

## **STUART TURNER LTD**

### **A SHORT HISTORY BY H. SANDERSON NOV 1938**



Mr. S.M. Stuart Turner

He had served his apprenticeship on the Clyde, taking part in building the largest marine engines of the time. After a period at sea, he started an engineering works in Jersey. Here he provided the first public electricity supply in the island. In 1897 he left the island to take charge of the steam electric generating plant at Shiplake Court. In those days petrol and oil engines were very much in their infancy; a boiler and high speed steam engine were generally used to drive the dynamo for country house lighting. Only big country houses could afford to have electric light.

Whilst at Shiplake Court Mr. Stuart Turner designed the Stuart No. 1 Vertical Steam Engine, made the patterns and advertised the castings in the "Model Engineer", which was just starting its successful career. No. 1 immediately caught on; it was far the best model steam engine on the market.

In 1903 Mr. A.F. Plint having had two years' training in electrical engineering, joined Mr. Turner. They had known each other in Jersey. An early recollection of Mr. Plint's is of a model steam engine which wouldn't go, being made to go by Mr. Turner. Until 1905 the firm's only tools were a treadle lathe and a hand shaper; both excellent exercise! That year a move was made to Duke Street (it is now a woolshop) and other models of the Stuart range were produced, including a horizontal gas engine and the first Stuart two-stroke. Mr. W.G.Ayling and Mr. J.Cossins joined the growing firm. Mr. E.W.Masters was another notable member of the staff. He was a

wonderful craftsman and did most of the work on the sectional model of the "Rocket" Locomotive which Stuart Turner's made for the Science Museum, Kensington.

Gas and petrol engines found a



wide sale and then there was a demand for electric generating plants and the Stuart Lighting Plants were born. The firm also started to make a small lathe for amateurs, a very good little lathe it was too (there is still one in the Machine Shop), but it was soon given up. It is said that Drummonds decided that if Stuart Turners marketed lathes, Drummonds would sell castings, and therefore each firm trade up its mind to stick to its own business.

In 1908 a move was made to 43, Market Place, and the limited company, Stuart Turner Ltd., was formed, Mr. Turner having resigned his position at Shiplake Court. The business was growing steadily, though sometimes passing through troublous times.

In 1911 the company started making motor cycles. A 2hp two-stroke was produced and a fair number were sold. One was still being ridden in 1930. It was followed in 1912 by a twin cylinder water-cooled two-stroke with shaft and worm drive - a design which at this date would be considered thoroughly up-to-date. Then, in 1913, the engine for the Dayton 1½hp motor cycle was produced. This was a great success and was manufactured at the rate of 20 a week.

The writer did not join the Company till 1913 so he is quite a young member of the firm. Then the War came and most of us disappeared for four or more years. Mr. Cossins remained (for the Army Doctors thoroughly disapproved of him), and so did Mr. T.F.Nash who became a director and is still one, tough not taking an active part in the business. During the War the model business, motor cycles and everything else were dropped and we made aeroplane bolts, gas valves and other munitions. We worked day and night shifts and as many as

400 girls were employed towards the end; Miss Burfoot well remembers those days. The Old Broad Gates Inn was bought to provide the additional space required. Mr. Sharpe now sits in the Coffee Room of the Inn and Mr. Smith in the Bar Parlour. The pattern store is on the site of the most lovely asparagus bed I have ever seen!

After the War we had to revive the old business. The Model Department got going again and Mr. Plint designed the P.3 engine for our lighting and pumping plants. Our Foundry started, principally because we couldn't get castings outside, and Mr. E. Evans took charge of it. A foundry is often a source of worry, but we have never regretted having a foundry.

Mr. Stuart Turner left the firm in 1920 and went to South Africa. After some years he returned to England and eventually settled in Southend. He died in April of this year within a few days of his 70<sup>th</sup> birthday.

In 1923 an interesting thing happened. The War Office asked us to a conference. They told us that they wanted a very light aircooled engine and generator for wireless. It was to be carried on a pack mule. The whole plant must not weight more than 84lbs. it must run in any temperature from freezing to 140°F.; it must not be affected by being carried upside down or in any position; it must govern within 5% and there were various other conditions. They said they were inviting us and seven other firms to submit engines for trial. Would we make two engines to their order? Subsequent orders would be placed with the firm submitting the best design. We said we would try and got busy. The result was that five firms produced engines but the Stuart was the only one which fulfilled the requirements and passed the tests. So we have made the W.D. engine ever since.

In 1928 the P.4 engine was designed, superseding the P.3. About a year later Mr. Jesse T. Rymer joined the firm and worked heart and soul for the Company until he left at the end of 1937.

In 1930 the marine engine was born after an extremely short period of gestation.

It happened in this way :- Mr. Neble, a Danish gentleman, came to see us. He told us he wanted a 3 b.h.p. engine for pleasure park boats, could not find one that was any good and would we provide him with 50 engines within four weeks? We took a deep breath and said "Yes"!

The P.5 cylinder, the circulating pump and the

other details were designed, the patterns made, castings produced, engines machined, built and tested and the first delivery of 12 engines was taken down by Mr. Cossins in the Works lorry and delivered on the appointed day (much to the annoyance of the boat builders, who were not nearly ready for them). Everyone concerned had put their backs into it and done a little more than their best.

Afterwards, of course, the marine engine gradually evolved, marine clutch, gearbox and other frills were added and the P.55 came along.

Then there are the pulsators for milking machines. In the early days the pulsations were produced by a machine rather like a vacuum-operated, windscreen wiper on a car. It was impossible to keep them working at a constant speed and a cow strongly objects to being milked at a varying rate. When the temperature was low they worked slowly, when high, since the lubricating oil got thinner, they worked quickly. Mr. Plint invented the diaphragm type of pulsator which works at a constant speed and it gained the Silver Medal when first exhibited at the Royal Agricultural Show, for being the best dairy implement of the year. Thousands of them have been made since.

The new machine shop and foundry were built in 1931 enabling us to give up the dark and noisome machine shop at 43, Market Place. The erecting shop was added in 1936 enabling us to relinquish altogether the old premises.

That brings us nearly up to date-new designs, changes and improvements are happening all the time in the model business, the foundry and the capstan shop as well as with the bigger engines. For instance, the model centrifugal pumps which we have made for years have been recently so improved and modified that they have developed into quite a special trade.

Many of our special lines have been born in our model department and as they grow up have left the parental roof and started an establishment of their own.

Now we are introducing a diesel engine, the smallest commercial diesel engine in the World – another worry added to existence, but we hope it will prove to be a pleasant worry.

Anyway, though the grass may not be a source of pride just yet, the flowers in our gardens are a delight!