

*Owner Tim Moore and the Editor's wife enjoying a brief spin on the Stanley.*

# All steamed-up!

*The Editor drives a 1901 Stanley steam car*

Those of us who attended the 1963 International Rally were privileged to see, on the final day at Goodwood Race Track, a variety of pairs of vehicles negotiate the circuit giving 'demonstration' runs. I particularly remember Ed Roy's 1913 Grand Prix Delage and the 1909 Chalmers-Detroit of Fred Haller, which went surprisingly rapidly for a 30hp touring car, but the real eye-opener came when a pair of Stanley steamers circulated nearly as swiftly as these

*The*  
*Automobile*  
**EXCURSION**  
**No.6**

potent vehicles and, to the surprise of the assembled cognoscenti, in total silence.

Most enthusiasts for early vehicles can relate, however indirectly, to internal combustion engines, for no matter how sophisticated modern machinery may have become, it has a direct lineage that goes back to the pioneering efforts of Daimler, Benz, Peugeot, Panhard-Levassor, De Dion Bouton and Lanchester. Steam though, is another matter. We see it emanating from

*continued on page 52*





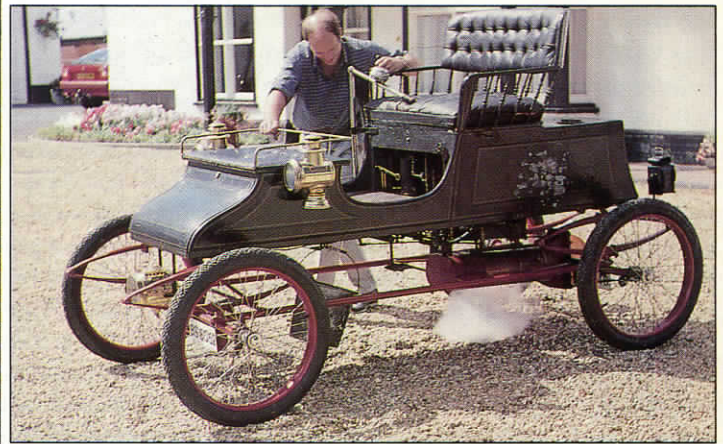
Above: Pre-heating the pilot light before the main burner can be lit to raise steam.



Above: Karen Moore at the tiller of the Stanley which she will be driving in this year's London to Brighton Run.



Above: Karen is checking the steam pressure-gauge and also trying to avoid running over the Editor!



Above: 'Purging' the cylinders of condensed steam.



Rapid acceleration produces evidence that the car is steam powered.

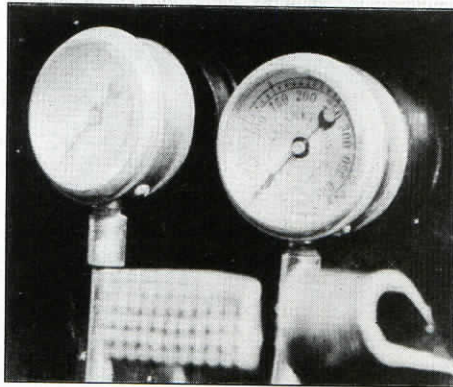


our kettles, our car radiators when things go wrong, but as a motive force it is largely consigned to the memory of thundering railway trains, roadworks in days of yore and heavy transport of a distant age. It is difficult for most of us to relate to steam as an every-day concept for the motive force of normal transport.

Had we been around in 1900, the situation would have been different. Then there would have been a distinct and perfectly realistic choice to be made between internal combustion (essentially the petrol engine), electricity, and external combustion (the steam engine) as a means of propelling our horseless-carriage. Writing in 1902 in the Badminton Library publication 'Motors and Motor Driving,' Alfred Harmsworth (later Lord Northcliffe) suggests that in the choice of a 'Motor', if only one car was to be bought, then a petrol-engined vehicle was probably best. However, he was enthusiastic about his steamer: "the most comfortable motor car, and in many ways the most satisfactory....is my Serpollet, whilst quite the most perfect cars are my two electric carriages....For shopping, theatre and station work, an electric carriage is an inestimable boon". He did feel though that the light steamer was "at present only useful to those who thoroughly enjoy a mechanical task". As a wealthy newspaper proprietor with one of the finest 'stables' of motor cars in the country, Harmsworth's views were based on direct experience and it does show that those who were in a position to choose, could select from three different power sources, each of which had its merits.

Whilst the French Serpollet can be described (in shorthand terms) as the Rolls-Royce of steam cars, it was the

Below: *The boiler lives under the driver's seat, but since Stanley boilers have been tested to well over 1,000 lbs. p.s.i. this is not a disconcerting location.*



*The essential steam pressure and fuel pressure gauges, mounted just above the floorboards.*

Americans who developed the light steamer (the Austin 7 of its day) as a practical vehicle. At the forefront of this development were the identical twins Francis E. and Freeland O. Stanley who, with a production period that ran from 1897 to 1927, not only outlasted all their rivals but also produced more steam cars than any other manufacturer.

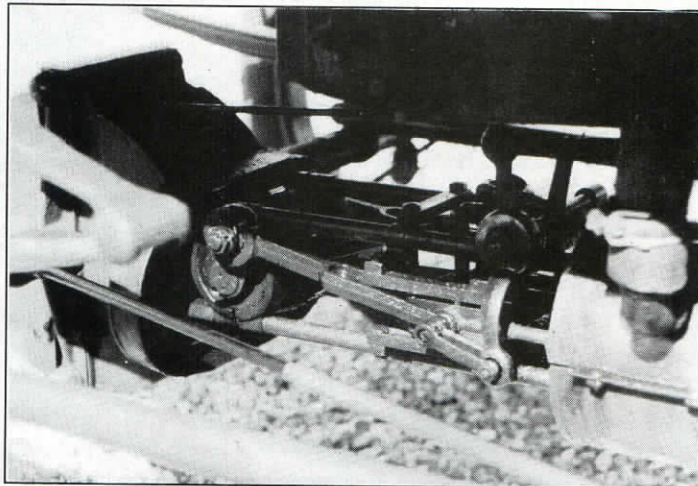
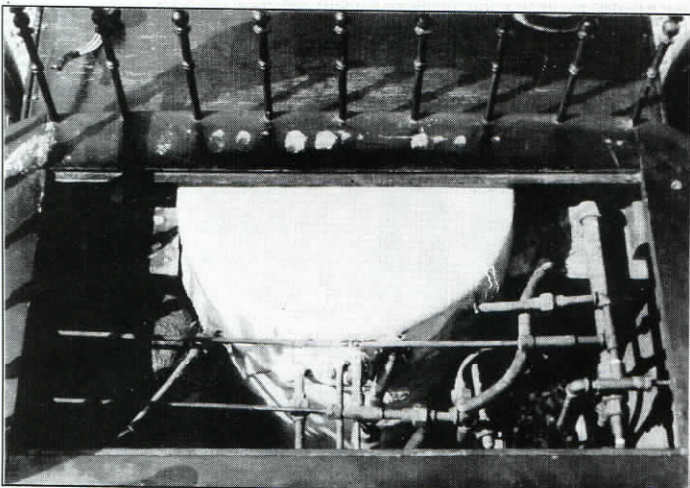
The Stanleys were successful businessmen who ran a factory in the Boston (Massachusetts) area, producing dry-plates and other photographic equipment. They had attempted unsuccessfully to make a steam car in 1887, but spurred by a sighting of a Whitney steamer in 1896, they decided to have another go. By the spring of 1898, they had sold one of the three cars they had built and were then in the steam car business. As a result of success at a demonstration in the autumn of the year, they received orders for 200 steamers and production was commenced on the first batch of 100 cars. Manufacture was proceeding well, when early in 1899 they were approached about a buy-out by one John Walker. The twins were not particularly interested in the approach, so they named the then astronomical sum of \$250,000 for their firm, this being over ten times the sum they had invested up to

that point. To their surprise Walker agreed to the figure and he brought in A.L. Barber to assist with the necessary finance. Walker and Barber named their new venture 'Locomobile' and production went rapidly ahead. However, the two partners soon fell out and Walker went off to make the Mobile steam car to the same design as the Locomobile nee Stanley.

The twins had continued experimenting and were keen to get back in to the steam car business. In the spring of 1901 they opened a new factory at Newton, Mass. and began production of a car that superficially resembled their 1898 design, but which had numerous improvements and overcame most of the problems that Locomobile owners encountered: fragility and high water consumption to name but two. The most noticeable change was the placing of the engine horizontally, forward of, and level with, the rear axle, and geared directly to it. This remained a feature of all Stanley steamers until their demise some twenty-five years later. Indeed, apart from moving the boiler to an under-bonnet position in 1906, it was really only in detail and external appearance that the Stanley changed. Even the car which broke the world speed record in 1906 at 127.66 mph was clearly recognisable as a Stanley mechanically, though externally it looked like an upturned boat, as did so many other 'racers' of the day.

By 1901 F.E. and F.O. (as the twins were generally known) had designed and developed the most successful steam car, in terms of practicality and output, that has been seen to date. Later they only made changes when there was a very good reason so to do, not just to follow the whim of fashion. Many owners

Below: *The twin-cylinder engine (with its cover removed) is mounted directly in front of the back axle.*

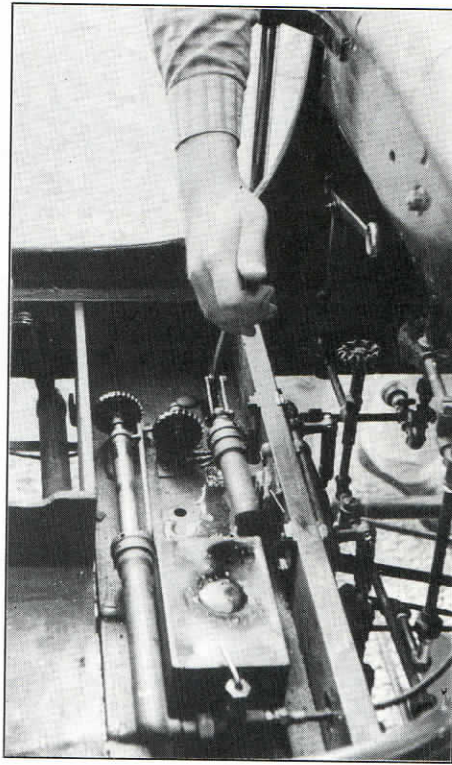




became intensely enthusiastic about the cars and marque loyalty has been compared to that enjoyed by the likes of Bugatti. The example that the Editor was afforded the opportunity of sampling, was imported from America earlier this year by Tim Moore. Having caught the steam 'bug' with his 1884 De Dion Bouton et Trépardoux, he decided that his wife should become a convert too and accordingly Karen will be driving the Stanley in the London to Brighton Run on November the 5th. However, in the interests of enlightenment I was allowed a morning playing with the car under Tim's supervision!

Since the 'firing-up' process takes about 15 minutes there was ample opportunity to examine the car in detail and learn something of its history. A plate on the rear of the bodywork, includes as well as the name and address, the number 105. If, like most volume producers, numbering started at 100, this then is the 5th car made by F.E. & F.O. once they recommenced business in 1901. Even if it is the 105th, production numbers were such that the vehicle must have been made before the end of the year. Whichever, it is the oldest roadworthy Stanley this side of the Atlantic (and possibly anywhere) as I do not believe that the 1899 example in the London Science Museum has been run within living memory. Its history back to before the first war is known, but although it has been in the ownership of a number of collectors of historic machinery, it seems to have had very little use and is essentially original and unmodified. The bodywork looks to have been repainted in the not too distant past, but unfortunately the burner had not been correctly fitted beneath the boiler and the consequent escaping flames have

*The Stanleys modestly attached their name-plate to the back of the vehicle.*



*Pumping up fuel pressure.*

blistered the finish on the side and rear panels. The burner has now been mounted correctly but the blemishes to the paint have yet to be eradicated.

Starting the car calls for steam being raised and this means firstly pumping water into the boiler from the rear-mounted tank, using a hand-lever under the driver's seat. To bring the water to the boil it is necessary to pre-heat the pilot light with a blowlamp until the former will stay alight under its own efforts. Once this happens (within a minute or two) the main burner can be lit by turning on the fuel supply to it. Ignition takes place with a whoosh familiar in sound to all those who remember 'geysers' mounted in bathrooms to heat the bath-water. However, we are not yet in an automatic mode. Air pressure to the fuel supply has to be maintained by means of a hand-pump mounted beneath

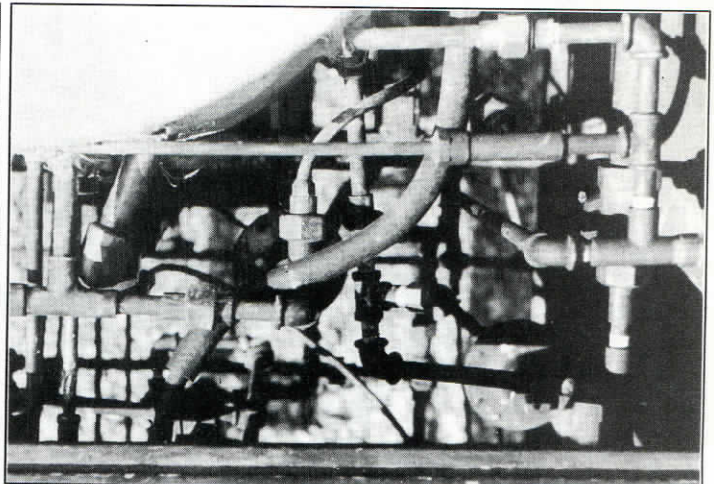
the floorboards. Once the car is on the move, air pressure and boiler water-level are maintained by the pumps functioning automatically. In the initial heating process, air pressure is kept between 30 and 40 lbs. p.s.i., since, going above this figure, whilst undoubtedly cutting down time for the raising of steam pressure, brings the risk of spectacular flaring from the burner which is disconcerting to the uninitiated, wasteful of fuel and would further damage the paintwork. Before moving off, it is necessary to purge the two-cylinders of condensate which is done by rocking the car forwards and backwards and admitting steam in small quantities. This process helps to emphasise the light weight of the car, which on level ground takes very little effort to move.

If all the above sounds protracted and complicated, it is worth noting that experienced Stanley owners used to leave their pilot lights on for long periods (even over-night we are told), which reduced the total firing-up time. Also, when written down, the setting-up of an early petrol-engined car before it was started, takes even more space!

Tim drove initially, while I observed what skills were necessary for efficient driving. They seemed to be few but, even though I am used to *queue de vache* (cow's tail) tiller steering, I was not sure how I would adapt to the side-mounted version. Also it was soon evident that the art of driving a steamer, is to take no more pressure from the boiler than the pumps and burner can adequately sustain, frequent reference to the steam-pressure gauge mounted at foot level, proving necessary. The ideal is to maintain pressure at about 250 to 300 lbs.

*continued on page 54*

*Some idea of the complexity of the pipe-work can be seen in this under-seat view.*





p.s.i., so that hills, or the demand for rapid acceleration, does not leave one with the steam car's equivalent of breathlessness.

On taking the driver's seat I soon discovered that driving a 1901 Stanley steam car, has to be the easiest task ever set before a motorist. There are really only three concerns: going; where one is going; and stopping. 'Going' is controlled by a vertical (steam regulator) lever on the driver's right which is pushed forwards to go, and moved backwards to slow down. Easing the lever forwards results in smooth, gentle and continuous acceleration, with no sound apart from the movement of air past one's ears. If the lever is moved smartly forwards there is a distinct chuffing sound and the increase in velocity, whilst not quite neck-snapping, certainly results in a very firm push in the back. So, the 'going' was fine. The 'where' was simplicity itself. Just as when riding a bicycle one finds that one corners without really thinking about it, so with the side-tiller. Bends were approached and only after they had been taken, did realisation dawn that they had been negotiated. And the 'stopping'? Move the steam regulator lever backwards and deceleration was

## All steamed up!

*continued*

noticeable, in case of panic, one pressed the foot pedal and the brakes brought the car smoothly and undramatically to rest.

And so the morning proceeded through to lunchtime, confidence grew and driving became addictive. Hand-signals were given with panache, there was time to look around, the suspension was tested by intentionally driving into pot-holes — with no ill effects — and boiler pressure was maintained, even with the exhilaration of rapid acceleration. I felt that I was beginning to master the art.

But of course there is a flaw. All the while the car was 'on song' the enjoyment was total. Had anything gone wrong, I would not have had a clue where to start to seek the solution. In essence, a steamer is so simple: burner to heat the water, boiler containing the steam, and the engine to consume it. No

clutch, gearbox, magneto, carburettor and all the other paraphernalia that are necessary to make an internal combustion engine work effectively. Should such a vehicle play-up, I have a sporting chance of knowing where to begin to look for the source of the problem. With the Stanley, all the while it gave us our magic-carpet-ride, it was magnificent. Had it been otherwise, I would have been at a loss. I feel sure that as time went on it was this lack of understanding on the part of the average motorist, that brought about the eventual demise of the steamer, rather than any half-baked conspiracy theory that steam car aficionados sometimes laid at the door of the internal combustion engine car-makers who, it has been suggested, bought-up all the patents in order to put the steam car makers out of business.

*I am indebted to Tim and Karen Moore for allowing me to experience a different and fascinating form of transport. We should all be appreciative that there are people who are willing to master the art, not just of driving, but of maintaining such vehicles so that we can see what was; what might have been; and what in the future may be again.*



Exhausts manufactured for any vehicle regardless of age or type, in stainless or heavy duty mild steel. One-offs are our speciality, also small batch runs for clubs.

**NEWTON AND SULLEY LTD**  
6/8 Leen Valley House, Cinderhill Road  
Bullwell, Nottingham  
Telephone: (0602) Nottingham 761864

We are within two miles of Junction 26 of the M1

(29783)



(0273) 779864  
FAST MAIL ORDER SERVICE



**NUT & BOLT PACKS**  
HIGH TENSILE BRIGHT ZINC PLATED with washers  
£10.00 EACH + £2.50 P&P  
B.S.F. pack 320 pieces  
U.N.F. pack 450 pieces  
METRIC pack 550 pieces  
£6.00 each + £2.50 p & p.  
B.S.W. pack 175 pieces  
U.N.C. pack 225 pieces  
STAINLESS STEEL £20 EACH + £2.50 P.&P.  
U.N.F. pack 150 pieces  
METRIC pack 450 pieces

**SILICONE BRAKE FLUID**  
DOT 5 SPEC  
½ LITRE £7.25  
1 LITRE £14.00  
5 LITRE £65.00  
MOPROD FLARING TOOL £21.00  
3/16 COPPER BRAKE PIPE £8.75/25ft

**RUBBER MAKING PACK**  
FLEXANE 80. ½kg £19.60  
EPOXY ALUMINIUM ½kg £18.64

SEND TO: **NAMRICK LTD., DEPT T.A.**  
124 PORTLAND ROAD,  
HOVE, SUSSEX, BN3 5QL.  
Large SAE for catalogue

FOR CREDIT CARD ORDERS  
STATE CARD NUMBER AND  
EXPIRY DATE.  
PRICES INCLUDE VAT



FOR ALL YOUR - - AUTO-ELECTRICAL NEEDS

AC  
Aston Martin  
Bentley  
Jaguar  
Reliant  
Lotus  
MG  
Rolls Royce  
Triumph

**SPECIAL OFFER**  
Sealed Beam Units  
£9.95 Pair  
inc. VAT & postage  
(UK only)



**Sports MGB**  
Dis Kits  
£28.70  
inc. VAT & postage (UK only)



New Aston Martin XK120  
PF770 £95.50



Windtone Horns £32.50

RB106  
£17.95



Complete Range of  
Distributors and Component  
Parts available £65 - £95

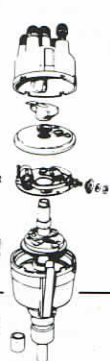


Freestanding  
Headlamps  
Black £34.00  
Chrome £38.75



LRB  
£57.50 each

L651 Original  
Series 1 - 1½  
Rear Lamps  
£190.00 per pair



Open  
5½ days/week  
NEW 40 Page  
Brochure  
£2.00 Each  
Inc. Postage



Over 200,000  
Genuine Lucas Parts  
1920 to 1970's in stock

Unit 43B, Hartlebury Trading Estate,  
Near Kidderminster, Worcestershire, England DY10 4JB  
Tel: 0299 251353

VAT, P&P  
not included

Mail Order or  
Direct Export Orders  
Welcomed

**HOLDEN VINTAGE & CLASSIC LTD**