

sticking up above the rest about 1-16m. When this had been filed down level, the trembler was again adjusted, and both cylinders then ran uniformly when tested separately. I have never before had a similar experience, but it must be obvious that with one of the wires of the core standing up higher than was intended, it would be impossible to correctly adjust that trembler."

The manner in which the tar method of dealing with the dust nuisance is being taken up in Glamorganshire is most satisfactory, and is well worth the consideration of local bodies in New Zealand. The Bridgend District Council is the latest authority to put tar on its roads. Soon all the urban areas in England and Wales will treat the mam macadamised thoroughfares in their areas in this manner.



DENNIS MOTOR OMNIBUS. AFTER TWO YEARS' HARD RUNNING IN LONDON THE DENNIS WORM GEAR IN THIS BUS WAS REMOVED FOR INSPECTION AND NO TRACE OF WEAR OR FRACTURE COULD BE DISCOVERED.

At present there seems to be a wide difference in the cost of the tarring in various places. The Cowbridge Town Council and the County Council both employ a method, the cost of which is considerably higher than that used at Porthcawl, where it is found to be cheaper to have the roads tarred than to leave them untreated. Not only do they wear better (the tarring need be done only once a year), but the cost of sweeping and watering is saved, and, above all, there is practically no dust.

Always carry a piece of bread somewhere on your car—rye bread for choice. Well, rye bread is difficult of acquisition in this country, so a good wheaten compound must suffice. The bread is not to be stored against a prolonged *panne*, and consequent famine in the depths of the wilds, but because under certain circumstances the staff of life can be of much avail in directions other than that of alimentation. A slight leak in a radiator can be most efficiently, although temporarily, staunched by means of paste made from bread well kneaded with the fingers. Saunier tells how one day, for lack of better material, he caulked a leak in a cylinder water-jacket with this same bread. The paste must be well kneaded, then spread over the leaky part, and worked in with some tool which will do duty as a spatula, just in the same way painters work up their colours on a palette.

The Turner-Miesse steamers are now all being fitted with a new burner regulator which enables the driver to regulate the heat of the generator to any desired extent when the car is standing, or when the full power of the burner is not required. There is no pilot light, no tendency to blow out, the whole arrangement being contained in the main burner itself. This can be instantaneously turned fully up, or lowered to give an extremely small flame; thus, a start can be made at any moment, no matter how long the car has been standing, with the small flame going. There is an entire absence of the roaring usually produced by these burners when turned low down or when full on. It is of interest to note that the idea of this burner was suggested by an amateur owner and regular driver of one of the standard 10 h.p. Turner-Miesse cars. The burner has been fully tested for some time and has proved very satisfactory.

The special feature of the Dennis car is the worm gear, illustrated on another page, and which is a perfectly silent drive and said to be more efficient than any other system adopted. The efficiency is equally displayed whether the worm pinion is

driving the worm wheel, or the worm wheel is driving the pinion. There is not the slightest tendency towards irreversibility. The worm pinion is contained in a specially constructed differential gear box, and runs on each end on most efficient journal and thrust pinions. The worm wheel encircles the differential gear, which is of the parallel pinion type with 6 pinions and 2 star pinions. The rear-axle casing is extended to take the bearings of the road wheels, so that they have an independent bearing on each to support the weight of the car and passengers, and the live axle has to transmit the drive only.

The new Dennis motor omnibus, imported by the Automobile Co of New Zealand Ltd., to the order of a Blenheim gentleman, had a trial run

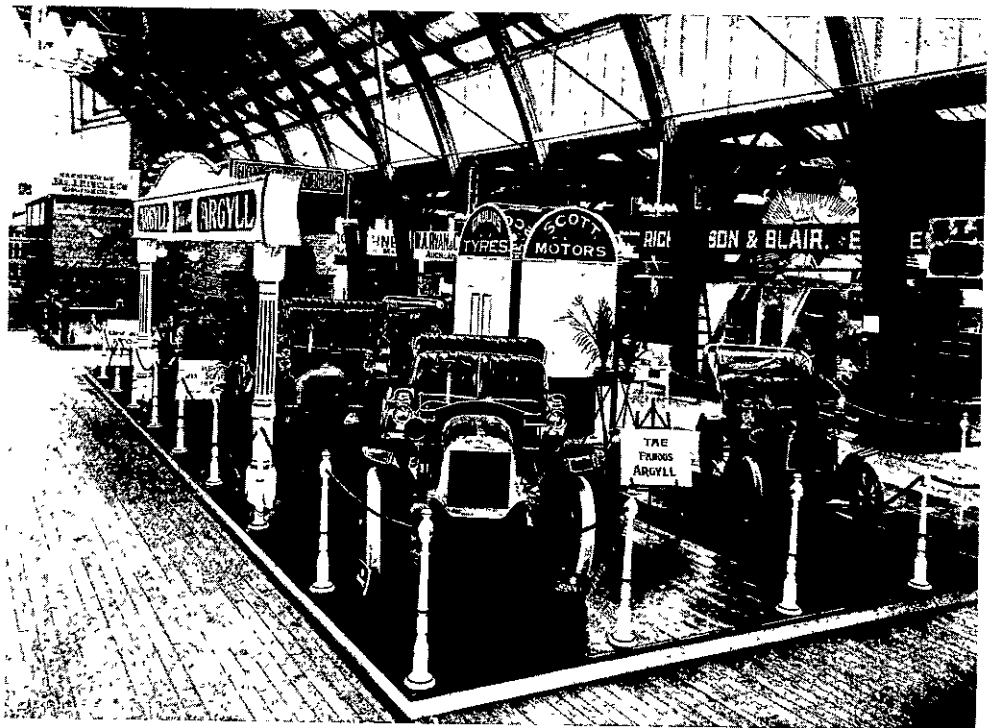
The Motor in the Colonies.

Owing to the legalisation of motive power on our roads in the United Kingdom, says *Motor Traction*, enormous strides have been made in the design and manufacture of the small high-speed internal combustion engine in order to meet requirements, and more recently the Heavy Motor Car Order has afforded wider scope to the makers of the steam lorry, who previously, in the earlier days of the motor movement, had to carry on their work penalised under a heavy handicap. Only as recently as two or three days ago it was not uncommon to hear men say that they intended buying a car, but would wait until the perfect motor arrived. Nearly all the men whom the writer has heard uttering such sentiments are now motor owners, so it may be assumed that the general belief is that the motor car is settling down into a standard form, and may now be regarded as fairly reliable. We would be the last to preach the doctrine of finality in anything, least of all in matters mechanical, but the experience of the past has shown that, when any master-system reaches such a point as to permit of reliable working with proper care, a stage is reached at which radical alterations cease, further improvements only lying in matters of detail, and that this stage lasts for some considerable period, until the system is superseded by another radically different. The locomotive is a case in point. Now, this is the stage which, in our opinion, has been reached by the internal combustion "motor" using such fuels as petrol or paraffin, although we are free to admit that there is room for improvement in the details dealing with the latter fuel. In fact, the industrial motor began at a stage quite different from the starting point of the private car. In its earlier days the motor car had to be painfully evolved by a process of natural selection, or, to be more correct, by the survival of the fittest, but the internal combustion motor for industrial purposes began life with the benefit of eight or nine years' experience obtained from the makers of the private car. The engine of the steam wagon, too, is the outcome of some sixty years' general experience, while the modern driving mechanism and structural parts have only been produced as the result of years of incessant work and experiment.

It is the consideration of such facts that brings one to realise that the time has now come for the industrial motor to extend its scope to the colonies, where he enormous possibilities for its use in all directions. The United Kingdom, like other countries, sends out a proportion of trash among her exports, but the percentage of that undesirable commodity is less in her case than in that of any other country. One point we would emphasise with all due respect to our colonial brothers. The foreigner is said to be taking our trade by supplying what the customer wants and asks for, while the Britisher loses the contract by trying to supply what seems to him fittest for his customer's needs, not what the latter wants. There is, however, something to be said for the British point of view, for it is no uncommon thing in our experience to come across makers who, against their better judgment, have supplied without question goods

through Wellington recently. Laden with 18 people, it did all that was required of it without any untoward incident. The running was nearly silent, practically vibrationless, and the demonstration is reported to have convinced the experts present of the car's practicability for the service it is intended to accommodate. The engine is four-cylinder, giving 24 h.p. at 900 revolutions, and 28 h.p. when accelerated. The weight of the omnibus is 3 tons, and its landed cost £1250. It is calculated that its New Zealand cost of carrying a full complement of passengers will be under 9d. per mile, depreciation, repairs, and all other expenses being reckoned in. The English cost is under 6d. for 34 passengers per mile.

The Scott Motor and Cycle Co have been appointed sole New Zealand agents for the celebrated Renault cars.



THE ARGYLL MOTOR EXHIBIT AT THE NEW ZEALAND INTERNATIONAL EXHIBITION.