

light impulses in rapid sequence—in fact, before one impulse ceases the next begins. This applies the power so constantly and so uniformly to the driving-shaft that no pulsation and no vibration is felt; this continuous, unbroken application of force, this constancy of torque, gives a smoothness of running, closely approaching the electric dynamo or the steam turbine. The overlapping impulses raise the pressure to a very high average, which greatly accentuates the gain in power; but it means even more than this to the motorist—a light car with ample power permits travelling on direct drive practically all the time, over all roads, up and down the steepest grades, through long stretches of deep sand, mud, etc., without touching the change speed lever. It is not only necessary to have

The well-known builders, Messrs. T. M. Lane and Sons, are to be congratulated on turning out such an excellent model, the lines of which are considered perfect for developing a high rate of speed, while at the same time, the craft has proved herself to be an excellent sea boat

**Tourist Trophy Race, 1906.**

The *Autocar*, commenting on the great race which recently eventuated at the Isle of Man, says —  
After the lapse of 4h 6m 3/5s from the start, Rolls flew by in his 20-h p Rolls-Royce for the last time, an easy winner. His times were First

it did, as the car lost a good bit of time in the third round. That is to say, there is no doubt whatever that this time was the second fastest, despite the delay George had in cutting the coat and rugs clear of his propeller shaft. It seems that the floor boards were pushed up by the differential case so that the sand bags broke through as they bumped about in response to the agitated movements of the car.

**Useful Hints.**

**A MYSTERIOUS SQUEAKING NOISE.**

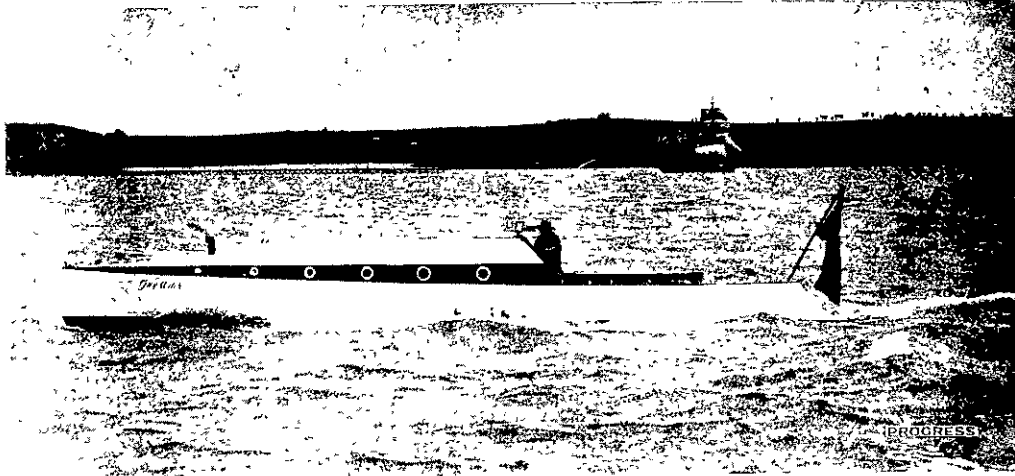
Sometimes a motor will develop a mysterious squeak when running, and this often takes a deal of locating. Many motors are fitted with the wipe type of contact-maker, and it is well to look to the wiper blade and the disc on which it rubs for the source of the squeak. If the disc is allowed to get dry, a most distressing noise is caused by the rubbing of the steel wiper piece on the fibre of the disc or by the bearing of the roller on the wiper arm when the latter is rotated. A spot or two of ordinary lubricating oil will effectually cure the trouble.

**FITTING SPARKING PLUGS.**

Though all sparking plugs are theoretically of a standard size as to that part which screws into the cylinder, there would appear to be some difference of opinion between makers as to the internal diameter of the sparking plug hole in the cylinder. This has been brought home to us in this wise: We were out for a short run a few days ago, when the engine commenced to misfire, undoubtedly from plug troubles. Having a new set of plugs awaiting an opportunity for testing, we decided to fit the new set, but, to our surprise, found that the plugs could not be induced to enter the cylinders. The old plugs were replaced, the faulty ones having been cleaned and adjusted. The next day we proceeded to investigate the why and wherefore of the new plugs not fitting, but found they entered the cylinders quite easily when the engine was cold. There is no difficulty in accounting for this, but it incidentally shows why some manufacturers wisely make the sparking pluck orifices of larger diameter than the corresponding screw threads on the plugs. Very often in new sparking plugs the thread is burred where the earth wire is let in. The burr should be removed with a triangular file.

**BATTERY TROUBLES.**

When an accumulator has been standing idle for any length of time, although it may show four volts, and even slightly over, when tested by a voltmeter, it is not safe to assume that it will work in a reliable manner when desired for ignition purposes to run a motor. The voltage of an accumulator may appear to be fairly high after a rest, and yet immediately a small amount of current, such as is used by an induction coil, is required from it, the



MR C A. WHITNEY'S 'GREY WITCH' OFF THE BASTION, AUCKLAND HARBOUR

power; it is necessary to have the proper design and light construction and serviceability. A careful inspection shows that every feature of Ford model "K" is along the advanced ideas to which manufacturers are tending, and embodies careful evolution and development of all the minute details that make the car, and make it a well-balanced car.

The other specifications are:—

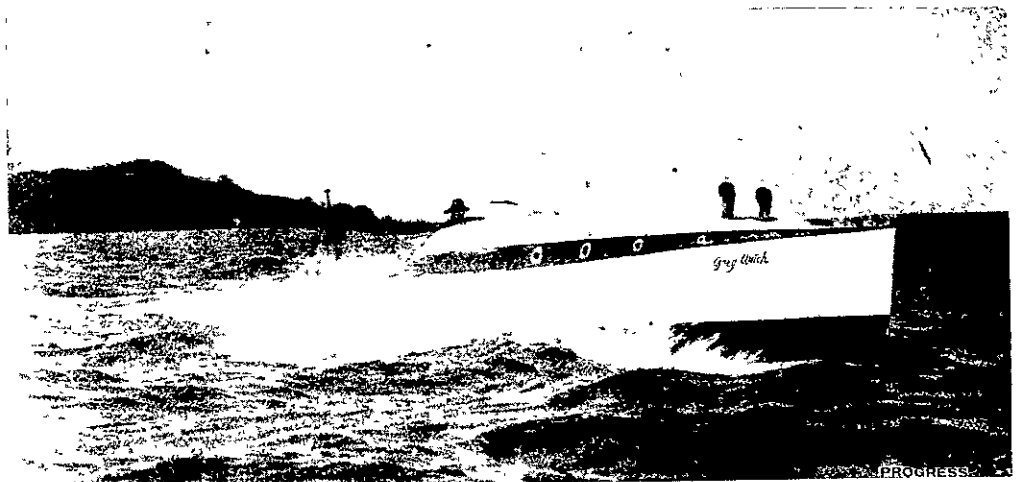
Motor, 6 cylinder, vertical, 4 1/2 in. bore x 4 1/4 in stroke, 40 h.p. Speed, 50 miles per hour, down to 4 miles per hour on the high gear. Improved planetary transmission, with improved clutch. Pressed steel frame. 114 in. wheel base. Water cooled, circulation by gear pump. Perfected magneto ignition. Mechanical oiler. Gasoline tank under seat, containing 15 gallons—good for 250 miles. Water contained in radiator. Hub brakes—internal expansion, with lever control. Emergency brake on driving shaft, controlled by foot lever. Springs, full elliptic on the rear, and half elliptic on the front. "Famous Ford" Direct Drive construction. Ample Roller Bearings on rear axle, with ball bearing thrust—special design. Ample Ball Bearings on front wheels. Wheel steering (fitted with Ford reduction gears) takes all the strain from steering over the roughest road—an exclusive Ford feature. Luxurious body, ample for five passengers. Weight—2000 pounds. 56-inch tread. Wheels, artillery, 32 in. Tyres, 4 in. Lubricating oil, sufficient for 250 miles. Colour (?) Equipment, two side oil lamps, tail lamp and tubular horn

We are enabled to reproduce in this issue, through the courtesy of the owner, Mr C A Whitney, two pictures of the motor launch *Grey Witch*. This fast craft is 42 ft long and 6 ft 8 in extreme beam. The draught, including propeller, is 2 ft 9 in, and draught of hull about 5 in. The engine is a 50-h p. Monarch four cycle. The hull is Carvel built, the total thickness being about 3/4". The whole of the hull is built of American cedar for lightness. The *Grey Witch* is covered by a whale back of American cedar which extends three-quarters of her length. Forward of the engine is a cabin of two berths. The whole of the boat is controlled from the steering wheel after the engine has once been started. Friction gear is furnished for reversing or going astern. The boat is driven by a three-bladed 26" propeller, and develops a speed of between 16 and 17 knots when cleared for racing. When fully equipped for cruising purposes, carrying a dingy etc., her speed ranges from 13 to 15 knots in fine weather. Of course, rough weather considerably decreases the speed. The *Grey Witch*, at the present time, is one of the fastest power launches in Australasia, and one of the best cruisers. She is lighted up by electricity supplied by accumulators, which are also used for ignition

circuit, 1h 0m 13-3/5s, speed, 40.2 m p h. Second circuit, 1h 0m 46-4/5s, speed, 39.8 m p h. Third circuit, 1h 1m 24-1/5s, speed, 39.4 m p h. Fourth circuit, 1h 3m. 36s., speed, 37.9 m p h. The course over which the four circuits were run measured forty miles, three furlongs. The race has again gone to the swift, as it did last year. The great fear that Rolls would fail for want of petrol before the finish was not justified, but other and slower cars failed for shortness of fuel

**THE FINAL PLACINGS.**

- The final placings were  
1.—No 4, *Rolls-Royce* (Hon. C. S. Rolls), 4h. 6m. 0 3/5s. Average speed 39.4 m p h.  
2.—No 23, *Berliet* (M. Bablot), 4h. 32m. 58-1/5s. Average speed 35.3 m p h.  
3.—No. 2, *Darracq* (A. Lee Guinness), 4h. 42m. 48-1/5s. Average speed 34.3 m p h.



ANOTHER VIEW OF "GREY WITCH" GOING AT TOP SPEED.

- 4.—No. 15, *Clement* (G Brand), 4h 47m 20s. Average speed 33.7 m p h.  
5.—No. 17 *Beeston Humber* (T C Pullinger), 4h 56m 1-1/5s. Average speed 32.8 m p h.  
6.—No 18, *Coventry Humber* (L Coatelen), 5h. 0m 52-4/5s. Average speed 32.1 m p h.  
7.—No 1, *Arrol-Johnston* (John S Napier), 5h. 22m 1s. Average speed 30.1 m p h.  
8.—No 25, *Siddeley* (A E Crowdy), 5h 47m 19s. Average speed 27.9 m p h.

The time of the Argyll was unofficially given as 4h. 28m. Except so far as any odd seconds might be concerned this was as nearly as possible what

voltage drops down from below 3.8, and this is insufficient to work an ordinary ignition coil. With such a battery the engine will start up readily enough, and will run for a matter of twenty seconds or so, then the engine speed will gradually decrease, and ultimately the engine will stop. After a few moments' rest the engine can be again started, with similar results. The novice is rather inclined to think that this shows that the battery is in good working condition, and that the trouble lies with the petrol supply. The symptoms, however, are different, for with an insufficient petrol supply, in addition to slowing up and stopping of the motor,