

DIATTO



Frank Lugg relates the early history of a respected Italian motor manufacturer.

Diatto cars were made in Turin between 1906 and 1928. The company was founded at about the turn of the century by two grandsons of Guglielmo Diatto. It was an offshoot of the large Fratelli Diatto railway engineering group. It began as a general engineering foundry and machine shop, covering six acres and employing about 500 men.

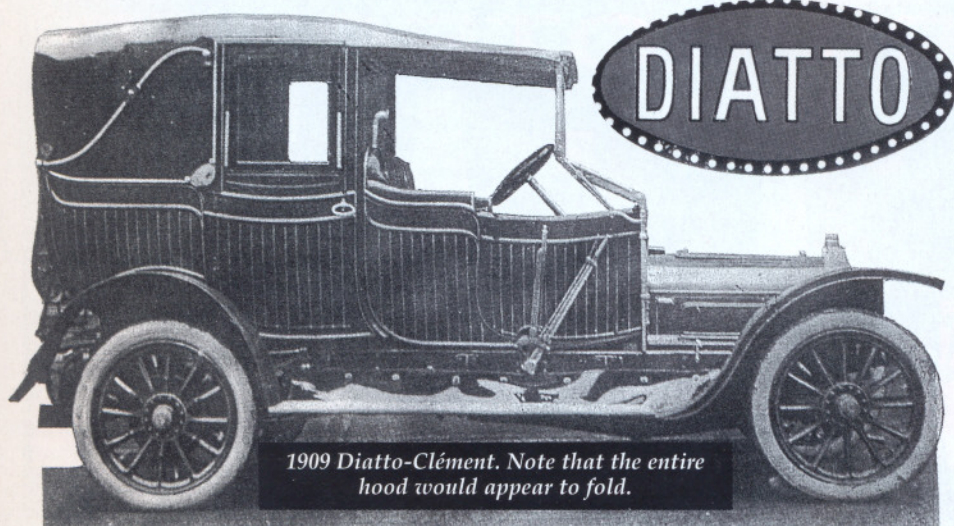
Guglielmo had started as a cartwright in the nearby country town of Carmagnola. In 1835 he

arrived in Turin, at the age of 30. He rented a workshop in a new industrial development on the right bank of the river Po, at the foot of Monte dei Capucchini. Here he manufactured wheels and wagons of his own design. So successful was he that at his death, in 1864, he owned not only a town house, but the entire industrial site, on which he had built an extensive new factory. Guglielmo's four sons diversified the business into railway engineering. The

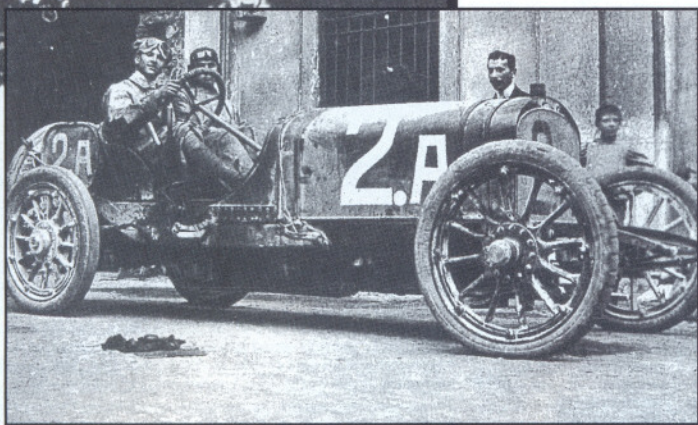
company became particularly noted for their very high quality carriages. These were supplied to famous railway companies of the day, including the Compagnie des Wagons Lits et des Grands Exprès Européens of Paris. By 1906, Diatto were collaborating with the rapidly expanding FIAT company in the manufacture of trams and rail cars. In 1918, the core business in Turin was merged with Fiat, to become their railway engineering division. Other factories in Rome and Milan were sold to N Romeo and C — shortly to become Alfa Romeo.

The independent car plant had been in production for 12 years by this time. At first, Cléments were built under licence from France. Typical Edwardian T-head models, they ranged in capacity from an 1884cc twin to a 4846cc four and a four-litre six. From the beginning, the company had followed an active competition programme. They won a race from Milan to San Remo in 1906 and gained a gold medal in the Herkomer trial in Germany. They also took part with distinction in the 2446mile endurance tour of Italy. In 1907, they finished well in the Targa Florio. In the following year, a 4846cc, 25/35hp model came fifth out of nine finishers in a 438 mile race from St Petersburg to Moscow. 31 cars had started. At Riga another race was won.

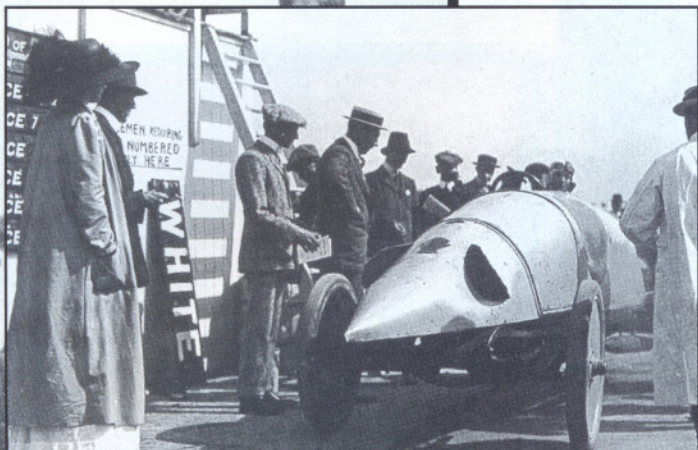
In 1909, the company was reformed. Clément, who had previously had a controlling interest, now ceased to have a shareholding. Diatto's own designs started to appear. In 1911,



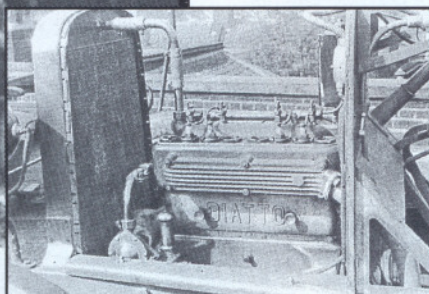
1909 Diatto-Clément. Note that the entire hood would appear to fold.



Left, top to bottom: 1907 Coppa della Velocità, Brescia. Buzio at the Pésage. Though entered as a Diatto-Clément, the car is actually a Clément-Bayard; A 15.9hp Diatto at Brooklands on 18th June, 1910. This is likely to be the 12/15hp L-head chassis. It was introduced that year, but bored out to 80mm, as a production chassis would be in 1911; A 1921 25hp 4DA or 4DC engine. Its dimensions are 85 by 120mm, giving 2724cc. This is a development of the 12/25 of 1910.



A Diatto-Clément at Naples during the Coppa d'Oro, 1906.



following a drastic rationalisation, only one model, the Tipo Unico, was produced. This was an 80 by 110mm L-head design of 2212cc, with three speed gearbox. A 77mm bore version of this engine had been introduced the previous year. This car remained in production until 1922, gaining a fourth gear in 1912 and growing to an 85 by 120mm, 2724cc configuration by 1916. In that year, a 95 by 140mm, 3969cc model, rated at 30/40hp, was also listed.

The First World War brought considerable expansion. A coachworks had been opened in 1915; car chassis were adapted as ambulances and light trucks for the army. The car factories of Scacchi and John Newton were absorbed, and Diatto bought a controlling share in the Gnôme et Rhône factory in Turin, where airframes were produced, as well as generator sets, motor pumps and compressors. Undoubtedly they also hoped to build the Diatto-Bugatti aero engine in quantity: they had built and successfully 50hr tested a prototype, but a government contract was not forthcoming. This was an interesting engine, a straight eight of 120 by 160mm of 14.5litres. It was the only Bugatti design to have four vertical valves per cylinder with finger tappets, and was of intricate construction. The very thin cast iron fixed head cylinders were machined all over. They were bolted to the crankcase in sets of four, covered with a sheet metal box forming a water jacket. This was held down at the top by screwed-in valve guides. A

continue after the war.

The return to peacetime output at Diatto was somewhat haphazard. It seems as if there was no overall plan. The 4D series continued in production. A light car of Gnôme et Rhône origins, known as the Type 10, was introduced. A total of 50 Type 22 Bugattis were bought in chassis form, to be fitted with Diatto radiators and bodies. The reason for the directors' caution is not hard to find. Though the company had, on paper, done well from war production, the politicians in Rome proved to be very slow payers. This caused such a crisis that the Diatto family lost control to the Gussi brothers from Bergamo.

There had been few competition successes, let alone entries, since 1908. In 1919, Domenico Gamboni did very well to achieve third place in the Targa Florio. He drove a sports version of the 4DC side valve design, coming behind Boillot (Peugeot) and Moriendo (Itala). Giacinto Ghia, the coachbuilder, drove another Diatto. A similar car came second in the 243mile Circuit of Mugello, at Florence, in the following year. It was driven by Tarabusi.

Both the 4DC and the Type 10 had four-cylinder, fixed head, side valve engines with full pressure lubrication and a Zenith carburettor. A separate gearbox was fitted and the back axle

was fully floating, with a torque tube. The larger car had the three bearing, 2724cc engine, a multi plate dry clutch, four speed gearbox and a cantilever sprung rear axle with a ratio of 3.57 to one. When it was fitted with suitable touring bodywork, a speed of 70mph was claimed, with a fuel consumption of 30mpg. The wheelbase was 9ft 10in and the chassis weighed 17cwt. The Type 10 was a curious little car, old fashioned in some respects, yet effective and well engineered. Its 60 by 90mm engine of 1018cc gave it a claimed maximum of well over 45mph. In normal use, it returned 45mpg. In a Junior Car Club fuel consumption trial, one of these cars, in standard touring trim and carrying three passengers, was awarded a silver medal. It was certified as having a petrol consumption of no less than 68mpg on a hilly circuit of more than 30miles. The chassis, with a 7ft 8in wheelbase and 3ft 6in track, weighed 9cwt. The 'particularly rigid' crank ran in two plain bearings. The connecting rods and pistons were drilled for lightness, and all was carefully balanced. Quarter elliptic rear springs were clamped at the front to the angle steel chassis, and at the rear to large bronze bearings on the axle case. A machined tubular subframe carried the engine, with its single plate clutch and three speed gearbox, each rigidly mounted by four split clamps. The whole unit was fixed to the chassis by four bronze brackets. Even the final drive casing was cast in bronze. Perhaps there was a surplus of copper alloy scrap at the time. A tractor type fan cowl was fitted after overheating problems were experienced in the mountains. The three speed gearbox was clearly unsuitable for such terrain. The Type 10 Diatto was far from cheap in 1921. £475 bought you an undistinguished looking two seater tourer. Despite its remarkable economy, it did not sell well, though it probably gave good service to those who bought one. The 4DC four seat tourer, so Edwardian in character, was also rather expensive, at £795. In 1921 the sporting 4DS, using basically the same engine, was credited with a maximum speed of 90mph.

By 1921, things were coming right for the company. The government had paid up at last, and the directors had decided on the new car they were going to build. It was to have a three point mounted, four-cylinder overhead camshaft engine of two litres. This would be in unit with a four speed gearbox via a single plate clutch. The torque tube and rear axle would be carried on cantilever rear springs. It was rather heavy, at 1980lb for the standard 9ft 10in chassis. It was to be known as the Type 20. The design was bought from the engineer, Giuseppe Coda (see *The Automobile*, January, 1998), who joined the board as technical director. Now that there was no shortage of money, he re-equipped the factory with the latest American machine tools, including some from Pratt and Whitney. Ⓢ

To be continued.

A 15/20 T-head chassis, discontinued after 1910.

