

"Times" in condemnation of the live rail, generally known as the third rail, which he maintains is an obsolete engineering device and a blunder which should never have been committed. It will be remembered that Dr. Thompson would have been pleased to see the three-phase overhead system adopted in the electrification of the Metropolitan Railway and Metropolitan District Railway, and his present attitude is now undoubtedly induced by the experiments which are being conducted on the single-phase system both in America and on the Continent. It would appear somewhat anomalous for Dr. Thompson to take up such a position at the present when it is well known that electrical engineers of greater experience in tramway and electric railway construction have been experimenting in this direction for years, and it would hardly appear just to the magnificent work that has been done in the last ten years to condemn so universally the third-rail system, which has undoubtedly filled the wants of electrical engineers for years past when no other system was available. If the third-rail system had been so blindly condemned years ago the present work of electrification would have been at a standstill. As the editorial columns of this paper recently said, it has never been conceived that the third rail would fulfill every condition, but electrical engineers have had to use what systems have been available.

After months of discussion, the South Shields Town Council has at last decided to municipalize its tramways, and will not enter into arrangements for any company to operate them. The whole scheme will involve an expenditure of about £153,000. The present trams and 'busses carry something like 3,000,000 passengers every year, and the gross revenue is about £12,400.

Upon the question of electrification of the tramways in the East End of London, the Borough Engineer of Stepney has recently reported that the reconstruction and electrical equipment is within measurable distance of realization. The London County Council has not insisted upon a uniform system for the district, but rather recommends a combination of the conduit and overhead trolley systems. In High Street, Whitechapel, Commercial Road, East India Dock Road, Whitechapel Road, Commercial Street and Le-man Street it is proposed to install the conduit system, while in other streets it is proposed to have the overhead trolley system. The Stepney Borough Council, however, despite the admitted cheapness of the latter system, is entirely opposed to it on the ground that it is only suited for those districts removed from crowded centers. The local authorities, in their opposition, rely upon the London County Council Tramways' electrical power act, which does not authorize the Council to place in any parish or district any poles or wires on or over any street for working tramways by electrical power unless the Parish Vestry or Board of Works for such district shall have consented to the adoption of such a system.

In the northern section of the city the same question is also being deliberated. The Clerk to the London County Council has written to the St. Pancras Council on the subject of its requirement that one system of electrification of tramways—the underground-conduit system—should be adopted throughout the borough. He points out that the County Council has endeavored to arrange for the conduit system in the more central districts, overhead traction being as far as possible confined to the outlying areas. He adds that it is estimated that the additional outlay which would be involved by the substitution of the conduit system on those routes for which it is suggested that the overhead system should be employed would amount to something like £500,000. A special committee of the St. Pancras Council recommend the Council to adhere to its resolution requiring adoption of the conduit system throughout.

The half-yearly meeting of the shareholders in the Mersey Railway Company was held in the company's offices, London, recently. Mr. James Falconer, chairman of directors, presiding. In moving the adoption of the reports and accounts, the chairman stated that the number of passengers carried, exclusive of season ticket holders, during the half year was about 4,500,000, as against 3,200,000 during the corresponding half year in 1903, an increase of something like 40 per cent. The receipts from those passengers, including season ticket holders, had increased from £26,136 to £33,715, equal to 29 per cent. There was a very substantial increase in the number of persons traveling under season tickets, as was shown by the fact that the receipts from season tickets advanced from £3,485 to £4,167, or 20 per cent. From all sources the total increase in the receipts was from £32,278 to £40,918, or about 25 per cent. The total working expenses were £33,591, as against £32,061, an increase of £1,530, but that included the exceptional charges for pumping and ventilation. If they excluded those charges the working expenses were £29,751, as against £27,375, an increase of £2,376. During the past half year the train mileage was 411,683, as against 218,308 in the corresponding period of 1903, so they had been running something like double the train mileage, and consequently doubling the convenience and facilities for traveling for the public. If they excluded the exceptional charges of pumping

and ventilation, the cost per train-mileage in the corresponding half year of 1903 was 30.1d, or practically 30d, per train-mile. That was for four months of steam and two months of electricity. During the past half year the cost per train-mile of the electrical service was 17.35d, equal to a 40 per cent reduction. If, however, they included the exceptional charges for pumping and ventilation, the cost per train-mile for the half year in 1903 was 35.25d, while the cost during the past half year was 19.58d, practically a reduction of 16d upon 35d. That was a very striking result of the change from steam to electricity. These figures conclusively established the extraordinary superiority of electrical traction over steam traction in dealing with such a railway as this. If he wanted to put briefly and simply the position and prospects of the Mersey Railway, he would say they had now demonstrated that at a cost of 19½d per train-mile they could carry double the number of passengers they were carrying at present. They had reached a point of earning per train-mile from all sources something like 2s, and the whole future of the company depended upon their increasing that figure of 2s per train-mile.

Mr. Arthur Ellis, Cardiff, borough electrical engineer and manager, has issued his report on the working of the tramways for the year ending March last. The total income from all sources is set down at £108,442, and the working expenses at £69,478, leaving a gross profit of £39,964. The actual net surplus balance was £7,724. There was a total disposable balance of £14,976, in addition to £5,796 allocated to a loans fund suspense account, and these amounts represented the excess income over expenditure since the inception of the system. The working expenditure per car-mile was equal to 5.818d per car-mile—a very reasonable result when compared with other towns. The ratio of working expenses to receipts worked out at just under 62 per cent. The greatest burden arose in the amount required to be paid out of revenue for loan charges, which alone absorbed 3.053d per car-mile, the capital at the end of March amounting to £687,222. The receipts from fares alone total £101,794.

The electric tramway system inaugurated by the Swindon Corporation was publicly opened recently. The 3½ miles of route have been equipped with the overhead system, and seven cars have been obtained at a cost of about £38,000, but other 3 miles of route have been sanctioned, while it is tolerably certain that three or four more cars will be required. A dinner was given to the employees engaged in the electricity and tramways undertaking, while the Mayor entertained the members of the Corporation and other gentlemen to luncheon. Lord Edmond Fitzmaurice, M. P., proposed "Success to the Swindon Corporation Tramways," and expressed the opinion that the venture would be an increased source of prosperity to the town and convenience to the inhabitants.

With the object of providing a special inducement to the Halifax Corporation to bring trams into the Sowerby district, the Sowerby Council a month ago decided that, so far as it legally could, it would indemnify the Halifax Corporation from the payment of rates on such tramways for a period of five years. This has called forth an interesting communication, which clearly indicates the attitude of the railway companies in such a case. The letter is from Mr. Skelmerdine, of the Rates and Taxes Department of the Lancashire & Yorkshire Railway Company, Manchester, who, on behalf of the company, opposes the adoption of any such resolution, as being both illegal and contrary to the provisions of the public health act. He adds: "It is perfectly clear that for the District Council to say they will not rate property for district rate purposes is giving unfair preference, and one which the railway company, as one of the largest—if not the largest—ratepayers in the district must strongly protest against." A copy of this letter has been forwarded to the Halifax Corporation. A. C. S.

The Columbus, Delaware & Marion Railway Company has been incorporated with \$2,500,000 capital stock for the purpose of taking over the Columbus, Delaware & Marion Electric Railroad Company, capitalized at \$1,600,000, and operating an interurban road from Columbus to Marion; the Marion Railway, Light & Power Company, capitalized at \$500,000, operating an electric railway system and lighting plant at Marion, and the Columbus Northern Railway, Power & Equipment Company, which was incorporated a short time ago for the purpose of erecting a large power station with which to operate the railway system. The companies mentioned are controlled by the same interests. The following officers have been elected: John G. Webb, Oscar Gottschall, M. G. Catrow, Dayton; H. B. Hanes, of Marion, and E. M. Campbell, of Indianapolis, directors. John G. Webb was elected president; M. J. Catrow, treasurer; W. A. Black, secretary; George Whysall, general manager. A branch line will be built to Richwood and additional rolling stock will be purchased. The power house will be located north of Delaware.