SPIT AND POLISH

JOINT PATRONS
Her Excellency The Honourable Margaret Beazley AC QC
Governor of New South Wales
and Mr. Dennis Wilson

The Journal of the VETERAN CAR CLUB OF AUSTRALIA (N.S.W.) INC.

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Journal of the Veteran Car Club of Australia (NSW) Inc.

SPIT AND POLISH

WEB PAGE: www.vccansw.com

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All letters, advertisements, articles are to be sent to "The Editor Spit & Polish" preferably by **Email:** nevpreston@gmail.com or by **Mail:** 18 Byron St. Wyong, NSW 2259

Articles to be received by the **First Wednesday** of the month.

Cover Photo:-

Evan Quarmby's 1911 Cadillac,

at the lunch stop at Mittagong RSL, on 14th February.

During the MaSH Branch's Bundanoon Ramble 2009.

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134 Queens Road, Canada Bay, 2046

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Minutes of Monthly Meeting of VCCA (NSW) Inc.

Owing to the COVID-19 Virus, all meetings and events have been cancelled until further notice.

Dear Members,

With the very concerning and increasingly active COVID-19 Virus, future VCCA(NSW) lnc the committee has decided that all meetings and events will be cancelled until further notice. Unfortunately this includes the annual Blue Mountains Rally. This is disappointing but it is in the interest for our members that we take this unusual precaution and hopefully in the short term we can resume our normal activities.

Take care!

Louise Yeomans
Hon Secretary
VCCA (NSW)lnc
17th March 2020

Please note there has been a lifting of Club activities as we have held a couple of small events in the last week and the General Meeting will be held on Thursday 23rd July, with restrictions still in place.

Nev Preston
Editor

Events Calendar - Club Events

JULY 2020

21st	Newcastle Branch Meeting at Westlakes Mining Museum, Teralba at 7.30pm and **AGM**
23rd	Committee Meeting starting at 6.45pm
23rd	Monthly Club Meeting at Club Rooms, Canada Bay at 8pm
24th	**MaSH Branch** Coffee run. 10.45am Curry Reserve, Camden Valley Way, Elderslie. *Check with Doug Fulford*

AUGUST 2019

7th	**MaSH Branch** Morning Tea run. *Check with Greg Roberts*
18th	Newcastle Branch Meeting at Westlakes Mining Museum, Teralba at 7.30pm
27th	Committee Meeting starting at 6.30pm
27th	Monthly Club Meeting at Club Rooms, Canada Bay at 8pm
27th	**Annual General Meeting at Club Rooms.**
28th	**MaSH Branch** Coffee run. 10.45am Curry Reserve, Camden Valley Way, Elderslie. *Check with Doug Fulford*

SEPTEMBER 2020

6th	**Sydney North Breakfast Run.** *Details to follow*
11th	**MaSH Branch** Morning Tea run. *Check with Greg Roberts*
15th	Newcastle Branch Meeting at Westlakes Mining Museum, Teralba at 7.30pm
24th	Committee Meeting starting at 6.30pm
24th	Monthly Club Meeting at Club Rooms, Canada Bay at 8pm
25th	**MaSH Branch** Coffee run. 10.45am Curry Reserve, Camden Valley Way, Elderslie. *Check with Doug Fulford*

Events Calendar - National Rallies

OCTOBER 2020

11th - 17th VCCA National Veteran Rally 2020 - Swan Hill. Our official rally website is now up and running. You will find this via our club website - www.veterancarclub.org.au. Click on "National Rally" at top of page and follow the links.
Here you will find an on-line Expressions of Interest form (preferred method). Fill it in now to stay up to date with rally information. 1st Newsletter is anticipated before Christmas.

Shifted to 2021 actual dates unknown

OCTOBER 2021

17th - 22nd The National Motorcycle Rally to be based in Manjimup WA.

24th - 29th The National Veteran Rally to be based in Busselton WA. ***Shifted to 2022 actual dates unknown***

Events Calendar - Invitation Event

APRIL 2021

9th - 12th CHMC ANNUAL RALLY - TEMORA
The CHMC Annual "Bush Council" Rally is held each year in a different NSW regional centre and hosted by the local CHMC club/s. Temora Antique Motor Club hosted our very successful 2016 Council of Heritage Motor Clubs Rally at which over120 heritage motor vehicles from a 1911Cadillac and 1911 Ford Model T to a 1986 Volvo were gathered, with scores of veteran, vintage, post vintage and historic cars from the 1940s to the 1980s. They are again hosting us in 2021. Limited to 100 entries. Accommodation in Temora is limited too - we suggest you book early.

Download Rally Entry Form and Accommodation details from
http://www.heritagemotoringcouncil.org.au/historic-and-heritage-motor-events.php

Regards Jenny Fawbert

Coming Events

1 & 2 Cylinder Rally

Rescheduled to

16th to 18th October 2020.

Orange.

Spend the weekend touring the Orange region starting with a Friday lunch and afternoon drive.
Saturday we will tour the local area and a lunch stop and afternoon drive.
Saturday Evening Dinner and Farewell Sunday.

Dave & Larna Perry or Russell Holden
Ph: 02 63 650 657 M: 0421 985 162 Ph : 0422 219 911

Expression of Interest Form on Page 19

Rescheduled date will depend on COVID-19 restrictions

Regards
Dave Perry

Editorial

Thanks to the few members for the articles received for this edition of **YOUR** Spit and Polish. Keep up the good work, it makes my task as editor that much easier in this quiet time. Since we are no longer having outings it is even harder.

No outings this month, COVID-19 restriction on events. Thankfully a few members supplied me with some articles, those members being Don Liddle, Gordon Dewey, Ron Hattersley and the Editor.

Coming events for the next month or so are, the MaSH Branch morning tea run and their Coffee Run. The 1&2 Cylinder Rally to be held at Orange, Expression of Interest is on page 19.

At the moment I have a **small** supply of material, and for the magazine to be able to keep going I need more articles. now is the time to do something about it whilst you are in hibernation for the COVID-19. So if you have something it would be appreciated.

Just remember a short article can be made into a page presentation with a couple of photos as I have stated before.

Finally I would like to inform you that I will not be standing for the job of Editor at the AGM in August. So now is the time to start looking for a new Editor.

Thankfully there has been an offer to take on the job of Editor.

Remember this is ***"YOUR MAGAZINE".***

Enjoy your Veteran motoring when we can start using our veterans again.

Nev Preston

The Exhaust Whistle Silent Auction

The Exhaust Whistle was successfully sold by the silent auction.

Many thanks to Russell Holden for the donation of the whistle.

Evan Quarmby doing some fine tuning of his Cadillac.
No it is not a secret only keeping the rain out.

Membership Fees

A reminder that membership fees for the Veteran Car Club of Australia (NSW) are due at the end of June for membership of **2020-2021**. If you have paid for three years in advance your fees may not be due this time.

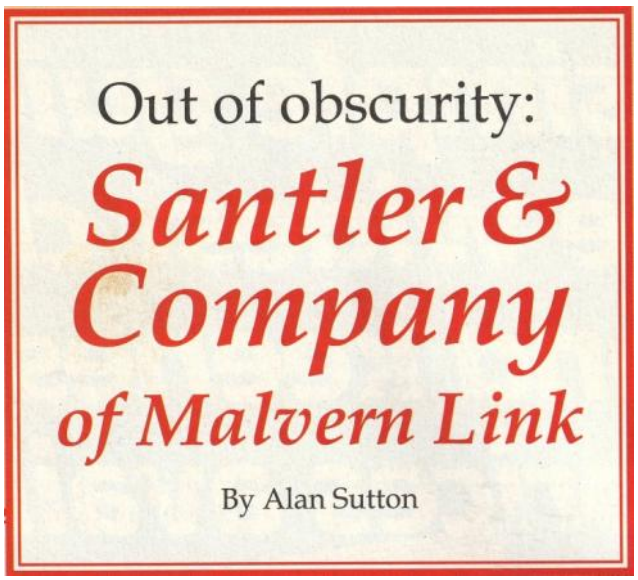
Members may pay $80 for a single year or $210 for three years. You may pay by cash, cheque or electronic funds transfer (EFT). If you pay by EFT you must clearly identify your payment in the description box with your name and membership number. When you pay by EFT please email the treasurer with the transaction details. His email is geoff.yeomans1@gmail.com Bank details are as follows:

Account name: Veteran Car Club of Australia (NSW) Inc

Bank:	Commonwealth	Branch:	Wynyard Sydney NSW
BSB:	062009	Acc number:	28023425

Any unidentified payments will be considered as a donation.

Geoff Yeomans
Honorary Treasurer



The SANTLER

Although Malvern, a small town a few miles to the south of Worcester, is well known for its role in the development of RADAR as a secret weapon in WW2 and as the home of the Morgan Motor Car Co., what is not so well known is that motor cars appeared there long before H. F. S. Morgan's prototype 3-wheeler was built in 1909. During 1897, the Coventry Cycle & Motor Co. opened premises in Church Street for the sale of the New Beeston motor-tricycle and in 1899 H. J. Burston of Newtown Engineering Works was offering a similar machine under the trade name 'Leader'.

More than a decade earlier still, in 1884, in a small workshop to the rear of a house named Northumberland Villa, a short distance from Malvern Link railway station Charles Santler began working in the family engineering business, started by his father Thomas Santler in 1875. There, with the help of his younger brother Walter, he expanded the firm's interests into bicycle repair and construction.

Both were clever engineers, their father having made sure they were properly educated by sending them to the Lyttelton Grammar School in Malvern. This school had an interesting history, having been founded in the early 1800s by Lady Lyttelton who also established a School of Ancient Industry where working class children could be taught useful craft skills. Not surprisingly, the grammar school curriculum also included training in industrial and business skills as well as the usual academic subjects, even to the extent of preparing pupils for entry to Oxford and Cambridge universities. Charles subsequently became a 'Premium pupil' of William Deane, Chief Locomotive Superintendent with the Great Western Railway, and also attended the Birmingham College of Science. Walter was sent to London for training as an electrical engineer with Messrs Goolden & Trotter.

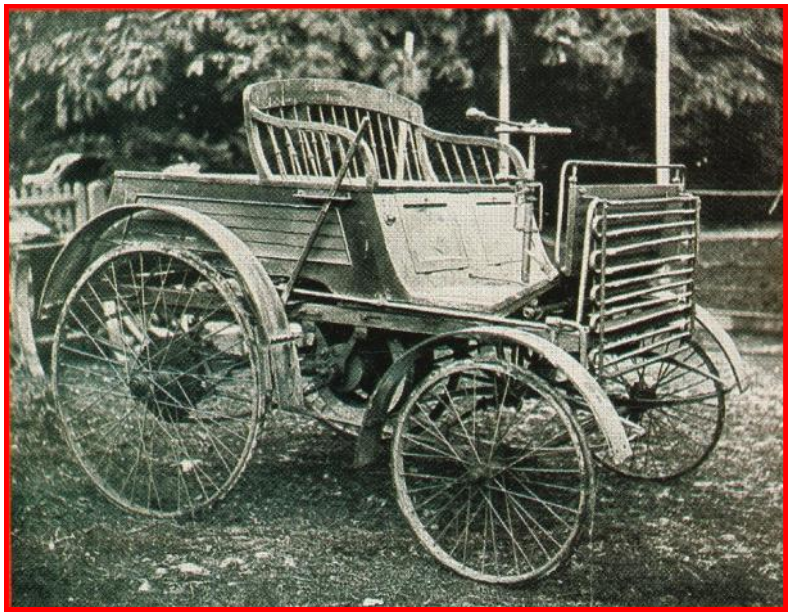
The Santler car as it is today, standing under a tree close to the site of the blacksmith's yard where it had stood for many years around the turn of the century

Over a number of years they obtained patents for a whole range of ingenious inventions. Charles, for example obtained a patent in 1884 for an unusual free-wheel device which he had invented in 1879 when he was only 15 and had tried the idea out on a foot-powered lathe. The 1884 patent covered an adaptation to treadle-operated tricycles. One advantage of it was that it automatically accommodated riders with long or short legs.

In 1905 Charles obtained a patent (no. 1107) for an automatic device to prevent motor vehicles from skidding sideways and again in 1907 (no. 18557) for a puncture indicator. His other inventions included, for example, his patent (no. 20,193) of 1891 for non-vibrating, cushioned handlebars for cycles. The latter could be said to have anticipated flexible front suspension later used on motor cycles.

In a surviving letter written by Charles, he indicates that as boys walking to school, he and his brother used to speculate about inventing a self-propelled carriage that would carry them effortlessly on their way. This germ of an idea began to come to fruition some time around 1887when they designed a small high-pressure marine-type steam

engine. Charles recorded that it took about two years of spare time work to complete the engine and install it in an angle-iron frame mounted on four wheels, so that by 1889 it was ready for a test run. Certainly they had such an engine in 1889 because it is listed, together with a Santler bicycle, amongst the items in an exhibition of domestic appliances at the Skating Rink in Worcester during September that year. However, it seems that the steam engine was not really satisfactory for the purpose and the project was put aside for a time.



The first Santler car, laid up in the blacksmith's yard c1907. The gridion radiator at the front is actually a steam condenser - a relic of the car's original steam power unit.

During this period Santler & Co. began to manufacture small electric-light outfits and to install electricity in various public buildings as well as private residences. The electricity generators were powered by small gas engines or steam engines or even by water turbines, to customer choice. One of the first buildings in Malvern to be electrified by the Santlers was a house named Ellerslie which later became Ellerslie School for Girls. Another, and rather more significant property, was St. James' House in West Malvern - bought in 1890 by The Dowager Lady Howard DeWalden one of whose sons was the Hon. Evelyn Ellis whose interests in motor vehicles are well known. It is also on record that the Santlers were engaged to install electricity as far afield as Watford and Plymouth. Later on, Walter was responsible for electrification at Ampleforth College near York.

By about 1891, Charles had adapted one of their small gas engines to drive the experimental car in place of the steam engine. The only problem was the supply of gas which somehow had to be carried on the car. That was solved by compressing gas from the domestic supply into a steel cylinder slung beneath the chassis. The location of the gas cylinder is still evident by virtue of the bolt holes for the sling straps and the profile of the cylinder where the angle iron chassis frame member were filed away to enable it to fit snugly. Whilst the gas engine was probably a more convenient power unit than the steam engine the power to weight ratio was not good and the sma1l supply of gas severely limited how far the car could travel on one charge. Once again the project was set aside for a time but this phase of the car's evolution is historically important in that it marks its conversion to internal combustion.

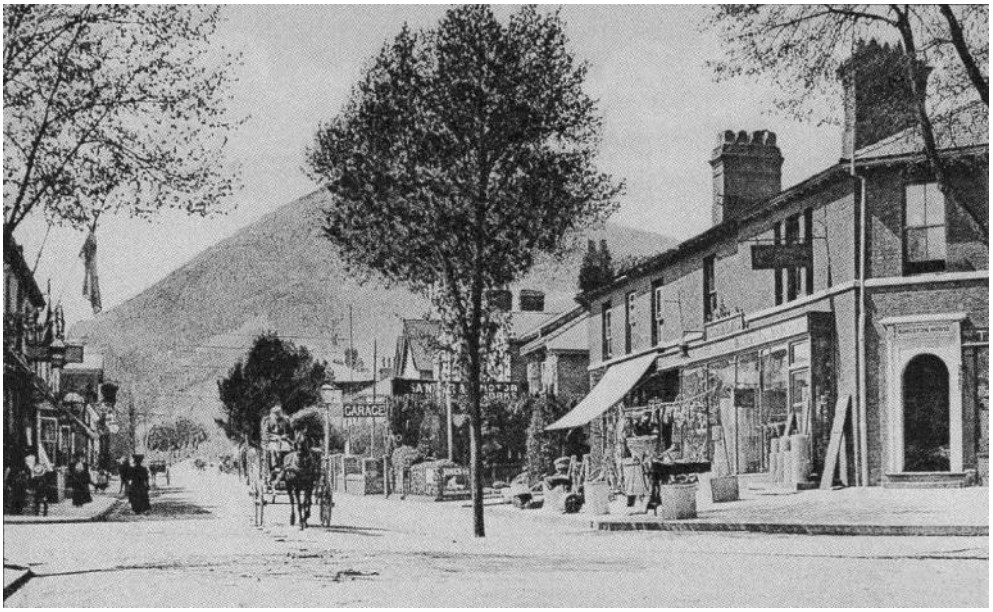
It was not long afterwards, however, that the gas engine itself was replaced by the even more convenient Benz-type petrol engine. It is evident that this was altogether more successful. Charles wrote that by 1894 they were achieving speeds of up to 12 mph. An obvious question to ask is 'Why didn't they get booked for exceeding the speed limit?' Indeed Charles revealed that they did sometimes take risks. It was Walter's job to walk in front with a red flag (a requirement in Malvern under local bye-laws) until they were out of sight of a habitation. Then he would jump aboard and off they would go as fast as the car would take them. However, it was recently discovered that most of their trials were not conducted on the public road but on a private road on the nearby estate of Earl Beauchamp at Madresfield Court. That meant that they were not only well away from the attentions of the police but from the general public as well.

There is no doubt that the Santlers deliberately avoided publicity in connection with their early motor car experiments. They had no wish to be branded as eccentric dabblers in crazy inventions such as horseless carriages. What is more they were not experimenting with the idea of selling cars to the public. There was no reason to do so since no-one could be expected to buy a car until the law was changed. It is interesting that George Lanchester in an address to the Veteran Car Club in 1948 pointed out that "... our cars were but little known outside the Birmingham locality.... We never sought publicity for the good reason that we were not yet manufacturing cars for sale". Sir Dugald Clerk is said to have advised F. W. Lanchester against making an engine for a flying machine in 1893 on the grounds that ".... you would be regarded as a crazy inventor and your reputation as a sane engineer would be ruined". In view, of such pressures on the early motor car pioneers in this country, it is hardly surprising that accurate records of their activities are so scarce.

It was not until the beginning of January, 1897, that the Santlers invited a reporter for the *Malvern News* into their new premises in Worcester Road - the Malvernia Works - into which they had moved during the week after Christmas, 1896. His report revealed that they had more than one car on the premises. One of these was probably the original machine, possibly already laid up, and the other an improved second car under construction. Eye-

witness accounts testify to the original car having been laid up by the turn of the century. A further report in the *Malvern News* in April, 1897 indicated that as well as cars, Santler & Co. were experimenting with motor cycles. It appears that these were motorised heavy-duty bicycles, A tiny engine attached to the headstock drove the front wheel by leather belt in a manner similar to the contemporary Werner.

Between 1897 and 1901, however, Santler & Co. seem to have had little spare time for motor car experiments. At least, none are recorded. Most of their energies at that time went into their other commitments - electrification, installation of telephones and general engineering. However, in 1901 they built a neat little 2-seater with a tubular chassis and a front-mounted vertical, single-cylinder engine. The crankshaft was transversely oriented across the chassis. Primary drive was by flat belt to a central gearbox with final drive by a single chain to a live axle. There is no record of this car having been sold. It was presumably built as a 'works' car. That probably meant it was for Charles's use since by all accounts Walter much preferred to ride his bicycle. It was eventually converted to take four seats and remained in use for some time.



Malvern Link in 1910 looking south. Santler & Company's Garage and Motor Works (Malverian Works) is just visible behind the tree in the centre.

The next Santler car for which there was any record appeared in 1907. This is an open 4-seater with a 'tulip-type' rear seat. A photograph of it appears on a trade card together with one of the original experimental car - just as it was at that time, laid up in the yard and covered in bird droppings. The 1907 car has been likened to the contemporary Humber and indeed it does have a similar appearance. Unfortunately no technical details have survived but a different photograph of it with Charles Santler and his elderly father aboard was published in the *Malvern Gazette* together with the statement that it was designed and built by Santler & Co. at the Malvernia Works. Although the front number plate is visible, the two letters of the registration mark are partially obscured by the starting handle and it is a matter of speculation what they might have been. What is clear, though is that they were not the Worcestershire letters, AB, as might have been expected. That presents a rather curious puzzle for which there is no obvious answer.

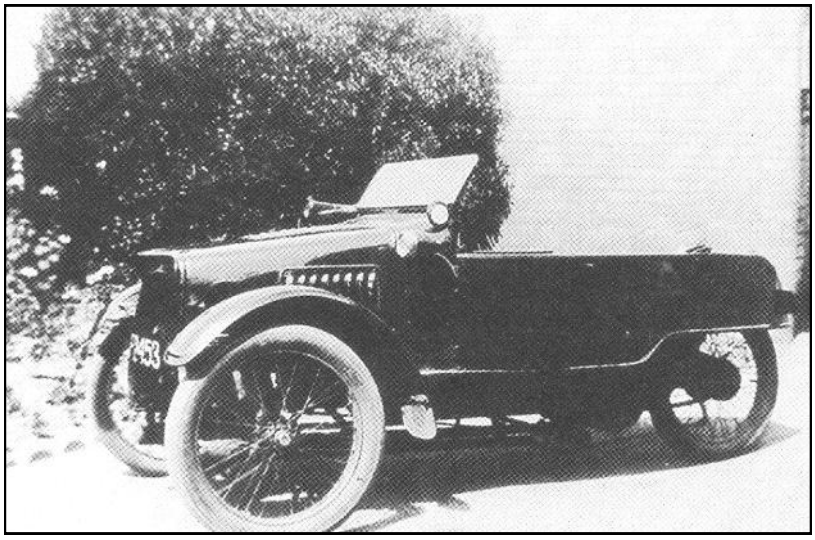
For the next six or seven years, Santler & Co. seem to have concentrated more on car repairs and maintenance than on construction. On the recommendation of C. W. Dyson Perrins (of the well-known firm of Lea & Perrins, makers of Worcester Sauce) Santler & Co. received recognition from the RAC as approved car repairers. It is evident from his glowing testimonial that Perrins thought very highly of Santler workmanship. He wrote: "... I have today written to the Secretary of the Royal Automobile Club in answer to an official inquiry, and said that I consider you are worthy of the highest certificate which they issue ..." There can hardly be a better recommendation than that.

The Santler car resurrected for a carnival parade in 1911 to mark the Coronation of King George V.

By 1913, Charles had begun work on a new light car. The prototype, fitted with a Dorman four-cylinder engine, open shaft drive and a round-nosed radiator, was ready for testing in the summer of 1914. The test driver was H. W. Ravenshaw whose name appears frequently in early issues of The Autocar, His report was exceedingly complimentary. Another glowing report

appeared in *Light Car & Cycle Car* in March 1915. The Santlers were so encouraged by these compliments that they advertised the car as 'the Rolls-Royce of light cars'. It was offered as a 2-seater or as a 4-seat tourer, or even as a tradesman's light delivery van. The rear of the latter could be speedily removed so that it could 'at any moment be converted into a private car'. One modern feature of the 1915 Santler was that the rake of the steering column could be adjusted to suit the driver.

Possibly in emulation of Evelyn Ellis who, in 1892 had driven a specially low-geared Daimler to the top of Worcester Beacon (1,394 ft) the highest peak in the Malvern Hills, Charles drove one of his light cars up the Beacon too. He was unlucky enough to be caught in low cloud at the top which obscured visibility and caused some difficulty in turning round for the descent. He only just avoided sliding over the edge of a steep drop but succeeded in getting down with the car in one piece. Since that time, cars have been forbidden on the Beacon.



One of the last Santler cars built, a Santler Rushabout c1922, with MAG v-twin engine.

Judging by the registration records, it seems that but for the war,1915 might have been a year of relatively prolific production of Santler cars. As it was, production came to an abrupt stop and Santler & Co. had to undertake munitions work, After the war was over the firm found itself in financial difficulties. The problem was partly due to the general economic climate as the 1920s approached and partly due to Charles Santlels pre-war experiments with a motorised plough which ate up what little capital the company had. The war and its aftermath meant that the firm was unable to recoup what had been spent on the plough. By 1922 Santler & Co. was forced to close down.

In what might be seen as a last desperate measure, in 1920 Santler & Co. brought out a 3 -wheeler - the Santler Rushabout - which, on the surface at least, looked exactly like the contemporary Morgan Runabout, built only a short walking distance away from the Santler works. The main difference lay in the transmission which on the Santler machine consisted of a two-speed gearbox and a single drive chain to the rear wheel. The Morgan at that time had two chains, one on each side of the whee1, running on different sized sprockets and engaged by a sliding dog-clutch.

Santler & Co. did have an intimate knowledge of the Morgan Runabout, having been sub-contracted from time to time by the Morgan Motor Co. to do machining work for them. Unfortunately for the Santlers, the Rushabout wasn't taken seriously by potential customers and not all those built were sold, despite a drastic reduction in the price from £165 to £85. It is reported that two were left in the works when it closed down. What happened to them after that is not known.

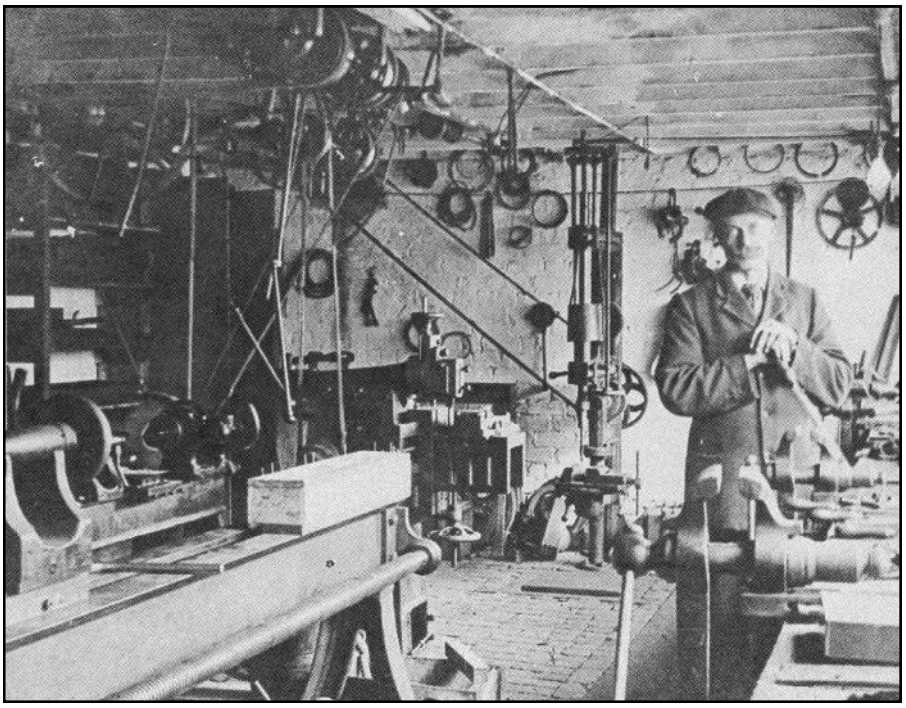
It was at this point that Walter took up a post as Resident Engineer at Ampleforth College. He remained there until his death in 1942. Charles on the other hand, in 1924 at the age of 60, set off for New Zealand and once there took on the task of improving the signaling system on the New Zealand Railway. When he retired at the age of 65 he returned to settle down in Malvern. However, on the outbreak of WW2 in 1939 he offered his services to the Mining Engineering Co. on the outskirts of Worcester, as a result of which he met an untimely end. In October 1940 the works canteen was struck by the only bomb dropped on Worcester during the war. Charles was one of the unlucky victims and died three days later. His grave can still be seen surmounted by a fallen cross at St. Leonard's Church, Newland, not far from the site of the Malvernia Works.

Several eye-witnesses have testified to an important aspect of Charles Santler's character which contributed to Santler & Co.'s shaky financial position. This was his single-minded pursuit of the solution to engineering problems at the expense of the commercial side of the business. When he was absorbed in what he was doing, he wouldn't even answer the telephone, let alone speak to prospective customers. There is a striking parallel between this description of Charles Santler and that of Carl Benz in David Scott-Moncrief's book, *The Three-Pointed Star:* 'Benz... was essentially an inventor, an engineer and a technician, but with few gifts for administration and none at all for common salesmanship'.

Reference to Carl Benz also raises one of the many puzzles surrounding Charles Santler's early activities. This lies in his claim to have gone to Germany and to have had some part in the development of the Benz car. Whilst there is no reason to doubt his word, as yet no positive independent proof has come to light. The nearest to any form of confirmation so far discovered, is a report in the *Malvern Gazette* in the 1930s under the headline 'Does Hitler

know this?' This indicates that Charles Santler did indeed go to Germany (at an unspecified date) but at the behest of an unnamed German industrialist to help to set up a new bicycle factory.

At this point it is easy to be drawn into making too great an assumption, but it is known that in 1886 the Adler Bicycle Works in Frankfurt began to manufacture safety bicycles in a new factory and Benz obtained the tubular frames for his 3-wheeler from Adler. Heinrich Kleyer who founded Adler was a known anglophile and could speak English fluently. He often visited the UK on business and attended trade shows so the possibility of a link with Charles Santler is not unrealistic.



The only known view of the Malvernia Works machine shop. Taken in 1911, it shows Charles Santler at the bench.

If some indication of the presence of an Englishman at Adler at the crucial time turned up, then that could be significant. What is significant, though, is that Benz didn't produce a satisfactory four-wheeler until 1892 and the steering gear on Santler's original four-wheeler bears no resemblance to the Benz steering. It is much cruder and closer in principle to that on the Daimler Stahlradagen of 1889. That suggests Santler's arrangement owes nothing to Carl Benz and reinforces Charles' claim to have first tested his car in 1889 when it was powered by the steam engine.

Despite being left outside in all weathers for many years, the car survived to be rescued in 1938 by a veteran car enthusiast, J. W. Mills, who paid the princely sum of £5 for it. He was fortunately able to get valuable first-hand information about the car from Charles Santler himself. When John Mills joined the armed services on the outbreak of WW2, the car was left in storage in the Coventry area. Amazingly it survived the blitz on the Midlands and is now the only known Santler car remaining.

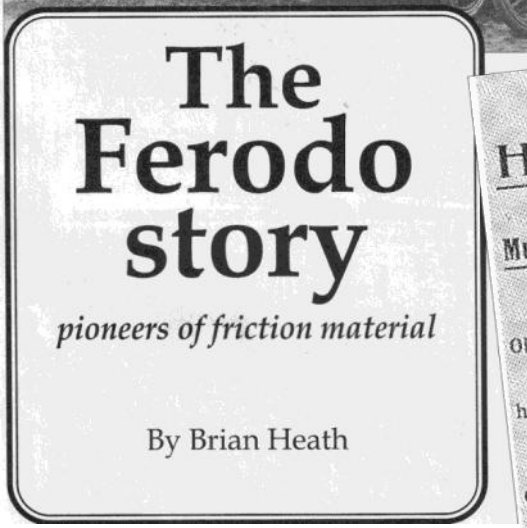
In 1986, after years of controversy, and on the basis of new research, the VCC Dating Committee acknowledged the car's early origins in 1889 and confirmed its date of completion in petrol-engined form as 1894. Until evidence can be found to the contrary, the Santler can certainly claim to be the earliest 4-wheeled petrol car built in Britain. Charles Santler's consistent assertions in that respect, made over many years, have never been refuted. What is more it is the oldest British car still running. At an average speed of 8-10 mph it is not exactly speedy, but it is reliable and usualy gets there in the end.

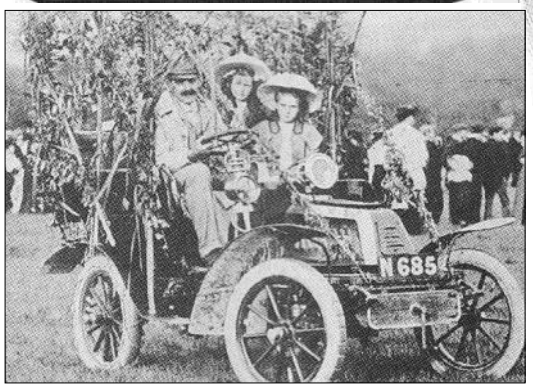
Copied from The Automobile September 1996

Things to Ponder

If a poison use-by date expires, is it more poisonous or is it no longer poisonous?
Which letter is silent in the word "Scent," the S or the C?
Do twins ever realise that one of them is unplanned?
Why is the letter W, in English, called double U? Shouldn't it be called double V?
Maybe oxygen is slowly killing you and it just takes 75-100 years to fully work.
Every time you clean something, you just make something else dirty.
The word "swims" upside-down is still "swims".
100 years ago, everyone owned a horse and only the rich had cars. Today everyone has cars and only the rich own horses.
If you replace "W" with "T" in "What, Where and When", you get the answer to each of them.

from Ron Hattersley





Herbert Frood with his daughters at the 1906 Chapel-en-le-Frith carnival

THE FERODO STORY

Exacting traffic conditions, in conjunction with the increased speed and acceleration of motor vehicles, demand that the stopping power of all vehicles should be adequate and completely reliable. Ferodo Limited have been involved with speed, and more importantly its control, since the invention of the motor car.

For centuries one of the most common methods of slowing down or holding horse-drawn wagons, was the use of the skid pan or roller scotch. The skid pan was made of cast iron; before a descent it was placed under the front of the left rear wheel as a form of brake block, locking the wheel or acting on the rim. The roller scotch which was made from elm wood, was used when going uphill, trailing on the ground close behind the point of contact between the wheel and the road, ready to hold the wagon should it roll backwards.

Besides wood, iron blocks working against other metal surfaces also became popular, especially for railway braking, although cruder forms of brake continued to be used until well into the twentieth century. A good example of early braking could be found on the Peak Forest Tramway, which was in daily use from 1797 until the time of the first World War. 16cwt wagons, each carrying anything up to 2 tons of limestone, and running under gravity in trains of as many as thirty at a time, were controlled by locking five or six pairs of wheels with pins thrust between the spokes.

Such was the situation in the mid-1890s, when Herbert Frood, a manufacturer's agent from Manchester, who had connections in the steel and silk trades, went to live in the Peak district of Derbyshire. What gave Frood his interest in brakes and braking material? He had recently married the daughter of Sir Samuel Ogden, who owned the Rossendale Belting Company of Rawtenstall, Lancashire, a firm which was supplying woven cotton anti-friction belting for industrial purposes. Apparently, it was the custom of this factory to economise on fuel by burning old belting, oil impregnated and stiff, that had out-run its useful working life. As a sideline, the boilerman used to sort out the best pieces, cut them into lengths and nail them roughly together to form brake blocks for the wagons used by the company and other local carters. On his visits to his father-in-law, Frood evidently became aware of this practice, and it gave him food for thought.

In those days brakes and brake linings for road vehicles were simple. For horse-drawn vehicles they consisted

of brake blocks applied by hand lever to the rims of the rear wheels. Various materials were used for the blocks, amongst them cast iron, elm wood, leather and camel hair belting. In France, Michelin (the tyre manufacturer) was successfully producing patent brake blocks made of canvas laminated with rubber, and cut in such a way that the edge of the canvas became the rubbing surface. Although they were effective, gritty roads wore them away rapidly, and they were expensive.

Herbert Frood used Michelin brake blocks on his trap, and he determined to endeavour to improve on this product. He began his investigations in a little wooden hut built in the grounds of his house, where he experimented with many types of material then in common use, among them cast iron, wire rope, hemp, colliery rope, leather, elm and poplar wood, hair and cotton belting.

The little wooden hut.

He noticed that although cotton belting tended to wear rapidly because of sand abrasion under wet conditions, the felting which this produced wore extremely well when dry. This led him to believe that the wearing quality was closely linked with the manner in which the fibres were bonded together. In pursuing this theory he carried out tests on samples of the old cotton textile belting, hardened and glazed through impregnation with mineral oil, which was being used for brake blocks at his father-in-law's mill. Here, within the family, was the substance which he had been seeking. It was cheap and easily obtainable, and wore better than the Michelin blocks in use at the time. This was the basis on which the Ferodo company was founded.

From his woven cotton fabric material, Herbert Frood developed his brake lining business under the company name Ferodo. He continued to experiment and in October 1900 he filed an application to patent his improved brake blocks. The complete specification, no. 18,292, was accepted in August the following year.

The basis of the patent was that the blocks consisted of layers of textile material, leather or a similar fibrous substance, cemented or nailed together, impregnated and dove-tailed, and screwed or nailed into suitable brake pads. The type of impregnation varied according to whether the brake blocks were for use against iron or rubber tyres. The grooved blocks for use with iron tyres were soaked in a molten composition of two parts rubber cement to one part each of ozokerite and resin. In the mixture for smooth-faced blocks for rubber tyres, the resin was replaced by cornuba or some other hard wax with a high melting point. In the specifications, Frood explained that he had found that when a resinous substance was used against a rubber tyre, the tyre wore out instead of the block. By substituting wax he limited the wear almost wholly to the block, without reducing its effectiveness.

In 1901 Frood transferred his activities to Gorton in Manchester. Sales at this time were directed towards the coachbuilding and wheelwright trades, which, since they did not include vehicle operators, had little interest in the brakes' operation. A conscious effort was directed towards vehicle operators, and it was then that the company entered a period of sustained growth. By 1902 business was such that he needed to expand and the company moved into two o1d mills in Chapel-en-le-Frith, the position it occupies until the present time.

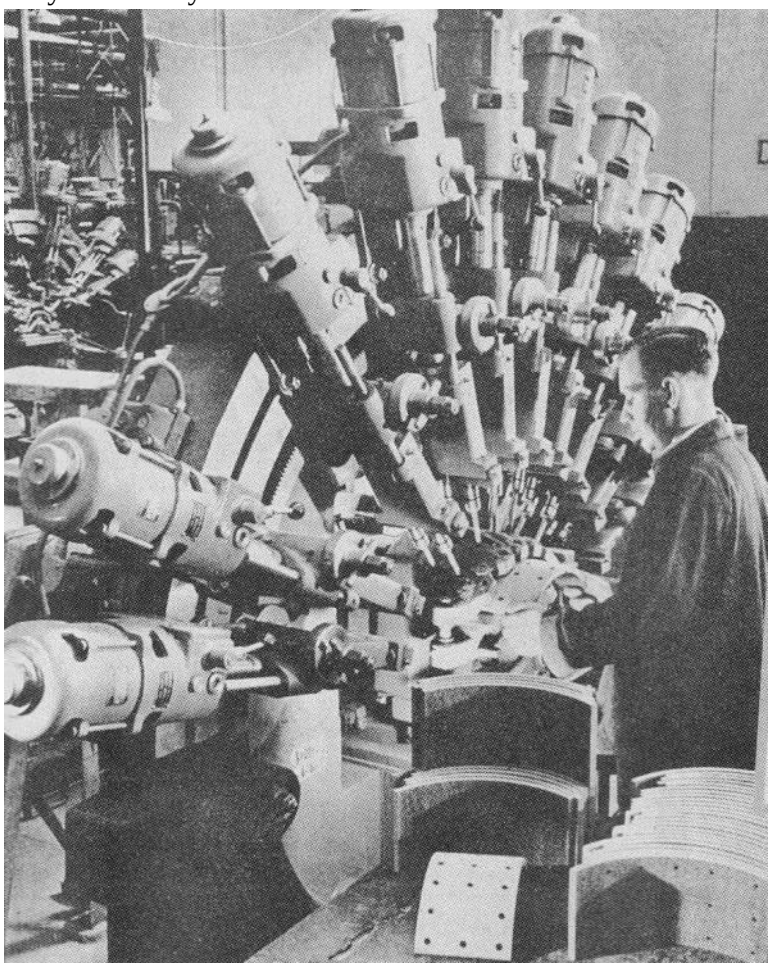
The first serious order for brake blocks came from the London General Omnibus Company who operated approximately 5,000 horse-drawn buses. For brake linings they relied on large supplies of scrap-leather harness which they had to renew on average twice a week. Within matter of weeks it was that whereas a brake block cost 18p and a negligible amount to the cost of making and fitting scrap leather blocks to give equivalent wear was twice as much. Moreover, tyres were no longer damaged by the nails used to hold the original linings in position. This contract lasted 1911, the last year in which drawn buses were used in London.

With the introduction of the motor car, and because of its considerably increased speed, development of brakes and their linings became of great importance. In 1904 the London General Omnibus Company introduced their first motor bus. In view of the satisfactory results on the horse-buses Herbert was invited to develop a suitable brake lining. In view of the generally greasy state of the city streets, braking needed to be as gentle as possible, metal-to-metal braking was too harsh, and caused wheels to 1ock. Tests showed that the cotton-based material was ideal and was able to withstand the Scotland Yard requirement that a bus travelling at 12mph must be able to stop in 14 feet. Moreover, cotton-based material was able to withstand the performance requirement of 2,340 applications a day (20 per mile for 117 miles). The contract to supply the LGOC did not go unnoticed and, after tests, the company fitted

Ferodo linings to all the British vehicles then in production.

There was another important friction application for Ferodo to tackle - the clutch. In the early days of the present century the cone clutch was coming into general use on motor cars, and leather was used almost exclusively as the friction lining material. Although its friction against metal was initially high, at 0.8, as it became warm with use its coefficient fell sharply, to about 0.2. Moreover, because leather carbonised easily, its life was short when London buses first came on the road with leather clutch linings, these sometimes had to be replaced twice in a day because the drivers had the habit of slipping and burning them out. It was not unknown for drivers of fairly powerful cars to have the clutch relined 'en route' on journeys of, say, I50 rniles.

In this field Frood and one or two of his colleagues carried out tests on their own cars, replacing leather with impregnated cotton in band form. As motoring enthusiasts they were very pleased with the results - long wear, steady friction and smooth engagement. On approaching manufacturers to demonstrate the lining, they were frequently told it was too expensive. Once again the sales effort of the company was directed towards the user, and they were richly rewarded.



A large multiple drill used for drilling and counter-boring, in one operation, the rivet holes in brake linings.

The first known user of impregnated cotton cone-clutch linings on public service vehicles took place in about 1905, when they were adopted by Scottish Motor Buses of Edinburgh, to be quickly followed by the LGOC. Initially a problem was experienced with stretching, but this was eventually overcome by developing a process for hardening and pre-shrinking the material. By contrast with the short life of leather linings, which lasted at best, a matter of days, the Ferodo linings lasted from two to three years. In due course, the new material was adopted by the majority of motor manufacturers as standard equipment.

As the motor vehicle developed, brake and clutch linings with greater resistance to heat and wear were required. Much experimentation and development was undertaken at Chapel-en-le-Frith, and it was in 1908 that the next major step was taken. Patent number 4627 covered a process for 'the hardening and impregnation of fibre brake blocks'. This was accepted in 1910 and a description of the process showed that it involved the coating or impregnation of fabrics with a varnish, japan or enamel solution of a none-vitreous type which required a high fixing temperature. As a typical enamel analysis, 65 parts by weight of resin spirit was quoted (25 parts rock bitumen and 25 parts gum copal) brought to a suitable condition by linseed oil and with litharge or other drier added if required. Impregnation was recommended to take place by immersion under pressure. The greatest development was to follow, however. During Frood's constant search for improvement he happened to experiment with woven asbestos fabric as a possible basis for high-temperature friction linings. The tests he conducted on this material showed that a combination of woven asbestos, spun on brass wire to increase its strength, with his new bonding agent, produced a friction material possessing the high-temperature-resistant quality he was seeking. Initially a problem was experienced with this material when it compressed - especially on heavy commercial vehicles - with a designated brake pressure as high as 300psi. The result was that the brakes often required adjustment soon after fitting, as the lining had spread. Once this had been done little further adjustment was required. The obvious remedy was to reduce the lining to its optimum thickness before being fitted to a vehicle. The method was patented in 1912; it allowed for a lining softened by warming, to be placed in a die of the exact dimensions required, to prevent lateral expansion. When pressure was applied, the lining would be reduced in thickness from, say ½" to ⅜". The development of this specification and its method of production were possibly the most important in the history of the company, and the process was to remain in use for many years.

Constant development produced much-improved friction materials for both brakes and clutches, to keep up with

constantly rising speeds as the motor vehicle became a necessity rather than a popular hobby for enthusiasts. Another major development took place after the second World War when the full-width or aerodynamic body came into fashion together with smaller wheels. brake linings had to cope with ever-increasing temperatures. The arrival of the disc brake offered a solution to many problems, principally as it offered a much improved ability to be cooled. That there is little new in life applies equally to engineering. In 1902 Dr F.W. Lanchester had devised a form of disc brake which operated on the rear of the worm drive of his air-cooled twin-cylinder car. In1914, Herbert Frood supplied discs with an outside diameter of ten inches for a similar type of brake, which supplemented the band-brakes on an A.C. cyclecar; again in 1923 the Villiers-engined Harper three-wheeler was braked entirely by disc brakes on the rear wheels. All of these applications were lined with Ferodo material.

Ferodo to-day is a far cry from the experiments of Herbert Frood. The imposing buildings of the company, which has been part of the T & N organisation since 1925, are a logical link with the little hut in which the early experiments were conducted. It is encouraging to find a company that has been involved with motor transportation since its inception and is still in the forefront of the industry. So many companies, once household names, have faded away. Not so Ferodo Limited!

This article has been based on extracts from 'The Ferodo story - sixty years of safety' with kind permission of Ferodo Limited.

All photographs reproduced with kind permission of Ferodo Limited.
Brian Heath

Copied from The Automobile, August 1996

AT Random - By Automan

Concerning Clutches

Last week I was discussing braking questions, so, as clutches belong pretty nearly to what would be called ornithologically, the same family, I propose now to commit myself to some musings on the subject of these important items of the transmission system.

I dare say there are a good many people driving cars who have not the least idea where the clutch is located or what its function is, and that there are others who, in selecting a car, would always be prepared to take this important member for granted.

Most of these unhappy folk I envy in many respects. Perhaps some people are born to clutch trouble (this is a semi-technical expression, not a gibe) - I think I was, for, casting back to very early motoring experiences, one memorable expedition prominently stands out, and so does the part that the clutch played in it.

Those were the days when we picked up experience plentifully as we went along - and, as often as not, dropped other things.

It was no end of a car, for its time; about 12 h.p., with a two-cylinder engine. It had been shipped to London from Paris, and I undertook to pilot it about 100 miles into the country. Although an early start had been intended, there were various delays - not altogether unusual with a new car even nowadays - and a dull March afternoon was all ready past its prime when we ultimately steered out into the traffic.

At first all went well, and it was not until we were fairly out on the Bath Road beyond Hounslow that misgivings arose. The clutch, a leather-faced one of the "external" cone type, was obviously not playing the game. It failed to take hold when the engine was accelerated, and second speed was called for on the slightest rises.

Eventually we began to get exasperated, finding that no amount of coaxing through the medium of the pedal contributed to remedy matters, and descended to go into things.

Of course everything was hot, a grease-cap had disappeared from the clutch shaft and there appeared no visible means of getting at the spring to tension it up. Equally, of course, we had none of the palliatives on board which were currently held in esteem as beneficial applications in such cases. The only thing suggested by a turnout of the tool-box was a dose of French chalk, which at the same time gave rise to a discussion as to whether it was likely to act as a lubricant or otherwise if applied to the leather. However, it was getting dark, and desperate measures were necessary, so the clutch was held out and as much chalk as possible introduced between the surfaces.

To this day I have been unable to follow exactly why an improvement was effected, but certain it is that the slipping was less pronounced on resuming the journey, and by something like 10p.m. we made Reading, and decided to postpone further progress till the next day - for all sorts of other details having nothing to do with the

present story had called for sundry stops and attention, and we had had quite enough. Amongst other things, we had run out of petrol about four miles from the town.

On going down to the garage the following morning which was the Sabbath (by way of further complicating our chances of getting any skilled assistance if needed), it quickly became apparent that the effect of the medicine had worn off during the night, for the car resolutely declined to ascend the slope out of its resting-place. The assistance of the genius on duty was invoked, and he prescribed Fuller's earth, and produced some. We tried to persuade him to tackle the clutch spring, but he looked at the parts which concealed it and demurred (we afterwards found it was necessary to displace the gearbox to get at the adjusting nuts, so he was a wise man in his generation).

Fuller's earth therefore was applied, after the leather had been treated to a liberal douche of petrol, and then we managed to get out and up on the road again.

But the improvement again was short-lived, for a few miles on matters were as bad as ever. This time the curiosity of some cottagers, who evinced considerable interest in our deliberations, prompted one of our party to inquire if any resin was likely to be got. As luck would have it, the possessor of a fiddle volunteered to supply some, so, a transaction satisfactory to all concerned was concluded, and a piece of the precious compound having been judiciously pounded up in the folds of a newspaper, the recalcitrant leather was liberally powdered with it.

This enabled us eventually to reach our destination, though not without having to shed passengers on the steeper hills. Our first care before using the car again was to unearth the clutch spring and increase its tension, and as a matter of fact that clutch subsequently gave more trouble through fierceness than in any other way - it was a creature addicted to extremes.

Now the quaint thing about this experience is that never since the days of that particular car have I ever had a leather-faced clutch which has given a moment's trouble. But I cannot say the same of the multiple-disc variety.

A few weeks ago my esteemed colleague "Cyclomont" was dilating on the treatment of multiple-disc clutches in a most praiseworthy manner, but his remarks at once impelled me to ask, why use a device which calls for such careful nursing, such precise lubricating and cleaning when a well-designed leather-faced clutch will do the work without any attention whatever ?

The scales of my own experience with all manner of clutches turn decidedly in favour of the leather cone clutch, preferably of the internal self-adjusting type which imposes no end-thrust on the shafting except during such brief periods as it is disengaged. I am frequently puzzled to know why manufacturers go out of their way to equip a car with the delicate and complicated mechanism of a multiple-disc clutch when the same end can be achieved so much more easily with the older variety.

Some multiple-disc clutches I have known have been a constant source of anxiety. One never knew they would set up chattering or squeaking or what they were going to do next, and their lubrication and cleaning are constant sources of tedious and time-consuming demand upon the driver's patience.

Several moderate-powered cars of the present day have but one blot upon their specifications, in my opinion, and that blot is the fitting of a multiple-disc clutch. I have been driving lately a new car made this year, and a very well known make, which suffers in this particular only - the clutch behaves most curiously sometimes on taking up the drive, emitting the weirdest noise which no manipulation will eliminate with certainty.

A good leather-faced clutch does not grunt or groan, it needs no attention whatever (I have used several for years without even dressing them with oil to soften the leather), and what more can one ask of any component of one's car?

Nor has it been by any means proved that leather-faced clutches are unsuitable to transmit the drive from a powerful engine, for in some of the largest and most satisfactory running cars of high power the type is employed every success. So I shall require a good deal of convincing that the multiple-disc clutch is either a necessary or desirable type to employ, especially on cars which have not the constant services of a mechanic at their disposal.

On the other hand I have nothing to say against the single-plate clutches used on such cars the small Rovers, or the De Dion type, while again the band-brake variety which is found on the Mors cars and the expanding-segment device which is a feature of the Metallurgique I have always found perfectly amenable to reason and quite satisfactory in service. But I am not in love with the miltiple-disc, and should welcome the "swing of the pendulum" more in the direction of what I hold to be that tried and trusted servant, the properly-designed leather-faced cone.

Reprint from The Motor October 1910

THE GREAT PLATE AUCTION

— BY ASSOCIATED AUCTIONEERS PTY. LTD., UNDER INSTRUCTIONS FROM THE DEPARTMENT OF MOTOR TRANSPORT.

On November 22nd, at 7.30 p.m., at the Sydney Entertainment Centre, it will become possible to obtain the unobtainable.

On November 22nd, at 7.30 p.m., throughout New South Wales, it will become legal to trade in the untradeable.

The investment potential inherent in these two related opportunities will be apparent to the astute collector.

The featured items at The Great Plate Auction will be 75 *Historic* number plates. Subsequent lots will comprise 15 *Distinctive* number plates and, at the conclusion of the evening, 1400 *Memento* number plates.

— 1 —

SMALL NUMBERS WORTH A SMALL FORTUNE

Even the earliest days of Motoring had their regulations. One such regulation in New South Wales required that *"no person shall upon any public street drive any motor vehicle upon which appears any advertisement likely to frighten any horse".*

Another regulation required that a vehicle "be capable of being so worked that it may travel either backwards or forwards and be capable of being readily steered".

Indeed, the Motor Traffic Act, 1909 specified that "The Governor may make regulations" and it was a further regulation that was to lead, some 74 years later, to this very event soon to happen in Haymarket.

The Governor provided *"that motor vehicles shall have separate distinguishing numbers"* and that "a suitable attachment (be) securely fastened in an approved manner at the rear of any motor vehicle for the purpose of affixing the number plate". The latter being defined as "an iron plate enamelled black, with letters 'N.S.W.' and figures of the number in white".

These number plates were *real* number plates. They started at "1", "2" followed, then "3". And so on, with admirable simplicity, until 1937 when "273·978" was reached.

In that year, real number plates were discontinued in favour of what aren't really "number" plates at all (they are "letter and number" plates).

— 2 —

A relative handful, less than half a per cent, of the original 273,978 survive. You could well look at thousands of cars and still not see one.

Were it legal to trade* in these coveted collectors' items, they would command keen prices.

In fact, holders of the low-digit plates have reported extraordinary offers for "their" plates. Five-figure amounts are common. Six-figure offers, not unknown.

At a coincidental auction in Hong Kong recently, the only one ever to precede Sydney's Great Plate Auction, number "3" went for $HK1,030,000.

A Mr. Cheong paid more than a million Hong Kong dollars for the especially lucky number since in the Cantonese dialect it sounded the same as the word for alive and growing.

Mr. Cheong won for himself a place in the Guinness Book of Records with his bid.

Lot 1 in The Great Plate Auction is number "3".

*After November 22nd, it will be.

A Buick in Market Street, Sydney, circa 1926. The number displayed is part of Lot 96.

— 3 —

THE HISTORIC SERIES:

THE SEVENTY-FIVE MOST COVETED NUMBER PLATES.

75 very distinguished "distinguishing" number plates will be the feature of this extraordinary auction.

This is the *Historic* series and comprises the most coveted numbers available. They range from the third number registered in New South Wales, offered by a private vendor, through to number "197".

Of particular interest are the 3 single-digit numbers – "3", "5" and "6" – and the 24 double-digit numbers, from 16 to 95. Among these are plates held by Samuel Hordern, Sir Hugh Dixson and the Hon. Sir Charles Kinnaird Mackellar, M.L.C. of New South Wales and father of the famous Dorothea Mackellar.

This page: "145" crossing Kangaroo Valley Bridge, New South Wales.

Opposite page: Sir Samuel Hordern at the wheel of the Hordern family's first car — a two-cylinder Darracq.

— 4 —

THE DISTINCTIVE SERIES:

FIFTEEN VALUABLE INVESTMENTS.

Nine of the most noticeable of all the original numbers will be auctioned, together with six previously unissued plates. The former range from "222" to "8888", the latter from "444·444" to "999·999" (the *highest* numeral-only plate). Each *Distinctive* plate features the one repeated digit. All digits are represented.

THE MEMENTO SERIES:

1400 CHANCES TO SECURE A LUCKY NUMBER OR INVESTMENT.

Each is an original number. Each is in its own right a collector's item.

Yet through a special Pool System of bidding, you will have the opportunity to invest in one of these still rare plates at a less spectacular price than would be possible with the *Historic* Series, or the *Distinctive* Series.

After the first 90 lots have been auctioned, 1400 number plates with special *Memento* numbers will be made available by the Pool System.

For details see page 45 and Notes for Buyers (page 9).

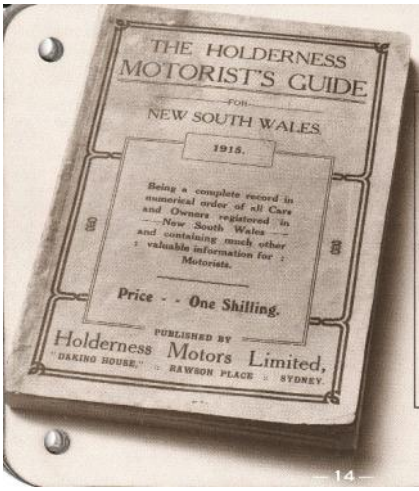
All of the lots being offered on behalf of the Department at this extraordinary auction are without reserve. This could be your opportunity to obtain a valuable piece of motoring history, a distinctive number plate or a personal memento that means something very special to you.

— 5 —

LOT 19:	LOT 20:	LOT 21:	LOT 22:
NSW 81	NSW 82	NSW 83	NSW 84
Previously held by: Henry C. Hinder 147 Macquarie Street Sydney	Previously held by: Mackellar Bros. Kurrumbede Gunnedah	Previously held by: Charles K. Mackellar 183 Liverpool Street Sydney	Previously held by: Daniel Stirgess Imperial Hotel Armidale
Car: Minerva	Car: Armstrong-Whitworth	Car: Armstrong-Whitworth	Car: Renault
Horsepower: 26	Horsepower: 25-30	Horsepower: 25-30	Horsepower: 14-20
Era: 1915	Era: 1915	Era: 1915	Era: 1915
Transfer Fee: $1,000	Transfer Fee: $1,000	Transfer Fee: $1,000	Transfer Fee: $1,000

27 —

— 28



— 14 —

HOLDERNESS MOTORIST'S GUIDE

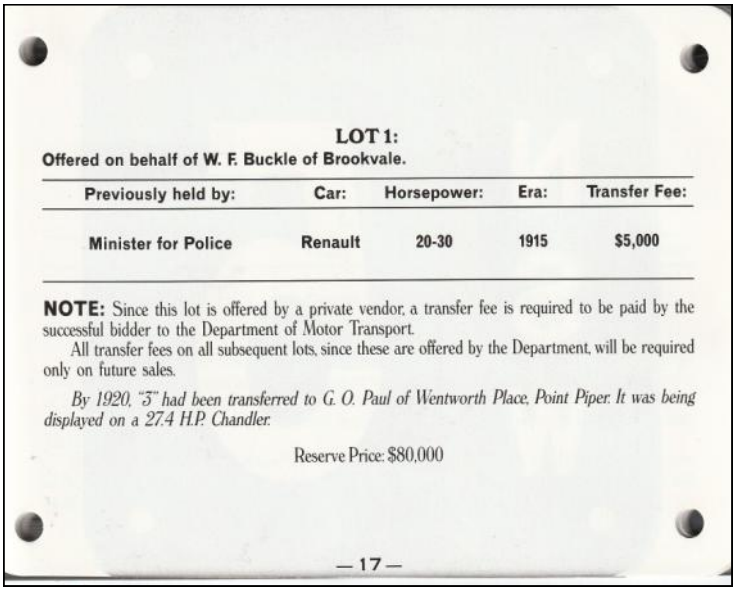
This rare copy of the Holderness Motorist's Guide for New South Wales, 1915, is a fascinating record of the early holders of the State's first plates. More than 13,000 entries (up to plate number 13·383) detail the name, address and make of car according to the number plate. This information is reproduced for the 75 *Historic* plates. Should serious bidders require any information about a particular number from the *Distinctive* or *Memento* series, they are directed to the Auctioneer who will endeavour to supply details from the Holderness Motorist's Guide.

Copy courtesy of The Fisher Library, University of Sydney.

THE SEVENTY FIVE HISTORIC NUMBERS.

This photograph was taken on March 3rd, 1918 at Tom Ugly's Point and features the two Detroit Electrics which displayed plates 144 and 146.

– 15 –



LOT 1:
Offered on behalf of W. F. Buckle of Brookvale.

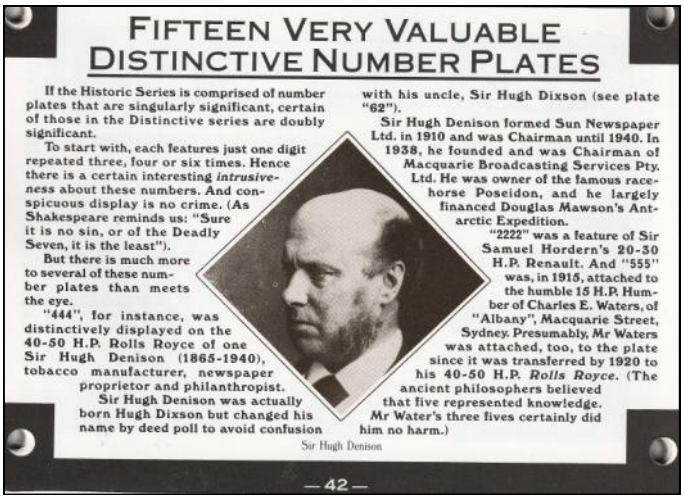
Previously held by:	Car:	Horsepower:	Era:	Transfer Fee:
Minister for Police	Renault	20-30	1915	$5,000

NOTE: Since this lot is offered by a private vendor, a transfer fee is required to be paid by the successful bidder to the Department of Motor Transport.
All transfer fees on all subsequent lots, since these are offered by the Department, will be required only on future sales.

By 1920, "3" had been transferred to G. O. Paul of Wentworth Place, Point Piper. It was being displayed on a 27.4 H.P. Chandler.

Reserve Price: $80,000

— 17 —



FIFTEEN VERY VALUABLE DISTINCTIVE NUMBER PLATES

If the Historic Series is comprised of number plates that are singularly significant, certain of those in the Distinctive series are doubly significant.

To start with, each features just one digit repeated three, four or six times. Hence there is a certain interesting *intrusiveness* about these numbers. And conspicuous display is no crime. (As Shakespeare reminds us: "Sure it is no sin, or of the Deadly Seven, it is the least").

But there is much more to several of these number plates than meets the eye.

"444", for instance, was distinctively displayed on the 40-50 H.P. Rolls Royce of one Sir Hugh Denison (1865-1940), tobacco manufacturer, newspaper proprietor and philanthropist.

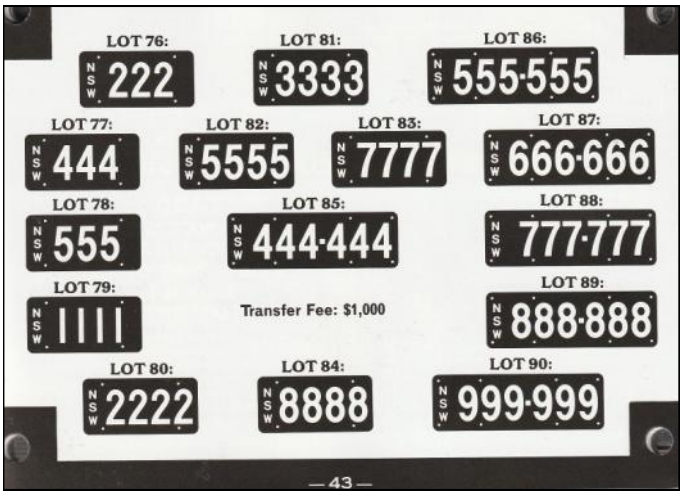
Sir Hugh Denison was actually born Hugh Dixson but changed his name by deed poll to avoid confusion with his uncle, Sir Hugh Dixson (see plate "62").

Sir Hugh Denison formed Sun Newspaper Ltd. in 1910 and was Chairman until 1940. In 1938, he founded and was Chairman of Macquarie Broadcasting Services Pty. Ltd. He was owner of the famous racehorse Poseidon, and he largely financed Douglas Mawson's Antarctic Expedition.

"2222" was a feature of Sir Samuel Hordern's 20-30 H.P. Renault. And "555" was, in 1915, attached to the humble 15 H.P. Humber of Charles E. Waters, of "Albany", Macquarie Street, Sydney. Presumably, Mr Waters was attached, too, to the plate since it was transferred by 1920 to his 40-50 H.P. *Rolls Royce*. (The ancient philosophers believed that five represented knowledge. Mr Water's three fives certainly did him no harm.)

Sir Hugh Denison

— 42 —



Event: The Great Plate Auction **Date:** 22 November 1983 **Location:** Sydney Entertainment Centre

This was the first heritage number plate auction held in NSW, and was held by the Department of Motor Transport. Around 6,000 people attended the auction and a total of $1,418,600 worth of number plates where sold.
The heritage plates offered where split into three different categories – Historic, Distinctive and Memento.

"Historic"
75 "historic" heritage plates were offered at the auction. These included single digit and two digit plates, along with three digit plates starting with a '1'.

1 digit:

3 – Passed in at $60,000 (Private Seller – $80,000 reserve) **5** – $49,500 **6** – $50,500

3 digit:
222 – $21,000 **444** – $24,000 **555** – ?

4 digit:
•**1111** – $20,000 (unclear) **2222** – $17,000 **3333** – $15,000 or $15,500 **5555** – $16,500
•**7777** – $22,000 **8888** – $20,000

6 digit:
•**444444** – $13,000 **555555** – $11,000 **666666** – $11,000 **777777** – $17,000
•**888888** – $14,000 **999999** – $11,000

"Memento"
1,400 "memento" heritage plates were offered, ranging from four to six digits.

6 digit:
999939 – $4,300

(*These are just some of the sale prices, taken from the web site*.)

(*Pages copied from a booklet (NSW 47) supplied by Don Liddle*.)

Rare Discovery in Saudi Arabia

Gordon Dewey

Various accounts of a large consignment of "old" cars coming to light in Saudi Arabia have recently been circulating. Gathering the common threads of the stories reveals that it is a select collection of Bullnose Morris cars numbering one hundred that span the years of their production – 1914 to 1926.

All are apparently in fairly sound condition and are remarkably complete except that at some stage, for whatever reason, all the radiator caps were removed from the cars and have been given up as lost.

The vehicles are representative of all the different body styles, wheelbases, colours, engine types etc. available in both the Oxford and Cowley models.

Sheikh Abdul Aziz, a well known collector of antique cars, has acquired all 100 vehicles and is adopting a conservation versus restoration direction to create a unique physical record of a one marque portrayal of developments in early motoring history.

In true Oil Baron style he commissioned from a London goldsmith 100 ornate radiator caps in solid gold as deserved identifier hallmark replacements for this particular set of cars. Each of these weighing 20 ounces no less. ($3M worth!!)

The caps were evidently shipped to Jedda on the Red Sea coast where Arab camel drivers had been hired to transport the caps across the desert to the Sheikh's facilities in Riyadh. For security reasons a ten camel train was decided upon with each driver given an equally divided allotment of ten caps each.

During the journey, an informer messaged the Sheikh suspecting that one of the camel drivers was not trustworthy. With previous form in clever petty theft the good oil was that, prior to departure, he cunningly had one ounce of gold machined from each of his ten caps in a way that was not readily discernible.

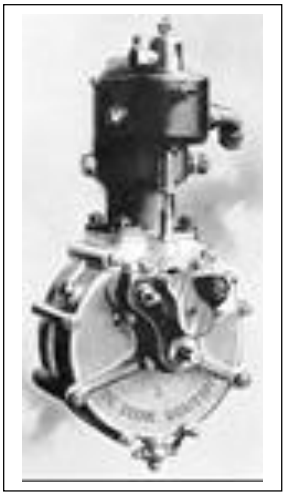
The Sheikh immediately contacted one of his influential friends in high places, Ali B. Aba – the Chief of Police in Riyadh. The Chief responded quickly, passing the case straight to his smartest detective - Azzif. In a stroke of rare genius, Azzif came up with a set of simple instructions of how to very quickly and positively identify the culprit in just one single weighing procedure.

The instructions, together with a dial & spring "SALTER" type potato scale borrowed from an industrial chemist working in an oil analysis laboratory, were despatched post haste to the Sheikh.

What did the instructions say?

(*In anticipation of many responses to this, only the first opened correct answer will be published in next month's S&P – Editor)*

1&2 Cylinder *Rally*



October 16-18th

Orange NSW *2020*

Expression of interest to attend

Spend the weekend touring the Orange region starting with a Friday lunch and afternoon drive. Saturday we will tour the local area and a lunch stop and afternoon drive. Saturday Evening Dinner and Farewell Sunday.

Entrant: …… Club : ……..

Address: ……..

……. State: …… Postcode: …….. Phone: ……

Email: …….

Vehicle: ……..

Send to :
Dave & Larna Perry
"Willawong Homestead Cottage B&B"
1043 Mitchell Hwy Orange NSW 2800
patchnpanels@hotmail.com
Ph: 02 63 650 657 M: 0421 985 162
Or
Russell Holden
PO Box 786, Mudgee, NSW, 2850
Ph : 0422 219 911 russell@oldworldlamps.net

The HQ Motel will be the **Oriana Motel**
178-184 Woodward St Orange NSW 2800 026362 3066
Please ring & book a room, be sure to let them know that you are part of the Veteran Car Club 1&2 Cylinder Rally

Classifieds

Please note ALL ADS MUST include the price and if you wish ONO

All States please copy!

If you wish to have a photograph with your Advertisement please Email (Email ONLY!!) the photo and I'll include it next to your ad. Advertisements will only run for 3 months then will be removed unless requested otherwise.

For Sale:

AX Renault gearbox. New casting in high tensile aluminium. Fully machined. Most gears and other attachments. $3000

Contact: John Wards 0418 229 917
[7-20]

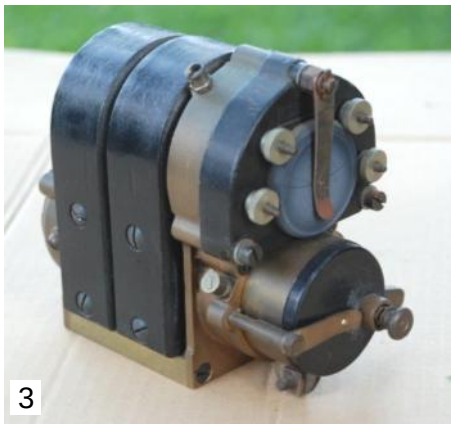
Having recently turned 85 I am retiring from long distance runs and rallies so I offer my **1910 Brush D24** for sale. I have rallied this Brush in NSW and my son Craig successfully drove it from Perth to Sydney on the 2012 Centenary Expedition.
Since then I have had all mudguards and bonnet professional painted, new white NON SKID tyres, new upholstered
seats and have thoroughly examined the engine, transmission and differential. Sale price - Offers around $25,000 -
I am keeping my other D26 which has the world's only 2 cylinder Brush Motor
Also offered for sale is my **1910 D26 Single complete motor**
sale price $1,500

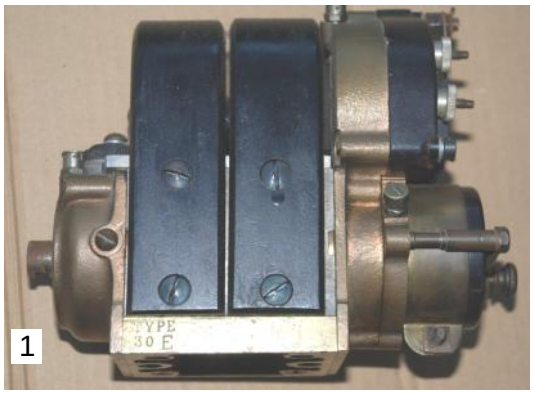
Contact: Bob Lamond, Piambong - 0409 712 101
[7-20]

For Sale: (cont.)

"Nil Meloir" French Magneto
Its for a 4 cylinder engine.
Its in good condition, just out of quarantine
Need a bit of humour at the moment.
Has a number 35272. $250 or near offer.
(photos 1, 2 & 3)


2


3



1

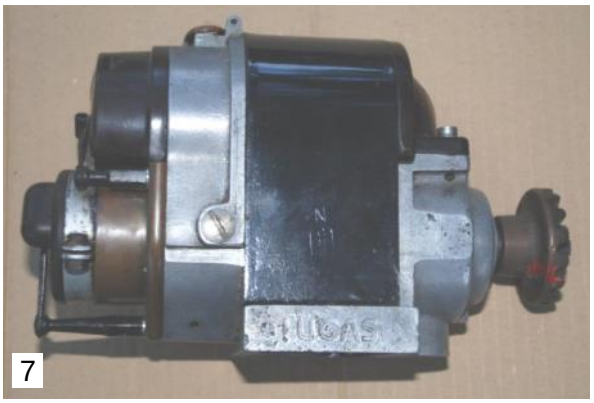
4

4 Cylinder Lucas Magneto Type GL4.
This is probably for a vintage car, but thought it would be fun reading anyway. It is also Virus free.
Good Condition. $200 or near offer.
(photos 4, 5, 6 & 7)

Would love to send these magnetos to new home, Buick is not happy with other magneto in the Garage.


5


6



7

Contact: Laurie 0428 254 029
[5-20]

For Sale: (cont.)

Two veteran T Ford gaslights, no glasses or burners,
$150-00 for the pair.

Veteran hand operated tire pump, and hoses and gauge, $25-00
Veteran hand operated windscreen wiper, $10-00.
Reel-light parts, $25-00.
Two rug rails, $5-00 each.

Contact: David Croser 0428 951 889,
or write to 75 King Street, Portland, Victoria, 3305.
Email. davidcroser47@gmail.com
[5-20]

1 only 1200w RYOBI Plunge Router, 1 only 16" TOOLMAC Scroll Saw. 1 only 82mm NRG Planer,
1 only 210mm Compound Mitre Saw, 1 only GMC Twin Pack, Router Table and 1200w Router.
All brand new still in boxes. Price is $500 the above lot.
TOOLMAC 4"(100mm) x 6"(150mm) Belt and Disc Sander, brand new still in box $120.
To be picked up from Nelson Bay.
Contact: Malcolm Bailey. (H) 4981 1552 (E) malcolm.bailey@bigpond.com
[5-20]

To suit Model T Ford.
1913-14 trans cover and can supply ribbed pedals.
1912-18 pointed nose sumps. $200
1913-14 E&J side light, has no font or burner. $120
1913 wooden coil box, takes ford coils and is new timber and just needs contacts.
High compression heads, dates 1914. $200, been cleaned and crack tested and machined down .005" to true surface
Contact: Ray Green on 0429 471 138 Q'Connell NSW.
[3-20]

Wanted:

820 x 120 Rudge Rim (picture), to suit Fiat Tipo 2
FIAT oil and fuel air pressure gauges,
fuel air hand pump
Contact: Neil Adams 0418 682 828
[5-20]

Magneto switch for 1913 - 14 Hupmobile or similar type of switch.
Photo of switch or similar sought
Contact: Laurie McGrath 0403 030 998
[6-20]

Classifieds

Wanted for our Web Site

Early rally flyers (entrant lists) of major rally's such as the Blue Mountains event for events prior to 1960. We have a number of old photo's of cars in events.
It would be nice to be able to identify the events the cars were taking part in.

'Before and After' photo's of any veteran vehicles members may have restored, along with some details of the car and restoration. We want to add a section to the Website to highlight what can be achieved with the persistence and talent (or money) our members possess.

Any other articles or ideas to publish on the website.

Please contact us on the details below or talk to me at a Club meeting.

Contact: Graeme & Abbey Newman Ph: 4392 1035 (H) 0412 138 063 (Mob)
kazngrae@bigpond.com or events@vccansw.org or contact us via the website.

Services

This page will automatically have our supporting advertisers as a bold listing as part of their yearly advertising cost. Other businesses or people who provide a service can place a listing here for only $20 per year or part there of (August to July). If you know someone who provides a service that may be of benefit to club members please encourage them to partake in this section as it will help them, other club members and the club itself. I've started the list with our current supporting advertisers.

Please remember support those that support the club!

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