

English stem. In making the journey between the two cities, the distance travelled on English ground is 78 miles, and on Belgian 89 miles. On the English side are two well-appointed railways, the property of private companies, both running trains between London and Dover, each with its separate chairman and board of directors, general manager staff and working plant. On the Belgian side is a single railway, the property of the nation worked by government officials responsible to the administration for the time being. Of the two railways on the English side, the one most recently constructed was authorized by Parliament in order to give the public the benefit of "competition" by railway. But Parliament in its wisdom does not seem to have provided for the contingency of the new company combining with the old one and rendering "competition" impossible. The companies have combined, and now see the advantage which the public has derived from the competitive policy so much favored by Parliament. First take express trains. While the fare by both the English lines to Dover for 78 miles is 2s 6d first-class, and 1s 6d second-class, or over 3d and 2 1-3d per mile respectively, the fares charged by the Belgian State railway for the journey of 89 miles is only 5s 3d first-class, 3s 4d second-class, and 2s 8d third-class, or less than seven-tenths of a penny per mile first-class, less than five-tenths of a penny second-class, and a little more than three-tenths of a penny third-class, or about one-fourth the rate of travelling in England. It must, however, be added, that while the English railways allow 120 lbs of baggage free for each first-class passenger, and 100 lbs for each second-class, the Belgian railway allows only 25 kilograms, equal to about 55 lbs, free, charging for all above that weight at the rate of six centimes per kilometre, which, on 120 lbs of total luggage, would involve an addition to the Belgian fare between Ostend and Brussels of about 5s per passenger. But it will be seen that this arrangement is entirely in favor of the poorer classes of the community, as it is only the richer portion who carry with them large loads of personal luggage, and it is but reasonable that they should pay for their luxury. In the case of ordinary trains, the fare charged for the 78 miles run on the two English lines is 10s 6d first-class, 13s 6d second-class, and 6s 6d third-class, while that charged for the 89 miles run on the Belgian State line is equivalent to 5s 2d first-class, 2s 9d second-class, and 2s 1d third-class. Nor is there so much difference in the speed as might be supposed. The English express trains perform the journey of 78 miles in two hours, and the ordinary trains in a little over three hours; while the Belgian express trains perform the journey of 89 miles in two hours and twenty minutes, and the ordinary trains in a little less than four hours.

THE RESULT OF LOW TARIFFS.

The present very low tariff on Belgian railroads has been in force only three years. It was adopted in consequence of the advantages derived from a previous lowering of the tariff. In 1865, the Minister of Public works stated, since 1866, that is to say in eight years—

1. The charges of goods have been lowered on an average of 28 per cent.
2. The public have despatched 2,706,000 tons more, while they have economized more than 4,000,000 francs (£800,000) on the cost of carriage.
3. The public treasury has realized 5,781,000 francs more, after having paid the cost of working and the interest of capital.

Being in this prosperous situation, the government have asked if the time has not come for them to turn their attention to the second part of the problem of cheap transport. In other words, whether it is not proper to apply to the service of passengers the principles which have given such satisfactory results to that of goods.

The government is of opinion that facility and cheapness of travelling are in principle as fruitful of benefit to all classes of society as the economical transport of goods can be for the producers and for the consumer.

The success of the Belgian system induced other governments to follow this plan. Thus, of 3,777 miles open in Prussia 950 miles were constructed at the expense of the State, and are worked by a government staff, 877 miles were constructed under concessions, and are worked by the government; 1,950 miles were constructed and worked by the government. In 1863 the State lines yielded a profit of 73 per cent. on the capital expended on their construction; the lines worked by the government yielded 5 per cent., and the lines worked by private companies 84 per cent. Care has been taken in Prussia to prevent large preliminary expenses such as those which are necessary in England in carrying bills through Parliament. Competition between rival companies which would cause a depreciation of railroad property is not allowed. The government fixes the fare, and sees that it is sufficiently low. No new line is to be conceded which the minister considers competitive. This is intended to secure the value of the lines when they shall become the property of the government.

A similar policy has been observed in the other German States, in which the railways contribute largely to the revenue. Austria has been compelled to leave the construction of the roads to companies. It reserves the right, when the profits exceed 15 per cent., to make reductions in the tolls authorized by the concession; at the end of 90 years the property in the railways and their appurtenances become the property of the State.

The railway policy of France has been somewhat similar. When public railways were first introduced in that country in 1836, the government undertook to assist in their formation by granting sums in aid, and by constructing the earthworks and bridges. The French lines are for the most part leased to six great companies for a period of 99 years, during which a fund is reserved from the traffic receipts for redemption of the capital, after which the lines become, as in the case of the German railways, the absolute pro-

perty of the State. Meanwhile, in return for the assistance originally granted by the government, the companies are required to carry the mails free, as in Germany, and to carry the military and public employees at very low rates. The companies have also to submit to the control exercised by government over the rates and fares charged for all classes of traffic, besides paying a tax of 10 per cent. on their gross receipts. But as the carrying monopoly of the companies is rigidly protected, and no competitive lines are conceded, nor more railways constructed than are considered necessary for the adequate accommodation of the public, nearly all the French companies pay large dividends to their proprietors.

THE CHARACTERISTICS OF ENGLISH AND CONTINENTAL RAILROADS.

In England travelling is quicker and dearer; abroad it is slower, cheaper, and safer. The foreign receipts are greater and their expenses less. In France the receipts per mile are 10s. 2d, against 5s. 3d.; the net profit in one case is 6s. 5d., in the other only 2s. 9d. The reasons of this are fewer trains, less wear and tear, and slower speed. Great attention is paid on the Continent to third-class travel. Only prices and Englishmen travel first-class. Eighty per cent. of the German travellers are third and fourth-class. Yet they charge for first-class passengers but 1 1/2d. per mile; the other rates are correspondingly low.

THE COMPETITIVE PRINCIPLE.

English statesmen have been fond of supporting competition amongst railroads; but the desired effect has not been produced. On the contrary, the additional expenses of a parliamentary or speculative character, increase the rates of charges. The evidence before the commission shows conclusively that the competitive system has broken down completely.

THE UNPOPULARITY OF ENGLISH RAILROADS.

In England, railroads are regarded as enemies of the public, on the continent as their friends. The following extracts from evidence before the parliamentary commission will illustrate this:

The two systems, said Mr. Stewart (formerly of the London and North-western Railway), are totally different. One represents a system of unrestricted competition, leading occasionally to very great inconvenience and injustice to individuals; carried on, as respects current transactions, without regard to commercial principle, and too often with a view only to effect a settlement with a competitor; producing disturbance and much inconvenience to the general traffic and also serious injury to individual's localities, and ports; whereas abroad they have a system based on monopoly, regulated by the State with a view to the avoidance of those evils; a system, in fact, under which practical effect is given to the intentions of Cardwell's Act.

Again, Sir Rowland Hill also observed:

It cannot be denied that the injustice inflicted in various ways on the companies is too often retaliated upon individuals. No one can fail to be struck with the great amount of public dissatisfaction on the subject of railway management, of which not a little has come before us in evidence. And it must be admitted that there are points and occasions on which complaint is well founded.

IRREGULARITY OF THE TARIFF.

In Belgium there is a fixed rate of tariff, the system is uniform; it is based on just and definite principles; it works to the entire satisfaction of the public. In England, on the other hand, it is anomalous and most unfair.

INJUSTICE OF THE RAILROAD MONOPOLY.

There can be no doubt that the idea on which Parliament originally set out, of allowing private individuals to project, construct, and retain as their absolute property the national highways and the right of working them for their sole profit, was short-sighted and foolish; and that the theory then entertained of applying the principles of free trade to railways was absurd in the highest degree. For the railway is essentially of the nature of a monopoly, with which anything like free competition is impossible. Railways have superseded nearly every other method of conveyance. "A railway," says John Stuart Mill, "is in a great degree a private monopoly; and a government which concedes such monopoly unreservedly to a private company, does much the same thing as if it allowed an individual or an association to levy any tax they choose, for their own benefit, on all the mail produced in the country, or on all the cotton imported into it." This, however, has been done in England; and the way it has been done—so strongly in contrast with the policy pursued by Belgium, Prussia, and other continental governments—has already been productive of many evils, and is likely, if not remedied by legislation, to be productive of many more. It has been ascertained that it is a very great loss to the public, though affecting in the first instance the shareholders, to have non-paying roads constructed. Where there are two competing lines there is always an anxiety to combine them, and thus reduce expenses. The advantages of amalgamating lines are highly spoken of by railroad managers in their evidence before the Railroad Commission. "Every fresh amalgamation," says one of these officials, "has added to the development of the traffic. We have improved from being a non-paying line to paying six per cent." The question then arises why not carry out the principle which appears so good and amalgamate all the lines? It must be admitted, however, that the managers and others whose occupation in this case would be gone, do not think this admirable.

THE IRISH RAILWAY TRAFFIC

The main feature of the Irish system is the exorbitancy of the fares charged; its other inconveniences are no less disastrous to the companies. Thus, in travelling from Waterford to Dublin, a distance of 112

miles, a third-class passenger must spend the greater portion of two days. The fares charged third-class passengers between Athlone and Dublin are higher than the express first-class fares on Belgian lines for a similar length. The resources of the country are not properly worked in consequence of these charges. Thus the west coast of Ireland swarms with fish, and no facilities of forwarding it cheaply and rapidly to England or to the eastern coast are afforded. The defence of the proprietors is that the roads are private speculations, and that the companies endeavour to recoup themselves. But it is in the method of doing this that they err. It is extremely generous to the public and does not enrich their proprietors. The expense of working them on the high fare system amounts to 75 per cent. of the gross receipts, and the average dividend is 2 1/2 per cent. It is worthy of notice that, while the increase in the receipts from passenger traffic on the English railways in 1866 compared with 1865, was £284,885, and on the Scotch railways £75,184, the decrease on the Irish railways during the same period was £41,166. And yet the mileage of Irish railways compared with the population and the area of country served, is less in proportion than either in England or Scotland, while the Irish lines have been constructed more cheaply than those of most European countries, as will appear from the following table:

COUNTRIES.	Miles open.	Miles of railway to every 100 sq. miles of territory.	Average cost of railways per mile.	Miles of railway to every 10,000 population.	Miles. MILES. £
England.....	9,701	6	17	41,500	
Scotland.....	2,244	7	7	23,600	
Ireland.....	1,908	8 1/2	6	14,000	
Belgium.....	1,247	24	10	18,280	
France.....	9,014	24	4	24,800	
Prussia.....	3,777	2	4 1/2	16,740	
Austria.....	3,654	1	4	21,700	

The results which would follow the amalgamation of Irish railroads would include the immense advantages arising from a cessation of rivalry, jealousy, competition; an immense saving would at once be effected in the working expenses. In place of useless boards of directors, auditors, secretaries, engineers, and general directors, an efficient executive could be substituted, sitting in Dublin. As the authority of Parliament would be required to effect this consolidation, the question is raised why not at once place them under the control of the government. The expense of purchase would be trifling, not more than £22,000,000. This might be raised by a government stock at 31 per cent., the interest on which would be less by £167,000 than the receipts from the railroads in 1866. It is calculated that the expenses of working them under government control would be reduced 15 per cent., involving a saving of £300,000 annually, which might be employed in reducing the fares. Amongst other authorities recommending the purchase of the railroads by the government are Mr. Monsell and Sir Rowland Hill. These have made important reports on the subject, which the former, in support of the policy of the government assuming the proprietorship of the Irish railways, has not yet been answered, and indeed is unanswerable. That of Sir Rowland Hill is a report for the future, worthy of the author of the "Cheap Postage System." In brief, he sets forth that experience has shown that railways are essentially monopolies; consequently, that they are not suitable objects for ordinary commercial enterprise; that they cannot be left advantageously to independent companies, who, of course, manage them with exclusive reference to their own interests; but that they should be in the hands of those who will control their management with a view to the interests of the country at large, that is to say, in the hands of the government.

HEATING RAILROAD CARS.—The *New York Times* says: A new apparatus for heating railway cars has just been tried on the Michigan Southern Railroad. It consists of a series of pipes, passing along the sides and beneath the seats of the cars, connected with a cylindrical tank inclosing a coal burning heater, and partly filled with water, which is gradually converted into heated vapor, which readily passes through the pipes, circulating through them, and returning to the tank, imparting heat to every part of the car in proportion to the temperature to which the vapor is raised. The apparatus is capable of holding enough coal and enough water to last twenty-four hours, and is said to require little or no attention during the trip. It is reported to have served its purpose admirably in the trial that has been made. There is no doubt that we require some other mode of heating railway cars than the dangerous coal stoves which last winter, as in previous winters, produced such terrible disasters and destruction of life. The companies ought to see to this matter before the arrival of the very cold weather.

SHODDY.—Woolen rags are becoming a more important article than formerly. Once they were used chiefly for manure, for which purpose they are very valuable, a large demand existing for them among the agriculturists of England; but since woollen fabrics have advanced so much in price they have been extensively worked over and during the war have given rise to a term that will not very soon pass out of memory with the American people—Shoddy. The woollen rags are thoroughly picked to pieces, and made an extremely short, stapled wool, which may be used for some fabrics, but the cloth in which it is woven is of comparatively little value.