HISTORY OF WOLSELEY MACHINERY.

The patent for sheering sheep by machinery was granted to F.Y. Wolseley in 1877, and since then the name of Wolseley has been synonymous with sheering equipment.

Frederick York Wolseley, son of a clergyman was born in Kingstown, in the County of Dublin. His family already having achieved fame through the efforts of his brother Field Marshall Viscount Wolseley. During the late 1860's, Fredrick Wolseley was managing Caldwell's sheep shearing station in Victoria, Australia, and it was here that the idea of shearing sheep by mechanical means occurred to him. Although numerous experiments took place during this period, Wolseley was constantly dogged by the lack of local engineers capable of putting his ideas into practice. For this reason, he was forced to return to England in the early 1870's to seek assistance; however he was back in Australia by 1874, and once again continued with his experiments, but working from a room in Bourke Street West, Melbourne. After a further two years, the machining was ready for the final stage of development — practical testing, so a large sheep shearing station near Walgett, New South Wales, was purchased.

In 1887, the Wolseley Sheep Shearing Machine Company was founded, and it was about that time when Mr. Wolseley was joined by Herbert Austin. Austin was born in Buckinghamshire in 1866 and like Wolseley, had a keen interest for mechanical things right from his boyhood days. When he was 17 years of age, Austin was persuaded by his family to seek his fortune overseas, and to join his mother's brother — Walter Simpson who was manager of an Australian engineering firm. He worked for Simpson as an apprentice for two years before moving to another engineering firm called Cowans. This was about 1884 and Cowans had an agency for Crossley Brothers at that time, and maintained the local slide valve Otto gas engines which were so popular during that period.

From Cowans, Austin moved to Longlands Foundry Company of Melbourne and then to Wolseley S.S. Co. Ltd., he was 21 years old and still an apprentice, but he was soon to become works manager. His first job was to re-design the shearing equipment because already three types of cutter had been tried and resulted in failure due to excessive friction and difficult alignment. Also many cutters had been returned due to the efforts once again of the local engineers.

At around 1890, Wolseley decided to transfer his business to London. In 1893, Austin became General Manager and soon after, it was decided to once again move the business, this time to Birmingham 'the workshop of the world', the Works at Alma Street was opened.

In 1901, the Company sold its motor business to Vickers Sons and Maxim — who in turn sold it to Morris. Austin was made a director of Vickers, but in 1905 founded his own firm, however he remained chairman of Wolseley S.S.Co. Ltd., until 1933.

THE WORKS.

The earliest address shown on any relevant literature is Sydney Works, Alma Street, Birmingham (England), so why Witton? During the 1900-1910 period, one of the most important small machines in the dairy industry was the cream separator, the majority of which were imported. Early in 1905, extensive experiments began in separator design at the Alma Street Works, and later that year, the first machines were on the market. The Wolseley-Pederson separators were an instant success, and so great were the orders, that the original manufacturing facilities could not cope. In 1906 or 1907,

the Company decided to build a new works at Witton in order to build separators with the very latest equipment. Four acres of land were purchased and by 1908 the new factory was operating. All departments were under one roof except for the Smithy, Hardening Shop and the Dairy, and 170 workers were employed. The motive power for actuating the machines did not come from Tangye or Forward as one might expect, but directly from Birmingham's Corporation electric mains and distributed through the works by a number of motors aggregating 125 h.p.

The types of separator manufactured in 1908 included, hand machines to bolt direct to a table, hand machines to stand on the floor, machines for driving by hand or powered, also belt, turbine and electrically powered machines. Capacities ranged from 16 to 660 gallons per hour. It is worth a mention that these machines were not only sent to almost every country in Europe, but even to Sweden which was the home of the separator business.

THE ENGINES.

No details are available at the moment as to 'when' the first Wolseley Petrol Engine was manufactured, but the catalogues and adverts all give the Sydney Works, Alma Street, address, so one could guess perhaps, that the petrol engines filled the manufacturing gap in the factory when the separator business moved to Witton in 1908. Also the appearance of other makes of vertical engine in the 1906-10 period, such as the first Lister (5 h.p.),Bristol Carriage & Wagon Works — Victoria 3 & 5 h.p., plus several from the U.S.A., may well have played a part in the decision made by Messrs Wolseley S.S. Company Ltd., to introduce a vertical engine. The other obvious reason for such an engine was the need to offer a prime mover with their equipment as an 'all in' package.

The earliest illustration to hand, dated February 1912 is an advert for 'The Economical Petrol—Runs well under all conditions'. So from this, we can deduce that the engines were available before 1912, also no mention is made about the engine _being_ new. The actual introduction date so far remains a mystery but it certainly would appear to be in the 1909w 1911 period.

The engines must be dealt with in various stages in order to include certain important changes which took place during production stages. In order to simplify the description, the writer has divided the type of engine into 'Styles 1 to 4, this will also give a quick reference to the illustrations.

STYLE 1.

The most prominent feature of the early Wolseley engine is the long 'U' shaped injection pipe, of which one end is open and situated close enough to the exhaust stub to collect a warm air flow, the other half of the 'U' pipe contains the carburettor (Wolseley's own design). Looking beyond the injection pipe, we see a very heavy vertical engine with solid flywheels, a nicely cast trolley base which projects up to the crankcase, a ball type governor mounted on a horizontal axis, and an oscillating magneto. Sight feed lubricators are fitted to the main bearings and arranged in a manner which allows the oil to pass into the crank chamber for re-use.

The hit & miss governor mounted on the horizontal axis is known as the 'D' type governor and operates on the 'inlet' valve. The end of the stem carries a pivoted weight which engages with the cam follower during normal running, but is swung out-wards to miss the follower when governing is required.

Speeds for the two sizes of engine available, 31/2 h.p. maximum 600 r.p.m. and 5 h.p. maximum 450 r.p.m. All of the illustrations show high tension ignition by a Bosch 22 magneto.

A cold start device comprised of an adjustable band situated in the induction pipe just above the carburettor, however as an aid to starting the manufacturers say, 'If. it won't start, pour some petrol in the compression tap'.

STYLE 2.

This style seems to be identical to the previously described version except for the governor and in some instances the magneto. The most prominent change is the governor which is now of the throttling type, is mounted on a vertical axis- and is known as the 'T' type or Type 20. Strangely enough the engine is still described at this stage as a 'petrol' engine, but it is the opinion of the writer that this type of governor introduced the paraffin engines for obvious reasons (ie. the hit and miss system of governing is not generally used on a paraffin engine because the time between the explosions is some-times too great, thus allowing the cylinder to become too cooled — obviating the necessary conditions for the vapourisation of paraffin). From the literature available, it is impossible to date the introduction of the throttle governed (paraffin?) engines, but making a rough guess — 1916 may be reasonable. With this type of governing, a change to rotary magneto is seen — Thompson Bennett type AD1. Both the throttling and hit and miss governed engines were now produced together.

STYLE 3.

This time we do have a date. 1920. Wolseley introduce a 'new' petrol engine. To look at, this engine is almost the same as before except for one major difference. The 'U' shaped air pipe has been phased out in favour of a short horizontal 'U' shaped version, with the carburettor situated near the cylinder head. Rotary magnetos are now shown with the D and T type governors. The makers claim that the engine will now run for six hours at full load on a gallon of petrol. At this stage the magneto is an F.M.C. (Fellows), a make which becomes a permanent feature from now on.

STYLE 4.

Unfortunately a gap in the literature makes it difficult to ascertain when this type was introduced. The biggest structural change now appears. The main difference is the engine base (see photograph). Instead of having the main crank casting PLUS a lower base, the whole of the lower casting from the top of the crankcase downwards is cast in one piece. Now, yet another type of governor is used. This time it is INTERNAL and presumably of the centrifugal weight type acting on the carburettor butterfly in a throttling manner. Other differences, all apparent from the illustrations, thinner flywheels — solid but some with four holes and some with one. Absence of sight feed lubricators could mean that the mechanism seen under the magneto bracket is an oil pump. The first mention of Style 4 'internal governor' engine is in 1927 when the maker's say, 'Our NEW engine is noted for its steadiness and even running .

So at the moment the actual introduction date remains a mystery, although we now have a rough idea. These engines were available in the following sizes according to a specification sheet, 31/2, 5 & 7 h.p. petrol, 4 & 6 h.p. paraffin, r.p.m. from 600 to 700 depending on size.

It would appear that slight changes were made — again to the governor in the 1930s, but it still remained inside the crankcase. Very few other changes seem to have been made, the engine obviously having reached — or as the maker's claimed, 'a design unequalled by any other single cylinder internal combustion engine'.