THE NATIONAL GAS ENGINE COMPANY, LIMITED.

SOME 16 years ago the National Gas Engine Company was started in a small shop on the outskirts of Ashton-under-Lyne, England. To-day their premises cover an area fully 18 acres in extent, and branch depots have been established in nearly a score of the principal cities and towns in the United Kingdom, and in all the large foreign and colonial centres. Their staff, originally of modest proportions, has grown with the increasing prosperity of the firm, till now they give employment to fully 750 hands, while their output comprises some 2,500 engines of powers ranging from 1½ b.h.p. to 400 b.h.p., and aggregates 25,000 brake horse power per annum. This progress, though rapid has been steady, and has resulted from a keen perception, on the part of the Directorate, of the future of an industry even now in its infancy so far as its scope and usefulness are concerned. Shrewd business men have ever been at the helm, and as the concern prospered, eminent engineers of world-wide reputation have been added to the Board, and every opportunity seized of keeping the firm well ahead of the times. The Company was formed with the avowed object of making gas engines exclusively; and by specialising in this particular branch of engineering it soon forced its way to the very forefront of the trade. The demand for this class of motor is one which is increasing by leaps and bounds, and to-day even the present enormous capacity of the firm is taxed to its utmost, to keep pace with the requirements of an ever-increasing clientele

Though in its early days the scope of the Company was naturally very limited, their ramifications have now extended to practically every quarter of the globe. They have showrooms and depots in London, Manchester, Birmingham, Glasgow, Newcastle, Liverpool, Leeds, Dublin, Bristol, Nottingham, Dundee, Leicester, Sheffield, Carlisle, Chester and Belfast; while abroad they have similar establishments in Amsterdam, Rotterdam, Sydney, Brussels, Paris, Warsaw, Barcelona, and in Germany, Japan, South America Canada and New Zealand. Each of these is under the direct supervision of their own representatives, and at each, in addition to the clerical staff, they have a body of experienced workmen capable of carrying out installations, and effecting any necessary repairs. The achievements of the firm are many and notable. As already stated, they are turning out annually considerably over 2,500 engines, ranging in power up to 400 b.h.p. At the time of our visit, in one shop alone were some 200 engines in various stages of finishing and packing. That very week seven engines were being sent to Amsterdam Earlier in the month twenty-four engines had been despatched to Sydney, while in addition to the ordinary work twelve engines were being shipped to New Zealand, twenty to France and twenty to Canada. Last year nearly 100 engines were forwarded to Japan, whilst during the first two months of 1906 orders for forty were received.

One of the most important engineering developments of recent years has undoubtedly been the introduction of the suction-producer gas plant, which, owing to its increased economy in working, is creating what may be described as practically a revolution in gas-engine driving. Realising the future of the producer, the National Gas Engine Company have devoted considerable attention to its improvement, and their plant is at present amongst the best in the market. The great advantage of the suction producer over the older form lies in its very low first cost, the absence of a gas holder, the ease of starting, and the long period of time during which the producer can run without any attention whatever. The cheap gas of the older pressure producer was not obtained without considerable attention to the plant, and consequently the power at which pressure plants began to be applied ranged much higher than those which suction plants apply It was rather unusual to associate pressure plant with any gas engine below 50 h.p.; whereas now engines of 30 h.p. and lower are often operated by suction gas. Where larger powers are required, suction plant presents many advantages over the pressure type, and the increase of power and dimensions is steadily proceeding. Suction plants are now made by the company as low as 10 and as high as 300 h.p., and will soon be constructed to practically any power, in suitable units. The plant can be used in combination with a gas engine connected directly with it. The suction caused by the outstroke of the piston is then used to draw air through the fire in the gas generator, but the plant will work equally well if the air is supplied by a fan or blower. The gas is made by passing a mixture of superheated steam and air through incandescent fuel in the generator, the fire being made with small anthracite peas, or small clean coke. In special cases other fuel can be used. There is no external fire, and the gas is made as quickly as it can be consumed. An important feature of this plant is that it has been designed on the heat regenerative principle. All the air for producing the gas is heated by waste heat from the body of the gas generator The superheated steam required for making the gas is likewise produced by waste heat The fuel which is to be converted into gas is also heated by waste heat before it reaches the combustion zone. Throughout the apparatus the loss of heat is therefore reduced to a minimum, and the efficiency is exceptionally high When an engine works the suction plant, the engine itself governs the rate of gas production, to suit its varying consumption. No surplus gas can then be made, and as there is a partial vacuum in all parts of the plant, and in the piping while the engine is working, there cannot be any escape or waste of gas. The special feature of the "National" producer, which the Company claim gives it a marked advantage over other suction producers lies in the regulation of the water supply. This, we learnt, is their own patent, and is applied only to the "National" engines.

This brief sketch possible fails to do full justice to the size and importance of the remarkable business which has been built up at the Wellington Works, in England but however inadequate, it will give our readers some idea of its vast scope and the great future which is undoubtedly before this rapidly developing industry.—*Implement and Machinery Review.*

Mr C. Lilleard Natusch, architect, of Napier and Gisborne has opened an office in Commercial Chambers, Hunter street Wellington. His sons, Mr. Aleck and Mr Rene being left in charge of the branch offices at Napier and Gisborne, while his third son will be with him in Wellington.

Many, if not most of the larger country residences that have been erected in Hawkes Bay and Gisborne during the past ten years have been from Mr. Natusch's designs, as also have been many of those erected on the West Coast of this Island between Palmerston and Wanganui; among the latter being those for Messrs W Levin and D. G Riddiford, Col. Gorton, Messrs. Norman Gorton, M T. Taverner William Buch, Godfrey Pharazyn, Allan Strang, Walter Strang William Marshall, H. J Hawkins, Frank Moore Mrs. Willis, and others.

At Belmont, near the Lower Hutt, a very convenient and quaint house, plastered on the exterior, is now being completed for Mr. Natusch.

Have You Ever Noticed

That the clerk who talks with his customer and not at him always has a customer to talk with.

That the fellow who thinks he controls the trade soon finds out he can't even control himself

That cheerfulness is catching and that there is always room in the store for a smiling countenance.

That in successful stores the floor is not used as a waste basket, nor the counter for a catch-all.

That the salesman who gets the customer's attention gives him his.

That there is no substitute or anything else just as good as the truth.

That clean hands and clean linen make a favourable impression, while the other kind doesn't.

That a good clerk never makes the same error twice, while an indifferent one does and generally loses out

That you don't need to tell of your ability if you possess any Those interested will find out. —*The Keystone.*

Success mixture—Muscle and hustle brains and method.

DELICATE INSTRUMENTS REPAIRED BY PRACTISED MECHANICIAN.

HITHERTO scientific instruments of delicate construction have had to be sent out of the colony for repair. Now, however, it is possible for students and professional men in the mathematical sciences to have their instruments repaired by an expert in Wellington. Mr. H. H. Coote, of 65, Willis street, Wellington, has had, in addition to fourteen years' practise in optical work and the care of optical instruments a great experience in the repair of fine instruments of all descriptions Mr. Coote is a mechanician-specialist of such long standing that it will repay those who contemplate repairs or alterations to any of their instruments to consult him rather than to send out of the colony, or commission a local repairer who may prove inexperienced —[Advt.]

Country Agents.

PROGRESS is obtainable at the principal stations in Auckland, Wellington, Christchurch, Dunedin and Invercargill. The following have been appointed country agents:—

Thames, Mrs L. Gerrighty; *Rotorua*, Mr. Jas Bayliss; *Gisborne* Mr. H. J. Bushnell; *Napier*, Messrs Crerar & Son, Mr. McDougall; *Dannevirke*, Mr. T Bain; *Hastings* Messrs. J. Hall & Son *Waitara*, Mr. W. Sampson; *Hawera*, Messrs Cole & Donnelly; *Aramoho*, Mr. C. L. Bridges *Wanganui*, Messrs Jones & Son; *Hunterville*, Mr. A S. Brooker; *Feilding*, Mr. W. Carthew *Palmerston N.*, Mr. Swallow; *Foxton*, Mr. Fraser *Levin*, Mr. D. Smart; *Eketahuna*, Mr. R. G. Vile *Woodville*, Mr. F. Brook; *Masterton*, Messrs McLeod & Young; *Carterton*, Mr. Phillpotts *Featherston*, Mr. Robertson; *Greytown North*, Mr A. McPhee; *Lower Hutt*, Mr. E. Clark; *Petone* Mr. Earle; *Blenheim* Mr. E. H. Penny; *Nelson* Messrs. J. E Hounsell & Co., Messrs. Jackson & Co. *Waipawa*, Mr. Jas. Pellew; *Westport*, Mr. F. Mc Keegan; *Hokitika* Mr. Robinson; *Lyttelton*, Mr G. E. Collins; *Ashburton*, Mr. H. M. Jones; *Timaru* Messrs. Ware & Johnstone, Messrs. Hutton & Co. *Oamaru*, Mr. J. Cagney; *Cromwell*, Messrs J Ford & Co.; *Port Chalmers*, Mr. E. Godfred.

OFFICES AND REPRESENTATIVES.

AUCKLAND—J. Henry Mackie, Mercantile Chambers, Queen street.
NEW PLYMOUTH—Bewley & Griffiths.
HAWERA—W. A. Quin.
NAPIER—C. H. Cranby.
HASTINGS—J. A. Fraser.
WANGANUI—J. L. Stevenson.
PALMERSTON NORTH—Ravenhill & Co.
NELSON—C. Langley Bell.
CHRISTCHURCH—A. H. Hart, Gloucester street.
HOKITIKA—T. W. Beare.
OAMARU—E. Piper
DUNEDIN—Mirams Bros., Joel's Buildings, Crawford street
INVERCARGILL—J. F. Lillicrap (Hall Stout & Lillicrap.)
LONDON, ENG — Rayward Bros., 80 Victoria Street, E.C.
