Sufflied to office of the industrial condition of a city can cable trams running, a most difficult task as the orderly be obtained from day to day by a study of the street transport system. new cable ropes from Scotland had ceased and no new ropes could In this respect the returns of the Melbourne and Metropolitan Tramways All that was available to make good portions of the existing Board reflected week by week after war broke out the ever-increasing en these got stranded were two or three old ropes which had been tempo of the war effort until it reached its climax during the year withdrawn from service. As defects were discovered in the weekly examination which ended on the 30th June, 1945. When hostilities commenced, the of the old ropes, those old cables were examined and re-examined for good Board was operating 98 cable trams, 670 electric trams and 113 buses, ith which to carry through repairs. By splicing and re-splici most of the latter being Diesel-engined. The sole remaining cable lines, which in normal circumstances would have been discarded after those to Nicholson Street (Fitzroy) and Northcote, were about to be 13 weeks were actually made to serve for a full year, so that it converted to experimental bus routes; chasses had arrived from England 5th October, 1940, that the cable cars which had been and were being fitted with bodies built in Melbourne and Adelaide. No such a favourite feature of Melbourne since 1885 vanished from the streets. sooner were the vehicles ready, however, then the Federal Government the meantime, the erection of new factories for the production requested the Board to postpone their introduction for as long as of munitions of war had proceeded rapidly. As luck would have it possible in order to conserve rubber and oil. Naturally the Board at establishments could, of course, be placed only in proximity to existing once agreed, although it meant that buses representing a capital value works where land was available, and unfortunately for the Board of approximately a quarter of a million pounds had to stand idle and doubtless for the workers concerned, the sites were far from all established unremunerative in the garage. Well aware that the transport needs of transport facilities. Neither railway nor transay ran to Fisherman's Bend the city would grow as existing munition establishments expanded, the byrneng munition area. As railways were out of the question, Board ordered 70 additional bus chasses so that it would be able to and as tramways would take months to construct, and as the demand was most cope adequately with any situation that might arise. Before that order urgent, the only may to provide for the sudden demands ; could be executed, however, the British G vernment prohibited export, a decision which complicated enormously the position of the Board only difficulty arose. Had the 70 buses ordered materialised, al a few months later and compelled the Bus Engineer and his staff as time been well : the workers would have had moder, comfortable went on to adopt many a weird expedient, from the strictly ethical, fast vehicles to transport them to and from the works mechanical point of view, to keep the existing buses, subject as they not be got -- the order, as a matter of fact, was not fulfilled were to strains and stresses through overlanding such as was never Board proceeded to search Australia for the necessary contemplated by the designers on the road.

rolling stock. Buses were brought to Welbourne from as far away as Perth,

In the early months of the war, however, the chief effort centred in keeping the cable trams running, a most difficult task as the orderly arrival of new cable ropes from Scotland had ceased and no new ropes could be procured. All that was available to make good portions of the existing ropes when these got stranded were two or three old ropes which had been withdrawn from service. As defects were discovered in the weekly examinatio of the old ropes, those eld cables were examined and re-examined for good sections with which to carry through repairs. By splicing and re-splicing those ropes, which in normal circumstances would have been discarded after from 8 to 13 weeks were actually made to serve for a full year, so that it was mot until the 26th October, 1940, that the cable cars which had been such a favourite feature of Melbourne since 1885 vanished from the streets.

In the meantime, the erection of new factories for the production of munitions of war had proceeded rapidly. As luck would have it, these establishments could, of course, be placed only in proximity to existing works where land was available, and unfortunately for the Board, and doubtless for the workers concerned, the sites were far from all established transport facilities. Neither railway nor tranway ran to Fisherman's Bend or to the Maribyrnong munition area. As railways were out of the question, and as tramways would take months to construct, and as the demand was most urgent, the only way to provide for the sudden demands for transport made to the Board was to procure buses. It was just here that the great difficulty arose. Had the 70 buses ordered materialised, all would have been well; the workers would have had moder, comfortable, well-ventilated, well-lit, fast vehicles to transport them to and from the works. But as these could not be got -- the order, as a matter of fact, was not fulfilled until 1947-the Board proceeded to search Australia for the necessary rolling stock. Buses were brought to Melbourne from as far away as Perth,

others were purchased from private owners, some chasses were procured, and as time was the essence of the contract these were fitted as a temporary expedient with bodies of wood and canvas—named sarcastically by the Fisherman's Bend workers as "dog boxes"—while later other chasses were provided with what the designers called "austerity" bodies. Although the Board's standard, these were a big improvement on the wood and canvas types and it was a decided advantage that they could be constructed with reasonable speed. But the fleet as a whole was a motley collection of vehicles, and the Board was as proud of them as a mule is of his ancestry. There is this to be said for them, however, they did the job; they transported the workers cheaply, quickly and safely if not comfortably to the Bend and the Maribyrnong plants, though at a less to the Board of at least \$300,000.

Apart from a fare which was lower than that for a journey of similar length on other bus routes, that heavy debit was occasioned by the nature of the routes. Situated remote from all other centres of industrial activity and housing, the traffic to those areas ebbed and flowed as the shifts went on and came off; it provided an admirable illustration of the transport dictum that peak traffic is losing traffic. Outside these hours conductors could only talk to themselves, for passengers, except for an occasional sailor from a mixis ship moored at one of the more distant south wharf berths, were non-existent. At the peak periods, as many as 66 buses were required; during the off-peak hours the number sank to three, yet all the time the Board had not only to pay its drivers and conductors the usual rates but penalty rates in addition for overtime and the unavoidable spread of hours.

This aspect of operation illustrates again the truth of the transport axiom that peak traffic is losing traffic unless it can be

The difficulties associated with the provisions of transport facilities for such areas will be better understood if a normal day's work is outlined. While the figures quoted refer to Fisherman's Bend only, a similar state of affairs pervailed at Maribyrnong also, though the number of workers dealt with was less. Between 6.15 and 9 a.m., then, 52 buses ran 216 trips from Queen's Bridge to Fisherman's Bend. From 9 a.m. until 4.15 p.m. there were seats to spare with four buses in operation. The evening peak extended over but 90 minutes, and for that the Board had to put on no fewer than 66 vehicles which made 164 trips to the city. From then on until 11.45 p.m. three buses only were required for 27 trips. It will thus be seen that for 13 out of the 18 hours over which the service extended all the transport needs of the area were supplied adequately by seven buses manned by in men, while in the remaining five hours no less than 118 buses were in use, and these, of course, carried full loads only one way. For these 13 hours a large and valuable fleet stood idle for of course there was no other district during the off-peak period in which they could be employed. U_der such conditions it is easy to understand how the Board's aim of operating to pay at least all operating expenditure and non-operating cost was beyond the reach of achievement and led to the substantial loss quoted.

For some months the "brown out" caused considerable inconvenience to drivers, conductors and passengers alike, and the irritation of all over what was regarded as a futile and inane order with no apparent justification led after a few weeks first to a lighting restrictions and then to their abandonment. During the period the restrictions were in force, all street transport employees complained of the strain to which they were being subjected unnecessarily, and that stress manifested itself in an increase in absenteeism through sickness. Accident figures

increased also, though not to the extent which had been feared. Portion of the sick increase was, of course, due to the staff position which necessitated the men working a 13-day fortnight. That position improved when, rather late in the day, the tramways were declared a protected industry.

On the rolling stock side, apart from buses, sustained efforts were made successfully to keep the full number of trams on the streets. It times this was rendered extremely difficult by the scarcity of mechanics and through the maintenance programme at the Board's Preston Workshops being necessarily thrown out of gear through the manufacture, at cost, of much equipment for the Navy, Army, Air Force and the United States Army. The Workshops staff, however, not only managed to keep the tram wheels rolling; they showed resource and ingenuity of a high order in the manufacture of spares for the buses when, owing to the non-arrival of spare parts from England, it looked as if there would be a progressive diminuition of the number of buses in service. At the height of the crisis, almost one-third of the fleet was rendered immobile through the absence of spare parts. As these began to flow from the Workshops the situation improved rapidly, and it was not long before only the normal 10 per cent of the fleet was in the garage. Thus started, the manufacture of spare parts at the Workshops continued with profit, direct and indirect. In the first place it ensured a steady supply of most essential spares, and in the second it enabled the Board to become more and more a self-contained undertaking. An ides of the extent of the work performed at the Workshops and in the Central Bus Garage will be gained when it is stated that despite the priority given to the construction of war materials, the Shops managed to construct 54 new trans and 144 bus bodies, repair and overhaul 6,262 trams and effect major repairs and alterations to 297 buses.

while 5,204 buses passed through the Garage either for repair or in fulfilment of the overhaul and maintenance programme. The high value of that maintenance work so far as the trams were concerned was reflected in the astonishing fact that of the entire fleet of more than 700 vehicles the maximum number in service daily never fell below the astonishing average of 95%—a figure which would be regarded as extraordinarily satisfactory even under peace conditions. The achievement of the staff in this connection becomes all the more remarkable if regard is paid to the abnormal strain both on rolling stock and personnel. From the table given below, it will be seen that passengers increased from 194,005,841 in 1939 to 354,803,116 in 1945, and mileage from 25,145,451 to 30,877,108:—

	1939	1940	1941	1942	1943	1944
Tram passengers Bus	161,267,858	167,510,764	187,422,047	1942 233,136,284 61,893,220	265, 927, 574	278,451,170
Cable #	20 826 544	17,075,044	39, 694, 121	61,893,220	70,877,048	71,631,912
	20,020,944	+10((+6))	2, 304, 201		*****	

Tram passengers 284,139,431 Bus 70,663,685

During those years the traffic revenue advanced from £2,304,946 to £3,990,553, which indicates the magnitude of the transport service supplied by the Board during those years of war.