

Some Post-War Problems of Transport.

SIR JOHN ASPINALL'S long and unique experience in transport problems renders his "James Forrest" lecture—delivered at the Institution of Civil Engineers on May 2—of importance to the general public, all of whom are interested in passenger traffic and affected by the cost of the carriage of goods.

Sir John Aspinall dealt first with London passenger traffic. In the early days of the lay-out of railways the short distance passenger was scarcely considered, and it was only by degrees that his demand for greater facilities was met. Other lines of way have been added, and the notable addition of the tubes has been very effective. Travel has been helped also by attention to details. The modern station with its escalators is a vast improvement on the older types with long and tortuous passages, and plain, well-lighted directions enable passengers to find their way easily. In the carriages, high backs to the seats prevent vacant seats being seen; strap-hanging is preferable to pillars, which are apt to produce blockages. The necessity of quick loading and unloading of a car means that the doorway and platform arrangements have to be considered. It is a matter of common knowledge that getting into and out of a carriage during the rush hours at present is an exceedingly trying operation. Sir John Aspinall suggests the use of three platforms, two outer and an island platform. Passengers from both trains alight on the island platform and the trains are loaded from the outer platforms. This plan should be very effective in separating the streams of passengers. Proposals have also been considered by the tube companies for deeper tubes with fewer stations, suitable for quicker long distance travel.

The excellent reports and maps prepared by the London traffic branch of the Board of Trade indicate that future provision for the growing population will require to be made towards the north-west and south-west, both of which have much blank travel space on the map. Admirable as may be the organisation which cuts down time spent in the steam operation of suburban trains, it would appear that London traffic must henceforward rely on electrification to make more frequent service possible.

Traffic on the roads follows the same lines as the railway traffic. Here the motor bus helps greatly. In 1921 the London General Omnibus Company handled 761,250,000 passengers, which is nearly half the number dealt with by all the railways in Great Britain. The total passenger mileage on all the railways was 227,397,353, and the buses ran 87,000,000 miles, approximately one-third that of the railways. The improvement of the motor bus has been so great that it is safe to assume that the much more expensive tramway system will not be greatly extended.

Notwithstanding the help of the most modern buses, the extension of railway facilities in London is urgent. The engineering world has not been backward in proposing new means of dealing with London traffic. Most of the schemes prepared before 1903 represent an enormous waste of money, not because they were bad, but because of our methods of private bill legislature, which often result in the defeat of well-planned proposals on grounds which subsequent events showed to be unsound. Sir John Aspinall does not despair of some first-rate scheme being adopted for future gradual development if it were in the first instance considered and proposed

by a strong committee of those who are engaged in handling London traffic to-day, and then legalised. Hitherto so much harm has been done by dealing with this problem in bits that it becomes the more desirable to deal with it as a whole.

There has been great architectural objection to the continued existence of certain railway bridges over the Thames. On the other hand, the daily number of people crossing these is much larger than could pass over road bridges. Hence their abolition would inconvenience the travelling public. The objection on account of unsightliness is legitimate, and can be avoided. A well-known engineer has shown how a double-decked bridge can be constructed at Charing Cross with all those architectural features which our architect friends desire. In this bridge the railways cross at the same level as at present; the roadways are at a higher level and descend with easy gradients on both sides of the river.

So far as we have gone, it appears to be true that passenger traffic facilities have never been in advance of London requirements.

Sir John Aspinall gives strong evidence in favour of long distance electrification on main-line railways. The train capacity of any railway and particularly of any terminal station is vastly increased by electrification, and thus the capital cost of extensions and widenings can be postponed for years. Shunting is very costly; of a total of 288,000,000 freight engine miles run in Great Britain, half was on remunerative work and 117,000,000 miles on shunting. The ultimate ownership of all wagons by the railway companies—thus cutting out the private owner—will eliminate much shunting expenditure. Much economy may also be anticipated from the new group system. Sir John Aspinall has also something to say about local rates. There are many country districts through which railways run but have no stations and therefore are not road users, where the railways have to pay from 5 to 90 per cent. of the parish rates. The equity of the case appears to demand that those who do the damage to the roads should pay the cost. On the Great North Road the "tons per yard width of road per day" was 77.7 in 1912 and 300.8 in 1920, and of the latter figure 51.5 per cent. was due to heavy motors and tractors, for which the figure was 16.9 per cent. in 1912. Goods transport by road involves 300,000 vehicles at present, and road maintenance costs 50,000,000*l.* per annum.

There is not a great deal of water power available in this country for the production of electric current, and we must still largely rely on coal.

There seems to be much misunderstanding as to the merits of canals. The fact is, however, that the days of the small barge canal are gone. The greater canals, which permit of the passage of large cargo steamers, are on an entirely different basis. Sir John suggests the conversion of disused canals into roads, which of course would be level excepting where there are locks.

Many modern writers have pressed that civil aviation should receive considerable national assistance, but the same methods of gradual and persistent investigation which have been applied for so many years to the ships of the sea must be applied to the ships of the air. There will probably be common agreement that at no time in the history of this country has national transport been so intimately connected with the necessities of national defence.