

Straker Steam Wagon.

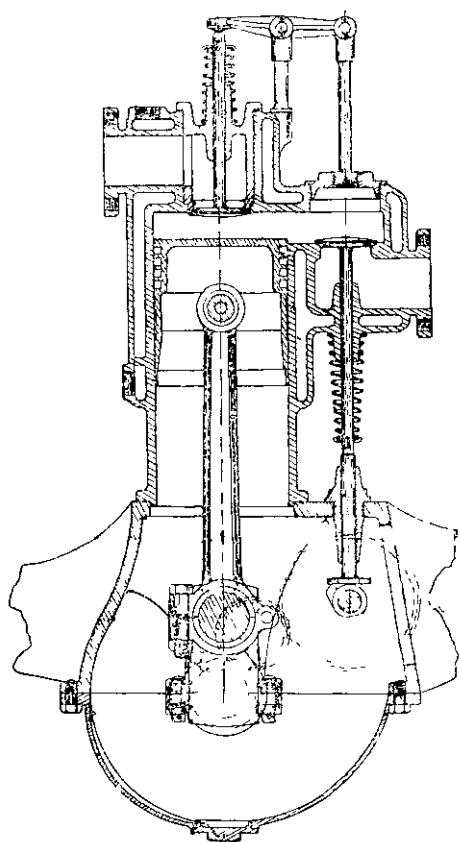
Gradually motor traction is taking the place of the horse for heavy traffic, even in the country districts. The Rangitikei County Council were the first to make use of steam motors for the cartage of metal, next, the Oroua Carrying Company Ltd. purchased a five-ton "Colonial" type to be used principally for the cartage of produce to the railway at Feilding. The following bearing on this wagon, is taken from the *Manawatu Daily Times*: "The wagon was loaded with four tons of wire. The run was along Kimbolton Road to Cheltenham, then via Hayne's Lane to Beacontfield and to Cunningham's Post Office, negotiating the Devil's Elbow with the utmost ease. It was then taken through Davis' cutting and home via the Cheltenham Cross Road negotiating the very steep hills (1 in 7) easily on the low-speed gear. With the four tons load it came home from Cheltenham a distance of 9 miles in 55 minutes. The journey only occupied six hours. It may also be mentioned that the consumption of coke was small. The settlers in Apiti will no doubt be delighted at the success of the company's enterprise, for now a speedy and cheap means of transit has at last been provided which will bring them in closer touch with the centres."

After exhaustive enquiry Mr. John White, contractor, of Hawera, decided to discard horse-traction for the cheaper, reliable and more modern system for the carriage of road metal and produce, and so as to meet the varying conditions, purchased a five-ton tipping wagon which is giving every satisfaction to its progressive owner. Wellington has also received the addition of one wagon, which is being used by its owners, Messrs. McEwen & Carter, for the carriage of goods between Wellington and Petone.

We gave it as our opinion in an early publication of *PROGRESS*, that motor traction would play a leading part in drawing the outlying country districts closer to the towns and railways, and it seems evident that Messrs. Sydney Straker & Squire Ltd. (who are now represented in New Zealand by Messrs. Norman Heath & Co.) have been able to turn out a machine that proves satisfactory to the owner, and which will be welcomed by the back-block settlers.

The motor cycle is destined to solve the problem of universal locomotion. Ladies of all ages are now procuring this means of transit in the Old Country, and it will not be long before the initiative is taken by some intrepid New Zealand lady whereupon the fashion will grow appreciably.

The Lancashire Steam Motor Company are announcing a new shipment of their celebrated steam wagons for municipal general and colonial service. They are contractors for the War Office and many of the largest municipal authorities. The excellence of their make has obtained everywhere the praise of experience.



CROSS SECTION OF MITCHELL MOTOR.
(See Motor Notes.)

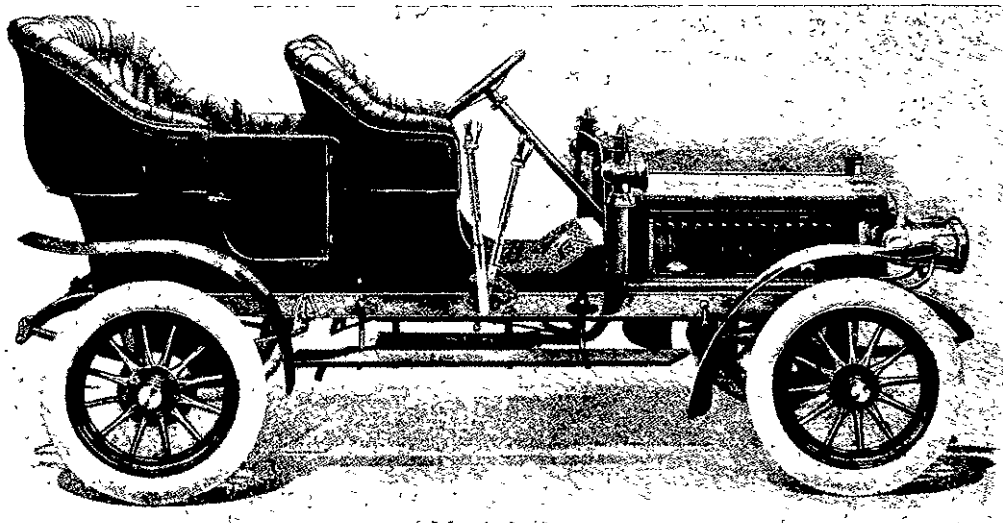
The Mitchell 1907 Car.

In John W. Bate the Mitchell Motor Car Company have an engineer whose foresight and knowledge of shop economics have done more for the car industry than perhaps any other man, as witness the fine models that firm is renowned for. Mr. Bate turns out three models viz—

- (1) 14-18 h.p. 2-seat run-about 4 cyl. $3\frac{1}{2} \times 4\frac{1}{2}$.
- (2) 18-20 h.p. 5-seat light touring car 4 cyl. $4 \times 4\frac{1}{2}$.
- (3) 24-30 h.p. 5-seat large touring car, 4 cyl. $4\frac{1}{2} \times 5$.

All three types are amply powered, as the cylinder volume shows and are really rated well below the actual horse-power for on working out the above, it comes out Mr. Bate says, that the 14-18 is actually 22 h.p., the 18-20 is actually 29 h.p., and the 24-30 is actually 44 h.p., a truly remarkable instance of under-rating the available power, and one which can be demonstrated any time, Mr. Bate believes, by brake test.

All these cars are provided with standard sliding gear transmission of an unusually substantial nature, and also a very special design of clutch,



A HANDSOME AMERICAN CAR 24-30 H.P. 4-CYLINDER MODEL "D" MITCHELL CAR.

which although on the core principle, is as smooth, if not smoother, in engagement than the multiple disc, the principle being that the leather face is mounted on a flat spring ring over the clutch cone, which while being compressed gradually, puts the car up into speed and then holds fast, and obviating danger of shock from a clumsy pedal engagement to the machinery or tyres. The frames of the cars are of heavy gauge pressed steel cold riveted, all cross-members being reinforced with gusset plates. The valve action of the motors is both direct lift and lever, Mr. Bate using a directly lifted intake valve at one side of the combustion chamber, and a lever-depressed exhaust valve in the middle of the cylinder head. This central placing of the exhaust valve clears the cylinder extremely well (a point which many designers neglect), and it is the valve placing that governs the speed of an oil engine, and the Mitchell cars have engines which can be run at extremely high speeds efficiently if necessary, and with great economy.

These cars show a decided tendency to substitute high grade bronze for both steel castings and drop forgings. The tough and enduring qualities of bronze—though costing more—being considered better practice.

The front spring hangers are also of bronze. Paron's manganese bronze only being used.

The spark is controlled by a hand lever under the steering wheel while there are both hand and pedal for the throttle.

The description of the Mitchell muffler has been refused till now. This important part of the car is worked exactly the reverse of the others, except one, by discharging the hot exhaust into the largest muffler chambers, and discharging it from the smallest of the three chambers formed by three concentric shells 4 in. outside diameter and 20 in. long. Messrs. Holmes & Allen inform us that this procedure is based on Bate's theory that since the hot gases have the largest volume they require not only the largest space, but also the coolest—the cooling immediately reduces the volume and results in quite a silent exhaust with a back pressure not even enough to blow the exhaust type of horn.

Taken all round, from upholstery and finish to the internal economics, we have to give this

new visitor to our shores a good welcome and can say that for easy riding, accompanied by that confident feeling that the car always has ample power in reserve, we know of no make better provided.

Messrs. Holmes & Allen, of Brandon street, the sole New Zealand representatives, have to be complimented on introducing so up-to-date and practical a machine.

16-20 Rolls-Royce Car.

This car, which belongs to Mr. W. A. Keiller, of Lower Rangitikei, is fitted with exactly the same engine as the one used on the car that successfully competed in the recent Tourist Trophy race, and gained first place. No expense has been spared in the way of fitting out this car with all the latest equipment. A Victoria hood is fitted which has the electric light inside. Synchronised ignition is used, the seats are covered with detachable waterproof covers to protect the upholstery, there is a Cromwell folding glass screen protecting the two front seats from wind and dust; and a folding-glass screen is fitted to the back of the front

seat to protect those behind. The car has four speeds, and is very fast indeed. The speeds are, 15, 14, 36, and 50, with direct drive on the third gear. The change-speed is the Gate type and is very easy to change. The wheel base of the car is 9 ft. 6 in. and the extreme length of each car is 13 ft. The engine is four-cylinder with bore and stroke, 100 x 127. In its trial run the car was able to negotiate from practically a standing start on the steep gradients on which it was tried on the third gear. The body work of this car was built to special specifications made by the Scott Motor and Cycle Co., Ltd., and executed by Messrs. Barker and Co. of London. The car is one of the most handsome machines ever landed in New Zealand. The equipment includes a speedometer and a mileometer, with eight-day clock.

16-20 Argyll Car.

This car was specially imported for Mr. P. R. Sargood, of Dunedin, and it is exactly the same in all particulars as the one which ran so well in the Tourist Trophy race with the exception of the wheels. The engine is a very beautiful piece of work, showing a very fine finish, every part being extremely accessible, and the whole working as quietly as possible. It has four cylinders, bore and stroke being 95 x 130. The cylinders are all cast separately, with the valves on opposite sides. Double ignition is used with high-tension coil and high-tension magneto ignition. The car is equipped with 35 x 5 Palmer cord tyres. It has the usual handsome Argyll Rolls-Royce side-entrance body, finished in deep carmine. The machine has lots of road clearance and is very speedy. It also has the latest Argyll design in back axle with ball bearings at four different points. This machine seems to require little or no effort to make it run on the road.

The Singer Motor Manufacturing Co., of Coventry, England, are shortly to be represented by an agency in Wellington for the Australasian colonies. Their motor cars are well known throughout the world for their reliability.