#### SCIENCE and INVENTION

"Safetyfirst" Motorcar:

"Robot" Bomb

Dog As Scientist:

Taking Speech To Pieces

(From Our Own Correspondent)

LONDON, June 16, 1939.

#### TRAINING ALL TO DRIVE?

An invention that may revolutionise the entire motoring world both practically and psychologically - will shortly be on the
market in thousands. If the hopes of its makers are realised,
it will play a prominent part in the education of almost every
citizen, and will strike fatally at the roots of the road accident
menace.

The invention was described to me this week by its originator, Mr J. Geoffrey Pugh, managing director of a firm of British motor mower manufacturers.

He defined it to me as "a trainer on which it is possible for every young person to have general driving (as opposed to walking or riding) training, off the roads and in safety, and at a trivial cost".

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Mr Pugh hopes that it will play a real part in the educational system, both private and public, of the nation.

### "Like Learning To Swim"

The trainer, which costs £35 and requires a very simple lay-out or training ground on which to operate, could be installed in every school in the country and lessons with it could form part of the daily curriculum, he believes. Also, any country house with a garden would have ideal facilities for the little car and the family could be taught to drive in the same way as they would learn to swim.

Mr Pugh's experience with youngsters and the trainer leave him in no doubt that training should start very soon after children know the difference between "right and wrong". He said that it was essential for "road sense", "second nature" control and a "mechanical mind" to be acquired by every driver from the beginning.

"Man has harnessed power and made it available to nearly everybody, but he has not provided for the vital thing - routine education in its use," Mr Pugh declared. "The benefits that can perhaps flow from having rising generations prepared in their schooling and coming to the fore as a whole are enormous both nationally and internationally." His trainer he claims as the missing link, the origination of which may make a great ideal capable of achievement.

## "Petroil" Fuel

Mr Pugh outlined to me the technical side of the trainer.

It works on exactly the same principles as a full-size motorcar except in so far as its small-scale proportions and low cost make
certain variations and modifications necessary.

Its internal combustion engine, which runs on "petroil" - a mixture of petrol and oil - is at the back behind the driver's seat and above the rear wheels.

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The steering wheel and foot control pedals are adjustable to allow, within reason, for variations in the size and reach of the driver. Mr Pugh said that a six-foot man would be almost as comfortable as a child in the car.

The trainer has steering on the Ackermann principle - the scientific basis of all motor vehicle steering. There is one forward gear and one reverso. Apart from these differences, the other parts, including tyres, transmission, brakes, throttle and exhaust, are in principle as in a larger car.

The makers have been very thorough with the makerup of this trainer, and they include with each model a most comprehensive manual of training and maintenance, which is not only a text book of the elementary technicalities of power vehicles, but also a text book of learning to drive and behave on the road. Moreover, it is written in a way which should appeal to parents and to children, whether they are "mechanically-minded" or not.

# Cowt Tennis/Big Enough

Comfortable, pleasing to the eye, safe, economical and amusing, the trainer has immense possibilities.

Mr Pugh told me with a smile what fun it would be to fit up some of the regular road signs in one's training circuit - which need be no larger than a tennis court. Home-made white lines, studs, signposts, beacons and road signs would make learning instructive and entertaining, while bicycles, pedestrians, pedal motorcars and wheelbarrows could be got together quite frequently to produce "crowd effects".

Speaking of the humanitarian side of the car, Mr Pugh referred to the road accident statistics as "a blot on the country's copybook".

It is a coincidence that the Select Committee of the House of Lords on the Prevention of Road Accidents, 1938-39, urges in its

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report that equal care and trouble should be expended in the education of future road-users in State public and preparatory schools.

Mr pugh evidently anticipated their recommendations last year, and we may soon see on school routine timetables "one hour's driving" sandwiched between algebra and Greek.

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