

The 'Bridgwater' Motor Car

The history of Bridgwater's own motor car and the Company that inspired its production

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Introduction.

That Bridgwater town at the turn of the century with a population of only 15,000 should have boasted a motor vehicle designed and partly constructed there, but more especially one called the 'Bridgwater', may surprise many. To those brought up alongside the Bridgwater Motor Company it is no surprise, but strangely it remains a car which despite research defies total identification.

The origin of the 'Bridgwater' motor vehicle is no different from the countless other unusual and oddly named cars of the time. Back garden sheds, indeed any building at all with four walls and a roof, proved ideal hideaways where brain and brawn, frequently with more enthusiasm than mechanical knowledge, spent all hours of the day and night producing the invention of all times, a motor car. The prospect of total controlled mobility at speed was a temptation few men could resist.

From small origins some large motor companies grew. Others came and went, and although some firms survived, most of the vehicles they produced have long since disappeared. Sadly, it seems this was the fate of the 'Bridgwater'. Indeed if one came to light now, it would be the discovery of a lifetime!

Whilst heads today may turn as a customised car roars down the street, we frequently forget that the mass production of identical cars was a later development in the history of the motor vehicle. Previously, if one was considering purchase or construction it was usual to take an engine produced by one company, marry it with a chassis from another, and then have it mounted with a body of one's design or choice. Thus it was quite usual for a car either to be unique, or one of a small number of the same 'model'. Whether totally manufactured under one roof, which was rare, or put together from parts from different sources, as was the 'Bridgwater', each car had its individual features, to suit the customer.

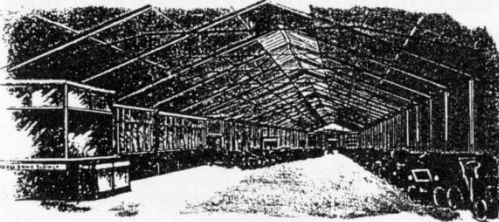


In the Beginning

In the late 1870s Harry Carver was a cycle shop proprietor with premises on East Quay, Bridgwater known as H. Carver's Cycle Works. He advertised large stocks of Raleighs, Rovers, Humbers and Singer bicycles together with a large assortment of second-hand cycles. By 1887 Mr Carver was able to acquire the adjoining premises at East Quay. He was a pioneering motorist and in due course a motor car company depot evolved, Carver being the manager, with Frank Wills as his consulting engineer. Soon the company became known as the Bridgwater Motor Company, 12 East Quay, complete with repair workshops, petrol supplies, storage for motor cars, tricycles and motor bicycles and facilities to teach prospective purchasers the techniques of driving within an indoor driving school at East Quay. By 1902 the company was appointed official repairers to the Automobile Club, to De Dion-Bouton Ltd. and the Motor Manufacturing Co. Ltd., with accommodation for the storage of 70 cars on their premises. By December 1903 plans were afoot to move to new premises in Eastover, Bridgwater. On 3rd February 1904 the Bridgwater Motor Company Limited was registered with an unissued share capital £20,000 in £1 shares.

The Bridgwater Motor Co., Ltd.,

GARAGE
OF THE
BRIDGWATER
MOTOR
Co., Ltd.



THE
FINEST
GARAGE
IN
ENGLAND.

EASTOVER, BRIDGWATER, SOMERSET.

Customers' Cars are driven by Members of our Staff entirely at Customers' own risk.

All communications must be addressed to the Company. Telegrams: "Motor Co., Bridgwater." Nat. Tel., No. 18.

After a 90 Mile run see what

**MAJOR-GENERAL SIR FREDERICK
CARRINGTON, BART., K.C.B., K.C.M.G.,**

SAYS OF THE
BRIDGWATER CAR.

"After trying your 12/14 h.p. 4 cylinders side entrance car, I have come to the conclusion that I like it better than any other car of that size, on account of its smoothness in running, quietness, hill climbing, and roominess."

Signed, **FRED CARRINGTON, Major-General.**

WRITE FOR SPECIFICATIONS AND PRICES OF THE BRIDGWATER CARS.
THE BRIDGWATER MOTOR CO., LTD.
EASTOVER, BRIDGWATER.

TELEPHONE No. 18. TELEGRAMS: "MOTOR Co., BRIDGWATER."

An advertisement from the *Bridgwater Mercury* dated 17th May 1905.

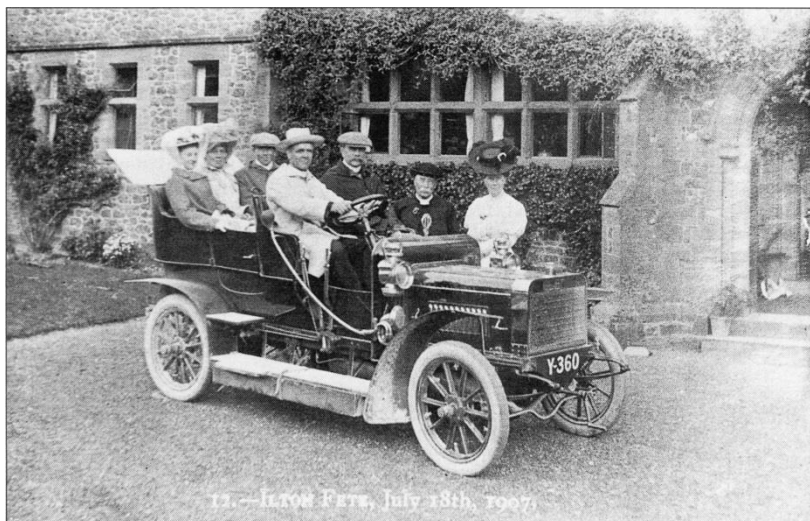
The Company

There were three directors of the Bridgwater Motor Company incorporated in 1904. Managing Director Harry Carver of Wembdon Road, Bridgwater, Chairman Stanley Austin of The Abbey, Glastonbury and Alfred Armitage of Haygrove House, Pitminster, Taunton.

By the summer of 1904 a 300 foot long building was opened with machine shop, general offices, stores, repair shop, Vulcanizing room, tyre store, accumulator charging room, coach shop, show-room all heated by hot water boiler and pipes. This accommodation was so outstanding in comparison with other similar concerns that the New York Times in July 1904 described it as 'one of the most modern garages in the Country. The Directors' minute book contains the following interesting reference at 7th October 1904: "Own Car. It was resolved that Mr. Armitage (a Director) be requested to make full enquiries with regard to making our own car, and to report to the next Directors Meeting". On 7th November 1904 it was minuted "Own Car". Mr Armitage reported that there are three cars now in the course of construction for the Company, 12hp, 16hp, and 20hp" and a further meeting on 1st February 1905 "On the proposition of Mr Armitage, it was resolved that printed specifications be got out on the new 'Bridgwater' cars, to be embodied with testimonials". By 1905 the first motor car was ready for the road!

On 6th April 1906 Mr. Cyril Chester Master of Friarn Lawn, Bridgwater a motor agent of Alveston, Thornbury, Gloucestershire was appointed a Director of the company. He received 5% commission on all 'Bridgwater' cars sold through him in Somerset and 7% on those sold or introduced by him outside the county.

The Autocar magazine of 18th November 1905 listed under the heading 'cars £500 and not exceeding £600' an 18hp Bridgwater with 4 cylinders with a 95 X 120mm bore and stroke, with three speed gearbox and 5 seats. The unladen weight with a standard type of body was listed as 17cwt'. Under the heading 'cars £600 and not exceeding £700' a '24hp Bridgwater with also 4 cylinders but with a 110 X 130mm bore and stroke, also with three speed gearbox and 5 seats. However the unladen weight with standard type of body is increased to 21cwt'.

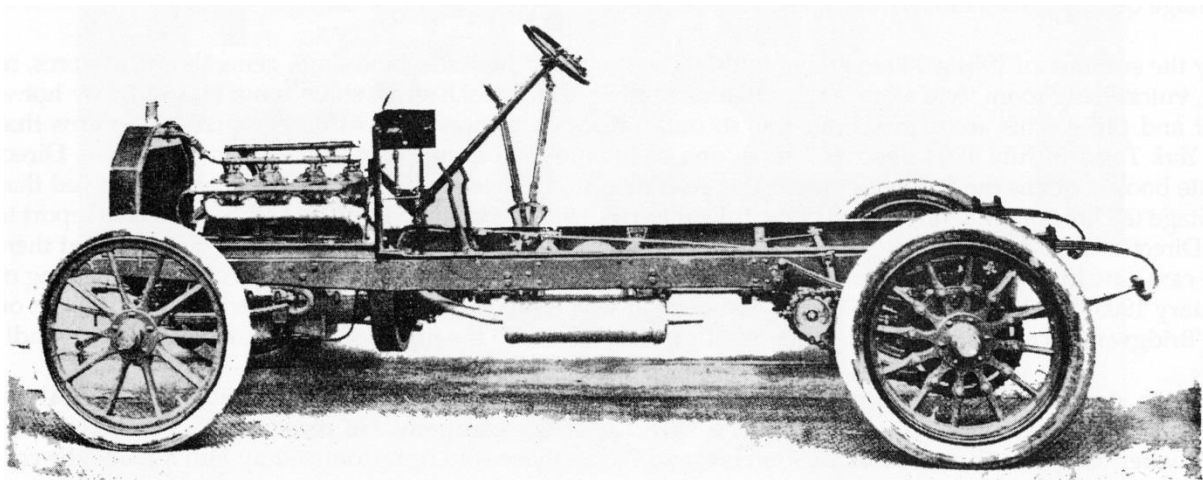


On July 18th 1907 a fete was held at the vicarage, Ilton, Nr. Ilminster. One of the attractions for visitors was the opportunity to take a ride through the grounds in a motor car. The car was a 16hp detachable Brougham 'Bridgwater' owned by Mr E.H. Watson, of Stone House, Nr. Taunton painted in Lincoln Green and shown here parked outside the entrance to the vicarage for the photographer to capture the moment.

The Chassis

The chassis for the 'Bridgwater' motor cars was made in France by Malicet et Blin of Aubervilliers, Seine. This company was originally formed in 1890 through a partnership between Eugene Blin and Paul Malicet, to make parts for bicycle manufacturers. By 1897 they had moved into the automobile business and manufactured a number of complete chassis themselves. By 1901 they were incorporated as Malicet et Blin and began to supply drive shafts, water pumps, axles, gearboxes and steering gears, and by 1905 complete chassis, except for the engines, were supplied to small-scale automobile assemblers, including some in England. Gauthier & Co. of 8, Great Marlborough Street, London (and later 60, Great Marlborough Street) were the agents for this and other French companies, and would supply component parts to any company wishing to build its own cars.

One of their outlets was the Chassis Construction Company of Taunton (known as C.C.C.) who shared premises at 11, Bridge Street, Taunton with Messrs C. Allen & Sons Ltd. (a company which itself built early motor cars called the C.C.C.) and it was from this company that the chassis components were purchased for the construction of the 'Bridgwater' motor car. The chassis had three-quarter elliptical rear springs together with internal expanding, side lever brakes with a 9 foot wheelbase on the smaller chassis with live axle transmission whilst the larger chassis was 9 foot 6 inches with either live axle or side chain drive.



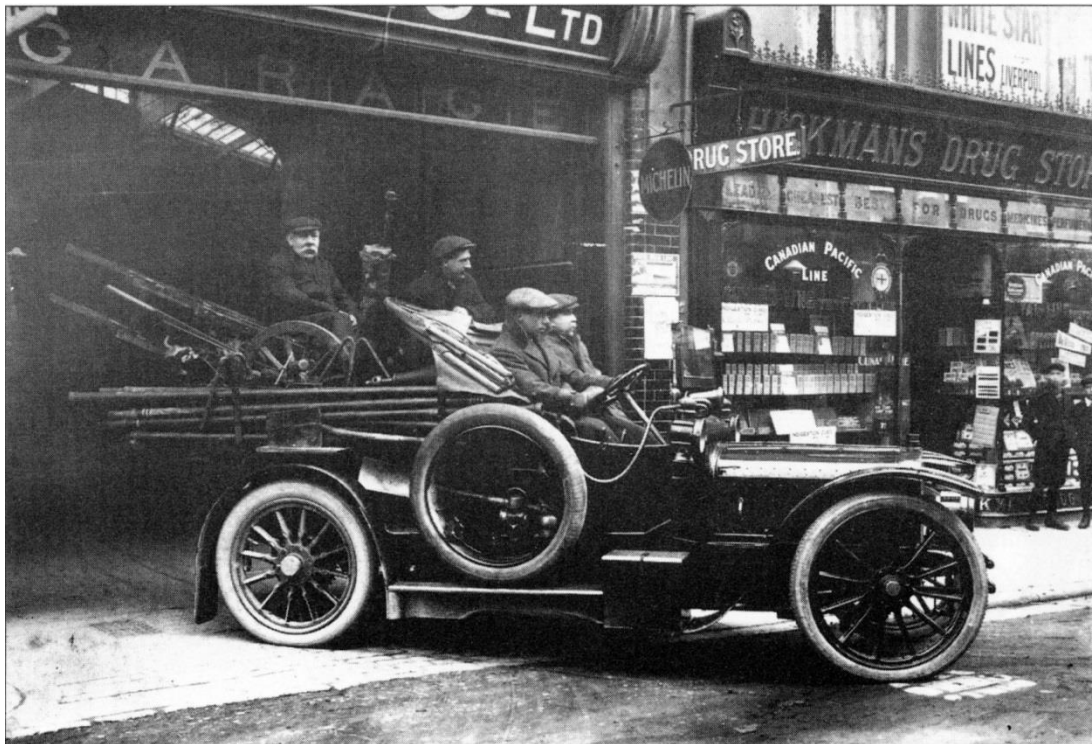
An advertisement from the *Autocar* magazine of 1906 showing a 24hp Ballot engine on a chassis built by the Chassis Construction Company, Taunton as exhibited at the Agricultural Hall Show of that year.

Ballot Engines

Potential purchasers were offered the choice of Ballot or White & Poppe engines. The former were a proprietary engine produced in Paris, the latter in Coventry.

Ballot engines ranged from a single-cylinder 8hp to a 4 cylinder 24-30hp. However, the 'Bridgwater' motor car used either the smaller 4 cylinder 16-20hp, or the 4 cylinder 24-30hp. The smaller of the two had a 95mm bore, and a stroke of 120mm, whilst the larger engine had a 110mm bore with a 130mm stroke. The cylinders were cast separately with the valves on opposite sides. A mechanical oil-pump formed a portion of the crank-case, this being driven off one of the camshafts and constantly circulated oil to the crankshaft bearings. The oil-pump took oil from a base chamber below the crank-case and into a reservoir in front of the dash on the inside of the bonnet, and then onto all the working parts of the engine. The big ends of the connecting rods dipped into an oil bath and splash-lubricated the cylinders. A Hele-Shaw clutch was employed for transmission between engine and gear-box, the clutch plates having external means of adjustment. A small shaft between the gear-box and differential-box allowed the chain drive to be kept as short as possible. Perhaps as a fail-safe device, each vehicle had two ignition systems, a high tension, gear-driven magneto by Bassée-Michel, and an accumulator, with a two-way switch on the dashboard to facilitate manual activation of either one of them. (Auguste Michel, who had worked on electric ignition in 1895, managed the Soc. cl' Electricité Nilmélior, which had been formed in 1902 to take over the Bassée et Michel concern.)

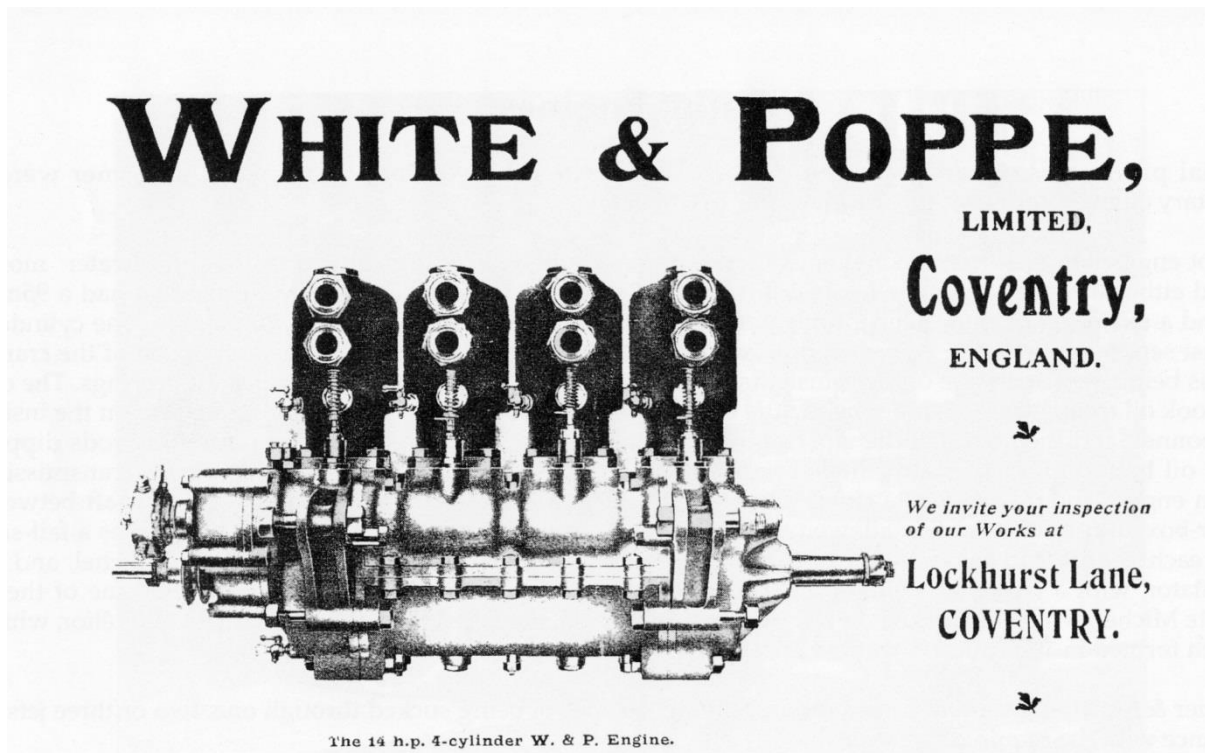
A Frier & Martins carburettor used three spraying jets, petrol being sucked through one, two or three jets in accordance with the required air supply.



An open Austin 20 break-down truck with four mechanics leaves the Eastover premises of the Bridgwater Motor Company. Photographed around 1920, the driver is Mr Vernon Alfred Richards who later became sales manager, with Mr Sam Redwood a passenger on the extreme left.

White and Poppe Engines

White and Poppe produced single, two, three and four cylinder motor engines from their Coventry factory, each with an 80mm bore and a 90mm stroke. They ranged from 3½hp, 7hp, 10hp to 14hp and by 1905 a 28hp engine was being developed. All the engines were water-cooled except the smallest which was air-cooled. A feature of their design was the ability to interchange the flywheel, valves, cylinders and piston rings between each engine size, even using the same end pieces to enable one or two cylinders to be inserted as desired. Mechanically-operated inlet valves with bearings for both the crank-shaft and the half-speed shaft were employed. Each crank had its own oil well with hollow leads. This allowed excess oil to overflow into the next well and be re-circulated. White and Poppe made and fitted their own carburettors. Every engine was run for four hours on a test bench before being passed for use.



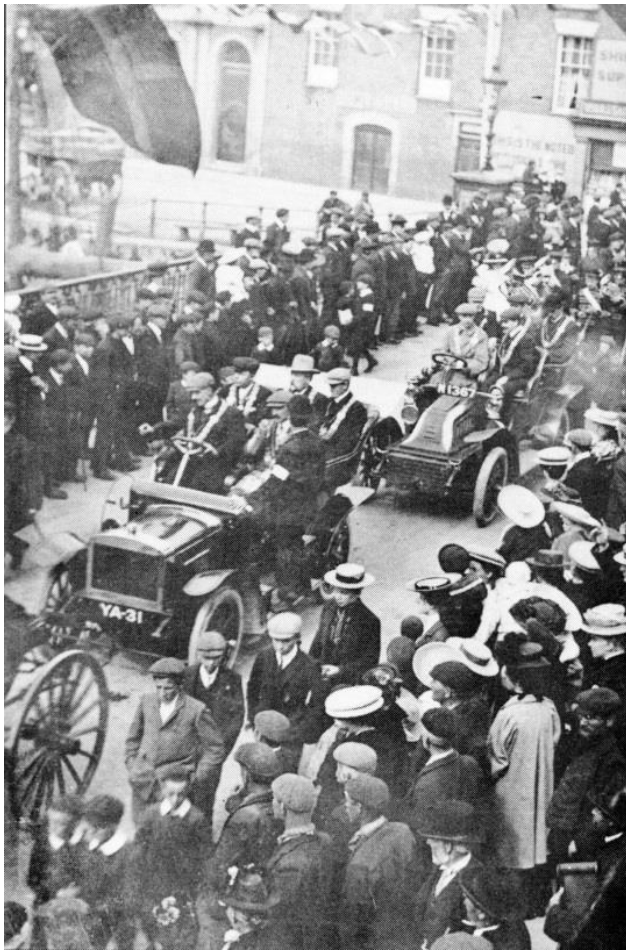
WHITE & POPPE,
LIMITED,
Coventry,
ENGLAND.

*We invite your inspection
of our Works at*
**Lockhurst Lane,
COVENTRY.**

The 14 h.p. 4-cylinder W. & P. Engine.

The advertisement features a detailed technical illustration of a 14 h.p. 4-cylinder engine. The engine is shown from a front-three-quarter perspective, highlighting its four vertical cylinders, each with a valve assembly on top. The crankshaft is visible at the bottom, and the engine is mounted on a base. The text is arranged in a classic, formal layout, with the company name in large, bold letters at the top, followed by the location and a small floral ornament. Below the engine illustration, there is a line of text inviting inspection at their works, followed by the address and another floral ornament. At the bottom, a small caption identifies the engine as 'The 14 h.p. 4-cylinder W. & P. Engine.'

An advertisement from the *Motor* magazine of February 1906 showing the latest White & Poppe engine.



The 1907 Bridgwater Hospital Fund procession crosses the Town Bridge, with a couple of early motor cars amongst a succession of carriages. YA-31 is almost certainly a 'Bridgwater' motor car carrying trade plates. The general identification mark for the issuing authority, namely Somerset, is the capital suffix 'Y'. The second letter of the alphabet was assigned to a manufacturer or dealer. The letter 'A' was issued on an annual basis, and in this case, the year 1907, to the Bridgwater Motor Company, followed by a dash and the issue number. The plate had white letters upon a red background. Records of the trade plates issued in Somerset at the turn of the century no longer exist.

The Coachwork

The coachwork was constructed and fitted at the premises of Raworth & Company of 6-8, Monmouth Street, Bridgwater (later the premises of Real Medland & and Wills), a company established in 1813 as coach and carriage builders. In 1906 it embarked on a new venture by constructing either a side-entranced tonneau body for the Bridgwater', or a fixed or detachable touring body. With the bodies attached to the chassis the cars were returned to the premises at 52, Eastover for all finishing work to be completed, including lights, wiring, testing and general preparation for the road prior to customers taking delivery. The exact number of 'Bridgwaters' manufactured remains a mystery. The motoring press at the time suggested that twelve cars had been produced, with a further twelve projected. However, the author has only been able to trace eleven cars in total as having been sold or registered between 8th March 1905 and 27th November 1908.

In the Motor Car journal of 6th May 1905 the prices for each model were listed for sale at the following amounts: 4 cyl. 12hp £360, 4 cyl. 16hp £450, and 4 cyl. 24hp £600.



A photograph taken in 1907 showing the premises of Charles Raworth & Son, Coach & Carriage Builders, next to Mill's 'cheap market'. Their advertisements specified four points for the construction of quality carriages: 'lightness, strength, stylishness and cheapness'

Competition

On Saturday 23rd September 1905 the Somerset Automobile Club conducted its first reliability trial at Puriton Hill, near Bridgwater. Using a half mile course, with a gradient of 1 in 11 over the last 300 yards, 36 cars competed in seven classes, based on the retail chassis cost of each car. Sixteen different makes made a timed ascent of the hill. Whilst a 30-40hp Daimler in class 7 (chassis price over £700) covered the steepest section at a speed between 30 and 40mph, a 12hp 'Bridgwater' driven by A. Armitage, won class 3 (chassis price of over £300) in a time of 1 minute 48½ seconds. In this same class a 12-14hp 'Bridgwater' driven by Mrs Chester Master, completed the course without being placed. In class 5 (chassis price of over £500), A. Armitage drove a 24hp 'Bridgwater' and completed the course in 1 minute 19 seconds, whilst a further 24hp 'Bridgwater' driven by P.F.C. Elwes also competed. In class 6 (chassis price £600) A. Armitage driving a different 24hp 'Bridgwater' came second, with Mr. Elwes close behind in his 24hp 'Bridgwater'. Class 7 had a 'Bridgwater' entrant competing, but this vehicle was unplaced.

On Saturday 30th June 1906, the hill climbing committee of the Somerset Automobile Club held a similar event to the previous year also at Puriton Hill. However the awards were based on the weight of the car, coupled with the total piston area and the time taken in the ascent of the hill. A 24-30hp 'Bridgwater' driven by Mr. P.F.C. Elwes came 5th with 63 points, against the winning 'Minerva' with 82 points. A second 'Bridgwater' motor vehicle entered by Mr. A. Armitage, came 11th with 44 points.

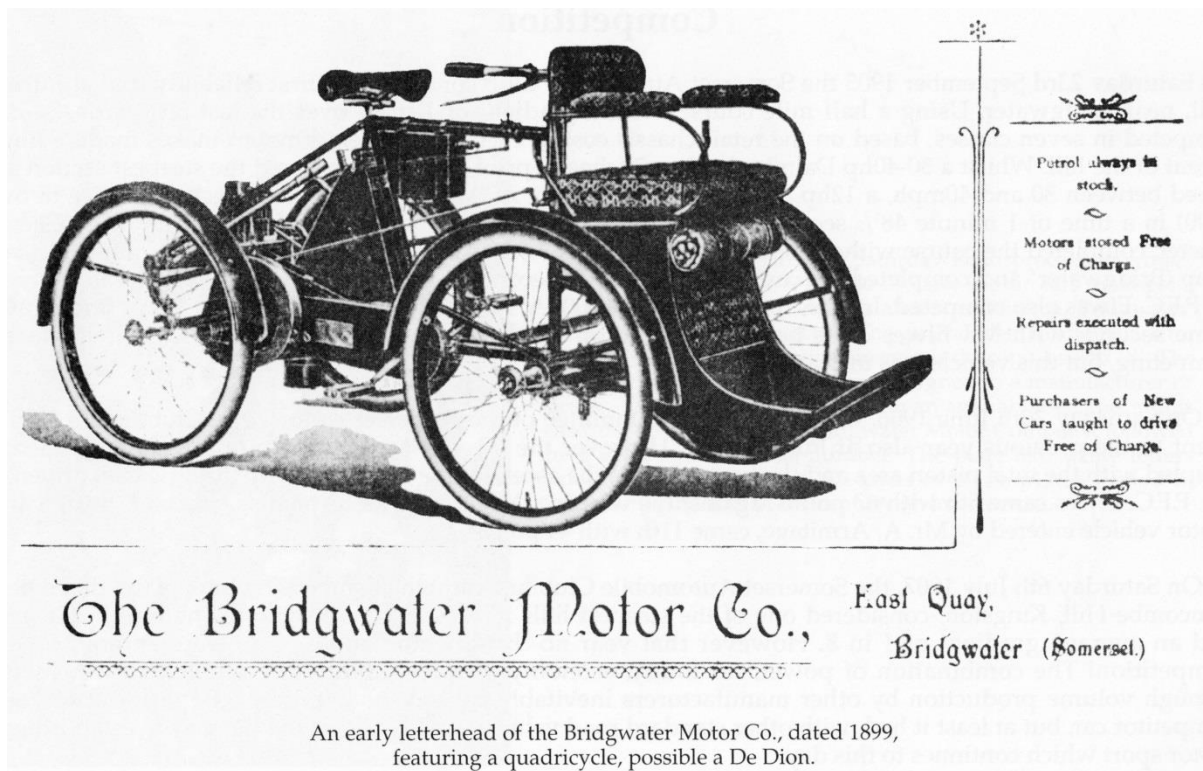
On Saturday 6th July 1907, the Somerset Automobile Club hill-climbing competition took place, this time at Buncombe Hill, Kingston, considered one of the steepest hills in West Somerset with a length of 2,200 yards and an average gradient of 1 in 8. However that year no 'Bridgwater' motor cars were entered for the competition! The combination of power, reliability, economy and availability to a wider public achieved through volume production by other manufacturers inevitably caused the demise of the 'Bridgwater' as a competitor car, but at least it had, with other standard road vehicles of the day, paved the way in establishing a motor sport which continues to this day.

List of Employees in 1914

Stanley Austin - Chairman
Harry Carver - Managing Director
C. Chester Master - Director

G. L. Wood
Jack Carver
F. J. Crowhurst - Assistant Manager
H. C. Turner - Cashier
M. D. Turner - Office Staff
T. Button - Foreman-engineer
R. Holcombe - Coach-building Foreman
C. Temblett - Paint-Shop Foreman
W. Downing - Garage Salesman (started with firm in 1899)
S. Adlam - Chief of Driving Department
E.D. White - J Driving Department
W. A. Watkins – Driving Department

V. A. Richards - Mechanic
(F. Wills, M.I.M.E. - Consulting Engineer)
(W. H. Palmer Auditor)



An early letterhead of the Bridgwater Motor Co. dated 1899, featuring a quadricycle, possible a De Dion.

Bridgwater Motor Company - Principal Dates

- 1887 H. Carver opens business at East Quay, Bridgwater.
- 1900 Company supplies first motor car to be seen locally.
- 1903 Company appointed sole agents for De Dion Bouton.
- 1904 Company opens new premises in Eastover.
- 1904 First 'Bridgwater' motor car produced.
- 1905 Agreement signed with Albert Edward Raworth to build and repair bodies for motor cars.
- 1907 Production of 'Bridgwater' motor car ceases.
- 1908 Contract signed with G.P.O. to deliver mail between Bridgwater & Burnham, using a twin cylinder Argyll van.
- 1908 Eastover premises extended.
- 1908 Serious fire in store-room of Eastover premises.
- 1909 Company opens motor depot at Thornbury on main Gloucester/Bristol Road.
- 1910 Company 'prepared to supply the aeroplane & everything for it'.
- 1910 Company appointed sole district agents for Peugeot, Rover, French Darracq, American Ford & agents for Triumph motor bicycle.
- 1911 Company takes over the business of John Roberts & Sons, Engineer, of New Road, Bridgwater.
- 1919 Company purchases premises of Messrs. Aplin & Sons Ltd., between St. Mary Street & George Street, as commercial & agricultural implements department.
- 1930 Company operates bus service to Stolford.
- 1930 Company installs & operates own generating plant for light & power.
- 1935 Company installs first hydraulic car-lift & high-pressure greasing system in area.
- 1939-45 Main building taken over by Ministry of Aircraft Production & fitted with machinery for making aircraft controls.
- 1963 Eastover premises re-built.
- 1980 Company's association with Austin ceases after 40 years – franchise changed to Renault.
- 1994 Company closes down.

Early Motor Car Owners of Bridgwater and Area

Acland-Hood, Rt. Hon. A.F., M.P., St. Audries

Alway, SB, 5 Penel Orlieu, Bridgwater

Armitage, Alfred, Haygrass, Pitminster *

Aspinall, J.W., Bridgwater (16-20hp Rover 8: 5hp Oldsmobile)

Austin, Stanley, The Abbey, Glastonbury (10-12hp Argyll & 16-20hp Beeston-Humber)*

Bernard, Lt. Col & Mrs. E., Oakfield, Wembdon*

Blake, Henry L.T., Fairfield, Stogursey

Broderip, Edmund J.P., Manor House Cossington

Carpenter, Henry James, Compton Bishop, Axbridge (5½ hp Daimler)*

Carver, Harry, 52-54 Eastover, Bridgwater & Wembdon*

Carver, Hugh Ruscomb JP" West House' Chilton-upon-Polden.

Carter, John Wesley, 106 Wembdon Road, Bridgwater (4½ hp De Dion Bouton)

Elwes, Philip F.C., Montecliffe House, Chilton-upon-Polden*

Foley, Robert Y., J.P., The Lions, 18 West Quay, Bridgwater (12hp Panhard

Greenhill, Christophe W.M., J.P., Puriton Manor, Puriton

Hamlin, Thomas, 35 Wellington Road, Bridgwater (Silver Cross)

Hill, Edward Wait, The Elms, Wembdon (18hp Star)

Master, Cyril Chester, 3 Friarn Lawn, Bridgwater*

Matchett, Anwyl Charles, Nether Stowey

Packer, W.N., Bridgwater (4½ hp De Dion Bouton)

Parker, CR, Bridgwater

Porter, C.P., St. Saviours Avenue, Bridgwater

Reed, Theophilus Maurice, The Friars, Bridgwater (6hp Lydard)

Roberts, William Henry, 1 New Road, Bridgwater

Scott, William, Friarn Lawn, Bridgwater*

Slade, Sir Cuthbert, Maunsel House, North Newton

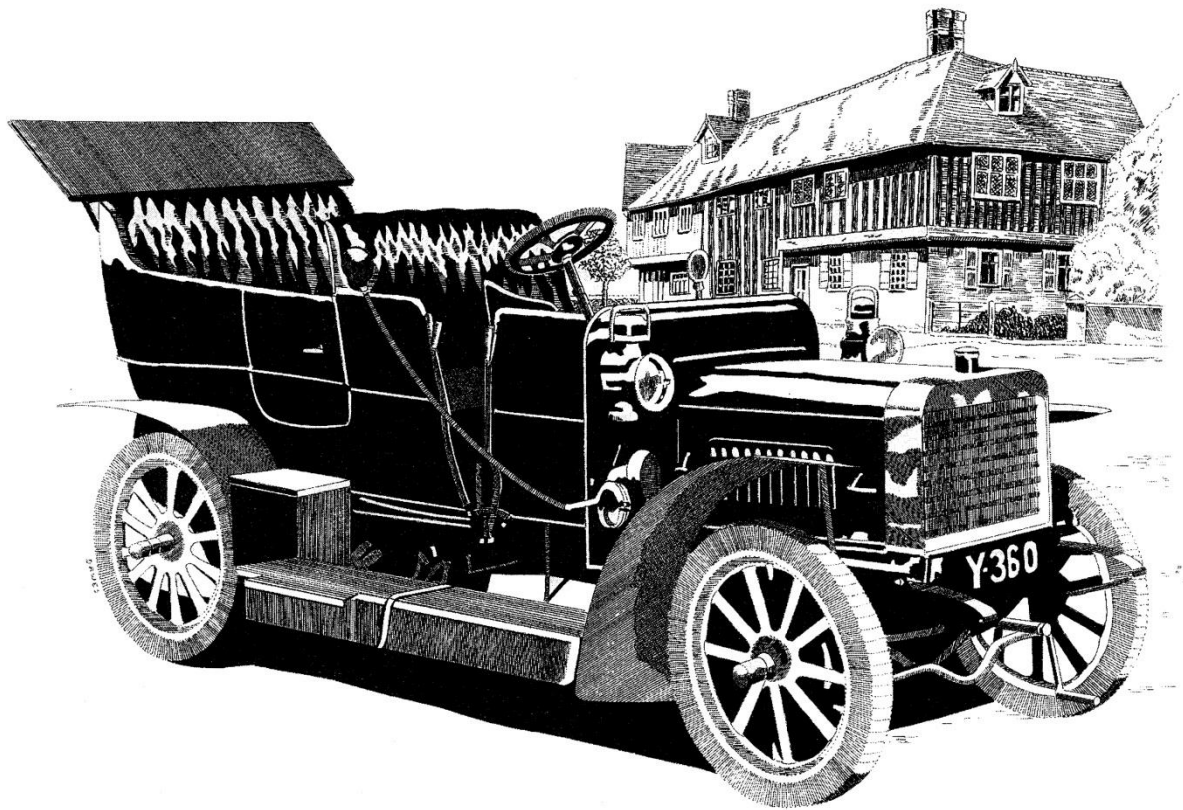
Stockham, Thomas, 21 Alexander Road, Bridgwater

Watson, Edgar Henry, Stone House, Nr. Taunton*

Wills, Frank, Aspen Grove, 63 Wembdon Road, Bridgwater)

Wills, Walter, Taunton Road, Bridgwater (3½ hp De Dion Bouton)

* Denotes known owners of the Bridgwater Motor Car



1905 Bridgwater 16hp detachable Brougham.

Reg No.	Name & Address of owner.	Description of car.	Type and colour of body of car.	Weight unladen	Date of registration.
Y 167	Philip Francis C. Elwes, Montecliffe House, Somerton, Somerset	24hp Bridgwater	Side entrance-four seated. Red	19cwt.	11 th July 1905.
Y 328	Cyril Chester Master, Friarn Lawn, Bridgwater.	12hp Bridgwater.	Side entrance Tonneau. Dark blue with red line.	14cwt.	8 th March 1905.
Y 360	Edgar Harry Watson, Stone House, Nr. Taunton.	16hp Bridgwater.	Detachable Brougham. Lincoln Green.	14 ½ cwt.	11 th May 1905.
Y 420	Mrs Enid Mortimer Bernard, Oakfield, Wembdon.	14hp Bridgwater.	Tonneau body. Red and red upholstery.	14cwt.	6 th Oct. 1905.
Y 492	The Bridgwater Motor Co. Ltd.	16/20hp Bridgwater	Side entrance. Red.	17cwt.	23 rd April 1906.
Y 684	William Scott, Friarn House, Bridgwater	16hp Bridgwater.	Tonneau body, side entrance. Bright red throughout.	About 13cwt.	17 th June 1907.
Y 716	The Bridgwater Motor Co. Ltd.	16/20hp Bridgwater.	Side entrance. Body cream colour.	18cwt.	19 th Aug. 1907.
Y 900	The Bridgwater Motor Co. Ltd.	16/20hp Bridgwater.	Side entrance. Body painted red.	16cwt.	27 th Nov. 1908.
Y 901	The Bridgwater Motor Co. Ltd.	16/20hp Bridgwater.	Side entrance. Body painted green.	16cwt.	27 th Nov. 1908.
Y 916	The Bridgwater Motor Co. Ltd.	16/20hp Bridgwater.	Side entrance. Body painted green with detachable top.	19cwt.	30 th Dec. 1908.
AD 571	Capt. C. Capel, Prestbury House, Gloucester.	18/18hp Bridgwater.	Tourer. Red.	-	7 th Sept. 1905.

Bridgwater was also known for the production of two other cars and one motorcycle. Over ninety years ago Thomas Hamlin & Co. of 35 Wellington Road, now a limited company with premises at 66 Monmouth Street, produced a 7hp vehicle called a 'Silver Cross'. Described as a "tonneau-4 seated-grey-with black and white lining" the car was registered on 9th July 1904 with an unladen weight of 10 cwt. and displaying the number Y 231.

Earlier that year the company also constructed a motorcycle registered on 2nd January 1904 with an unladen weight of 120lbs, numbered Y 70. Sadly neither car nor motorcycle survived.

W. & F. Wills produced the other car, probably a prototype, for whilst drawings exist, their light car was never registered with an index mark for use on public roads. Believed to have been a 10hp side-valve, with a single camshaft operating four inlet and four exhaust valves, the chassis was composed of components produced by outside suppliers. Just like other cars produced by small companies, production was abandoned when viability, let alone profitability could not be guaranteed.