, $6\frac{3}{4}$, 7, and 7 successively in 1880 to 1883, $3\frac{1}{2}$ in 1884, and nil in 1885. Pennsylvania paid $8\frac{1}{2}$ per eent. in 1882 and 1883, 7 per cent. in 1884, and 5 per cent. in 1885. The prices of ordinary stocks varied enormously. The *lowest* prices of stocks ranged as follows in the six years ending December, 1885:—New York Central, from \$$130\frac{1}{4}$ in 1881 to \$$81\frac{3}{4}$ in 1885; Lake Shore and Michigan Southern, from \$$112\frac{5}{8}$ in 1881 to \$$50\frac{3}{4}$ in 1885; Michigan Central, from \$$84\frac{3}{4}$ in 1881 to \$$46\frac{1}{2}$ in 1885; Central Pacific, from \$$82\frac{3}{8}$ in 1882 to \$$26\frac{1}{2}$ in 1885; Union Pacific, from \$$105\frac{1}{2}$ in 1881 to \$28 in 1884. It is unnecessary to refer to the fluctuations in the stocks of the Erie, Philadelphia and Reading, Wabash, and Grand Trunk Railways, as they have (for many years, at any rate) had no value as investments.

The dominant cause of the fall in dividends and values has been the decrease in receipts. Thus the gross receipts of the New York Central fell from $33\frac{3}{4}$ million dollars in 1883 to 28 millions in 1884, and $24\frac{1}{2}$ millions in 1885; and the sum available for payment of dividends fell from $10\frac{1}{2}$ million dollars in 1880 to $7\frac{1}{4}$ millions in 1881, $4\frac{3}{4}$ millions in 1884, and $2\frac{1}{5}$ millions in 1885. The Lake Shore receipts fell from $18\frac{1}{2}$ millions in 1883 to 14 millions in 1885. The receipts of the Pennsylvania fell from 51 million dollars in 1883 to $45\frac{1}{2}$ millions in 1885, and the net receipts fell from $19\frac{1}{4}$ millions in 1883 to 16 millions in 1885; and further, the balance of earnings of the Pennsylvania Company's Western lines fell from a surplus of $2\frac{1}{2}$ millions in 1881 to a deficiency of 1 million in 1885, a deficiency which the Pennsylvania Railway had to make good.

These fluctuations in the receipts render the values of stocks uncertain, and thus fit them for being the subjects of speculation. It

* All preferential and guaranteed stocks are included in Table X., and this accounts for the large percentage of stock in the United Kingdom receiving dividend not exceeding 5 per cent.

is this, combined with the small proportion of stocks to bonds, which enables a small combination of capitalists, or even a single capitalist, to control entire railways, and manipulate them at pleasure. It is important to observe how the various circumstances combine to facilitate such operations. First, the actual traffics and real earning power of the railways are liable to great variations; second, this renders manipulation of the traffic and earnings difficult to detect; third, the small percentage of share capital renders the dividends very sensitive to variations in earnings; and, fourth, this causes a large proportion of lines to pay no dividends or very small dividends; fifth, the value of the shares being depreciated, and standing very much below par, only a small amount relatively is necessary to purchase a majority of the stock, and thus obtain control of a line; sixth, the non-existence of any large quantity of preference stock further facilitates such operations. Voting power attaches to preference stock, but not to bonds. Hence a large quantity of preference stock would make it more difficult to get a preponderance of voting power. Seventh, bonds, being payable to bearer, can be transferred with secrecy, which is impossible with debenture stock. Thus, directors can traffic in the bonds of their own lines in a way quite impossible in the United Kingdom. These are the conditions which render possible the extensive power exercised over the railways of America by the "Railway Kings," and the only practical way to mitigate the evils arising from such personal government is by operating upon the causes which form the basis of their power.

It is all important to know whether all American lines are liable to similar fluctuations of earnings. There are two groups of lines whose dividends have been well maintained. The Chicago Burlington and Quincy and the Chicago and Alton have each paid 8 per cent., and the Chicago Rock Island and Pacific has paid 7 per cent. in each year from 1881 to 1885. The Illinois Central paid 7 per cent. in 1881 and 1882, 8 per cent. in 1883,* 10 per cent. in 1884, and 8 per cent. in 1885. The Chicago and North Western paid 6 per cent. in 1881, 7 per cent. from 1882 to 1884, and 6½ per cent. in 1885. The Chicago, Milwaukee, and St. Paul paid 7 per cent. from 1881 to 1884, but paid only 4 per cent. in 1885.

The second group in which dividends have been maintained comprises the principal lines of the New England States. The Boston and Albany, Boston and Maine, and the Boston and Providence, have each paid 8 per cent. from 1881 to 1885. The New York, New Haven, and Hartford has paid 10 per cent. from 1881 to 1885. The Boston and Lowell paid 4 per cent. in 1881 and 1882, 5 per cent. in 1883, 5½ in 1884, and 6 in 1885. The Old Colony paid 6 per cent. in 1881, 6½ in 1882, and 7 per cent. from 1883 to 1885. The Fitchburg paid 7 per cent. in 1881, 6 per cent. in 1882 and 1883, 5½ in 1884, and 5 per cent. in 1885.

The principal cause of the falling off in earnings which has been so disastrous to the Eastern Trunk lines, has been the excessive

* And 17 per cent. in stock.

competition arising from the multiplication of routes, or, in other words, the increase in the means of conveyance out of proportion to the traffic to be carried. Up to the present the extension of railways in the lines west of Chicago has not gone beyond the increase of traffic; but there is, as far as I know, nothing to prevent the excessive construction of lines in this region, and therefore there is no security that their dividends will not fall in future years. It is otherwise with the railways in the New England States, for there, as we have already stated, extension has practically ceased. The injurious effects of the excessive competition have been so obvious, that there has been much discussion over the question whether a check should not be put by law on the building of parallel lines. The State of Massachusetts is the only state which has a law that no line can be made till the commissioners have certified that public convenience requires it. The obvious argument for permitting unrestrained building of lines is that this is the only way to keep down the charges of the companies. In Massachusetts the citizens rely upon the railway commissioners to see that the companies make reasonable charges, and the system appears to work satisfactorily to all parties. The trade and agriculture of America are more liable to sudden and extreme fluctuations than those of the United Kingdom, and upon these legislation can exert but little influence. Railways cannot escape the ordinary alternations of prosperity and depression; but apart from these, the value of railway property cannot become more stable till the building of new lines is placed under regulation, and the public may reasonably take the opportunity of granting this protection, to require the companies to submit their proceedings to an effective supervision for the protection of the interests of the people. I shall now proceed to consider the efforts which have been made by different states to control the charges made by the companies.

Railway rates.

Numerous complaints are made in America as in the United Kingdom against the rates charged by railway companies. They are accused (1) of charging excessive rates, (2) of giving special advantages to towns where there is competition, (3) of carrying some goods at a loss, or at an unduly small profit, and making up for the loss by higher charges on other commodities, and (4) of giving advantages by low through rates to foreign producers over home traders. I am not prepared to say that none of these charges are well founded. Errors of judgment may be committed in some cases; but the principles upon which the rates objected to are fixed are sound. They are—(1) That regard should be paid to what the traffic will bear; (2) that the rate per mile should be reduced with the distance; (3) that rates may be specially reduced to meet competition at particular points.

The first of these principles is constantly appealed to by traders when seeking a low rate for any commodity. The argument is frequently heard that a trade cannot be carried on unless a very low rate is given. The cost of the service is ignored. It is insisted that the rate should be fixed to suit the circumstances. But when traders object to the rate upon some article, in regard to which this cannot be said, they compare the rate with some low rate, and argue that the cost of carrying the article is not at all or only slightly greater in the one case than in the other, and that rates should be fixed according to cost of service. They denounce as most outrageous the principle that the company is entitled to charge a higher rate, simply because the article is more valuable and can bear a higher rate without injury to its sale; and they frequently misrepresent this principle by stating that the companies claim a right to charge *as much as* an article will bear, while all that a company claims is, that they have a right to take into account what the traffic will bear, and charge something above the average cost of service on this account.

The second principle is that upon which through rates are founded. Here, again, all traders claim the benefit of it when it tells in their favour, but are most anxious to repudiate it when it gives an advantage to a competitor. To forbid through rates would cause immense injury to trade. The utmost that can be said is that in some cases they may be injudiciously fixed.

The third principle is also one which benefits traders. But traders at non-competing points find it hard to pay more than others for equal or less services. Here, again, the soundness of the principle cannot be questioned; but it is possible that companies may carry to excess the reduction of rates at competing points, and recoup themselves by charging rates higher than would otherwise be required at non-competing points. Again, traders and the public claim that companies should sacrifice profit to develop a particular trade, or trade in a particular locality, for the sake of the benefits which would result from the increased prosperity of the district. This is a claim which requires careful consideration. If railway companies could be regarded as merely private undertakings, the claim would be at once rejected. But railway companies are in possession of public privileges, granted to them for the sake of the public good, and although they exercise these privileges with a view to their own profit, yet if they fail to render that benefit to the community which may be reasonably expected of them, the public has a right to take steps to realize the advantages aimed at in the granting of the privileges. Thus the nation grants to a company the right to construct a means of communication between certain places. The company makes a railroad and runs trains, carrying goods and passengers at charges within the maximum fixed. Has the company discharged its responsibility to the State by the bare act of furnishing means of communication, without regard to the kind of service rendered? No. The State first of all will insist upon any regulations it considers necessary to insure the safety of those using the railway; it will further insist upon special terms to insure cheap conveyance, such as the "parliamentary train." The question is: Will it go a step further, and insist upon special rates or facilities for goods traffic?

Two questions must be distinguished :—(1) The bare right of the State to take such steps, and (2) the expediency of the State adopting any particular step which may be proposed to it. As to the first, it is sufficient to say that the whole course of legislation and political thought show that the people will not consider themselves bound by past legislation, if considered inconsistent with their view of public interest. The question is then narrowed down to the expediency of any proposed restrictions, and I think it would be best for all parties to concentrate examination upon this point.

Summing up ; I would say that in regard to all the current complaints of excessive and unequal charges, of through rates, of unfair advantages given to competing centres, and of neglect of public interest, what is first required is a thorough examination of the facts ; at present there is no means of making such an examination. A trader may appeal to the public through the press, or he may bring an action at law or before the railway commissioners, or inquiry may be made by a parliamentary committee. None of these processes are efficient. Such matters are too complicated to discuss in letters to the press. A railway company could not make all its proceedings public ; it may correct palpable mis-statements, but cannot explain its reasons. Nor is the editor of a newspaper in a position to weigh calmly all the facts. He has not leisure to acquire the requisite knowledge, nor would it be reasonable to expect that he could devote the requisite time to the examination of such complaints. The second remedy is no less inapplicable; because in the first place it is not generally alleged that the companies are acting beyond their legal rights ; and in the second place, to take legal proceedings, requires the trader to place himself in a false position. The question is not one of strict right. A wise trader would not assume that the company *must* be wrong. He would admit that he cannot know all the facts and motives of the company ; but he claims that the matter appears *prima facie* unreasonable, and that some impartial tribunal should decide whether the company's action is right. The third method of investigation—by a parliamentary committee, also fails, because the true facts cannot thus be fully brought to light. The process is too circuitous. Complaints are made, railway companies are invited to make explanations, and their officials are examined ; but they cannot go beyond the most general statement of principles. A full statement of the circumstances of each case would go too far into minute particulars, and any such statement could not be adequately examined into without access to documents and personal inquiry on the spot.

It would seem as if matters must be left to take their course ; but this would be a mistake. There is widespread dissatisfaction with railway management, and unless a better state of feeling can be brought about, the end will be rash legislation, which will probably do more harm than good. It is here that I think the experience of the States of America is of value to us.

In America the regulation of railways is a matter for the State governments, not for the Federal government. The States have tried different plans, and the knowledge of their experiments can hardly fail to be of advantage to us.

The methods adopted may be classified as follow :—

1. Specific legislation as to charges—that is, fixing rates by statute.

2. Appointment of railway commissioners with authority to fix rates obligatory upon the companies.

3. Appointment of railway commissioners with authority to draw up schedules of rates ; such rates not to be binding upon the companies, but only *prima facie* evidence of what charges are reasonable. The procedure in this case is that if a rate higher than that fixed by the commissioners is charged, the aggrieved party brings an action against the company, and the latter must prove that the rate fixed by the commissioners is not reasonable.

4. Appointing railway commissioners with authority to investigate all complaints, and pass judgment upon them. The decisions of the commissioners are not binding upon the companies, they are only *prima facie* evidence of what charges are reasonable. The respect paid to them depends upon the power of the Commissioners to influence public opinion, and so direct legislation. The decisions are reported in the press and in their annual reports, with such information and arguments as they think fit to furnish. Thus if the companies were systematically to ignore their decisions, they would be likely to see the authority of the commissioners extended.

Such railway commissioners are not to be confounded with the Railway Commission in these countries. Our Railway Commission is a judicial body—a sort of branch of the courts of justice, but having a lay and expert element side by side with the legal element —which hears cases, gives decisions, and requires suitors to come before it with all the procedure of a court of justice. In America the commissions have no judicial authority. Complaints are made to them without any formality whatever, and if their decisions are not complied with—the ordinary courts must be applied to. It should be observed that these methods of regulating rates are not mutually exclusive, but may be combined with one another.

The first method, that of fixing rates by statute, has been tried in various States, and has been generally abandoned—for example, in Iowa, Michigan, and Minnesota. It exists still in Ohio, but the law is inoperative. It exists also to some extent in Missouri, but is combined with the second plan, of giving the railway commissioners power to establish rates. The States of California, Illinois, Georgia, Kansas, and Missouri all have railway commissions, with extensive powers of fixing rates, and the difference between the second and third methods may be seen from an examination of their procedure. Thus, in California the commissioners have power to establish rates, and any company that charges higher rates is liable to a heavy fine. The people of California seem to think the legislation useful ; but as the present law has only been in force five years it is too soon to speak positively as to its results. The commissioners are not unanimous in their mode of applying it. The Central Pacific Railway protests against the rates fixed. They assert that the commissioners have acted under the dictation of the mob, and that all projects for further extension of railways must be postponed. They add that they are not "apprehensive of serious evil from an enlightened, unprejudiced, and untrammelled commission."

In Missouri freight is classified, and maximum rates for each class are fixed by statute, and the commissioners are authorized to revise the classification and fix schedules of rates, which the companies must conform to. This law has been in force for some years, but the commissioners appear to have only recently found out the full extent of their powers. The classification fixed by the commissioners does not give complete satisfaction, and the remarks of the commissioners show that they do not feel quite satisfied with their own handiwork. So far the practice is much the same as in California; but in Missouri the rates are not obligatory. The enforcement of the rates fixed by the commissioners is left to private persons. The commissioners have sought to obtain an enlargement of their powers, and especially to be enabled to prosecute suits against companies not observing their orders; but four General Assemblies in succession, each one fresh from the people, have deliberately refused to grant such increase.

The railway commissioners of Georgia, Illinois, and Kansas have also power to fix schedules of rates, and their rates are to be accepted as *prima facie* evidence of what charges are just and reasonable. If a company makes a higher charge, the trader must bring an action in the ordinary courts. The commissioners of Georgia lay stress upon the fact that their decisions are subject to such revision by a court of justice, and they recommend that a power of appeal to a higher court should be granted. The commissioners of Illinois assert that the railways readily comply with their decisions, and that—

> "The inclination now apparent in railroad management to avoid prosecutions and to foster friendly relations with the public, demonstrated the wisdom and efficiency of the present system of state control of transportation."

Yet the difficulty of laying down definite rules in regard to rates is well illustrated by their experience. There is a rule very common, in some form or another, in the States, and very generally approved of by critics of railways, viz., that a company should not charge more for a less distance than for a greater. One form of it is that a company should not charge more to a way station than to a terminus. Some States permit competition at a point to justify an exception; but the law in Illinois expressly says that competition is not a sufficient reason for breaking it. In carrying out this rule, the commissioners were obliged to give two decisions in 1884, which they considered injurious to the interest of the public as well as of the companies.

The States of Iowa, Kentucky, Maine, Massachusetts, Michigan, and New York, have railway commissioners, with authority to hear and determine complaints as to rates; but their decisions are not *ipso facto* binding upon the companies, although as a rule they are complied with. The Massachusetts commission may be taken as the type of this class, and it appears to have worked satisfactorily. It does justice to the rights and necessities of the companies, and it exerts a powerful influence upon the companies, to ensure that they regard the public interest in the exercise of their powers, and fulfil the obligations arising out of the possession of special powers conferred by the State. One example may be given to illustrate their jurisdiction. The citizens of Pittsfield complained that the Boston and Albany Railway charged only one dollar per ton for coal from East Albany to Pittsfield, a distance of 50 miles, while they charged one dollar 25 cents per ton for coal from Hudson to Pittsfield, a distance of 43 miles. The commissioners say that the rate of one dollar from East Albany is the company's share of the through rate from the mine—the local rate from East Albany to Pittsfield being one dollar 25 cents, or the same as from Hudson. They report that the rate is given in order to supply cheap bituminous coal, and that to forbid the rate would have the effect of raising the price of coal. They accordingly declined to make any recommendation to the company.

The existence of such a commission is of advantage to traders in many ways. (1) It furnishes information as to rates. A trader can learn from the commissioners what rate he ought to be charged, and thus he can check any statement made by the officials of the companies; and the knowledge of this fact tends to insure that the trader will get fair and equal charges in all cases. (2) A trader, without any trouble or expense, gets the opinion of a competent and impartial person, as to whether the charges made in any particular case are regular. (3) The trader has a simple and inexpensive machinery for gettimg a skilled tribunal to inquire into the fairness of any charge made by a company. It cannot be too carefully borne in mind that in this country if a dispute arise between a trader and a railway company as to the legality of any charge, the trader can only ascertain, at the cost of an action at law, whether the company's charge is legal or not. He has no means of ensuring that a company gives a thorough consideration of any complaint of excessive charge. I do not doubt that as a rule railway managers do endeavour to meet the requirements of traders; but it is only in accordance with human nature that they would do this more thoroughly, if their decisions were subject to an appeal. The Massachusetts commissioners conclude their report for 1884 with the words:—

> "The citizens of Massachusetts feel pride in the thought that the humblest of her people may find without delay and without cost redress against the most powerful class of her corporations."

It is in this direction that I think legislation might proceed in this country. I would have railway commissioners appointed for Ireland to investigate all complaints as to rates, and to make recommendations upon them. Their decisions should not be binding upon the companies. They would exert a powerful influence, by diffusing information, and by expounding the principles upon which rates are fixed. The companies would come to be regarded more favourably by the people, when impartial investigators had approved their policy, and the public would find that in cases of real hardship they would be able to obtain redress. The force of public opinion would cause the companies to respect the decisions of the commissioners, when based upon principles which would command general assent.

In addition to powers over rates, the commissioners should have transferred to them the powers now exercised by the Board of Trade, in regard to the certifying of new lines and inquiring into railway accidents in Ireland, and they should also be authorized to require the companies to furnish returns of traffic and expenditure and financial condition, as they think necessary.

V.—*On Fiscal Relations of the United Kingdom and Ireland, with special reference to the State Purchase of Land.* By W. F. Bailey, Esq. Barrister-at-Law.

[Read Tuesday, 13th April, 1886.]

ANY scheme that could be devised which would settle the land question in Ireland, without being unfair to the British taxpayer or unjust to the Irish landowner, would be gladly welcomed by all parties having a real desire to benefit Ireland, and restore peace and prosperity to its people. Events march rapidly nowadays, and a problem which was regarded as solved a few years ago, is again being pressed forward as if it had never engaged the attention of the leading legislators, economists, and jurists of the empire. A wholesale measure, dealing with the ownership of the land, including the expropriation of the present owners and the transference of their rights to the State, is by many considered the best, the most effectual, and, in fact, the only permanent way of settling the question. Although this has been the opinion long held by persons occupying entirely different and even opposing positions, no real attempt was made to propose any satisfactory solution on such lines. The magnitude of the difficulty, the immense extent of the property involved, and the disinclination to impose a heavy burden on the already overweighted taxpayer, left the question "in the air," so to speak. An attempt was made by the Land Acts of 1870 and 1881, and the Land Purchase Act of 1885, to encourage the buying out of the landowners, by giving the occupiers state loans on favourable terms for the purpose. Various circumstances prevented the success of these measures, although each was more favourable than its predecessor, so far as the purchaser was concerned. When, accordingly, a scheme was put forward some short time ago, which promised to effect a radical and sweeping change in the ownership of the land, without imposing any great hardship or additional burden on any class in the State, everybody was interested, and hope of a satisfactory settlement—a hope which has been grieviously languishing —again filled men's minds.