

Alfred the Great

ALFRED ANGAS SCOTT'S achievement was that he miniaturised the Day two-stroke engine while at the same time vastly enhancing its specific power output. Put crudely, a small cylinder will develop more power per litre than a large one — a lesson forced home with a vengeance by Honda racing machines in the Sixties.

Scott's work, involving both theoretical and practical problems, cannot be overstated. The port timings and port areas of his early engines show a strong understanding of the two-stroke cycle and its possibilities, many years ahead of the time. Particularly impressive is Scott's realisation that far from the new charge helping to push out the exhaust gas, it was the other way round. The rapid mass exit of the exhaust gas invites the fresh charge to enter the cylinder.

Scott also introduced the deflector piston, with the possibility of a squish area. This advance, along with crossflow scavenge, appears to be poised to make a comeback in a new generation of two-stroke engines.

Scott understood the merit of both a square and short stroke:bore ratio, and a high crankcase compression ratio. His engines were as simple as possible, with the exception of his rotary and oscillating transfer delay valves, fitted with the intention of increasing power without raising the crankshaft speed.

Unfortunately, Scott was to disappear from the racing scene after WWI, though one wonders if, in his position as consulting engineer, he had any influence on post-war Scott designs. He died from pneumonia, contracted after getting soaking wet during a potholing expedition, aged 48, in August 1923.

than 5 mph slower than in 1927. George Rowley was second on the AJS, and newcomer Tommy Hatch was third on his Scott. Of the other Scott entries, only Harry Langman finished, in 12th place.

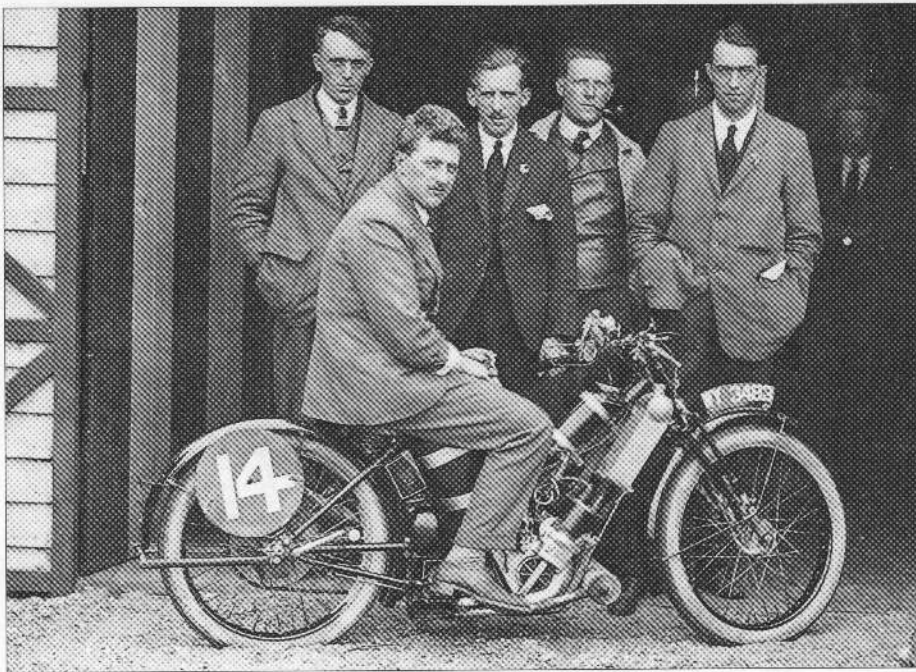
It was a brave ride by Hatch, and although this result led to a new TT Replica model, it was a hollow achievement. A Scott failed to finish anywhere near the leaderboard again.

With rising engine speeds — although 4500-5000 rpm is modest enough by today's standards — the construction of the Scott crankshaft became its weak point. The two overhung throws, fitted into tapers on either side of the central flywheel and bolted together, were liable to flex, destroying big end rollers, or break.

Tommy Hatch finished 13th out of six starters in 1929, the Scott company's last serious entry. For 1930, two new machines with upright cylinders were designed by Harry Shackleton. They featured simple four-bearing crankshafts. The expense was another nail in Scott's coffin — sales plunged to 220 in 1931 season — and was wasted, for vibration meant that the machines were almost unrideable. Two hastily substituted 1929 models both failed to complete the race.

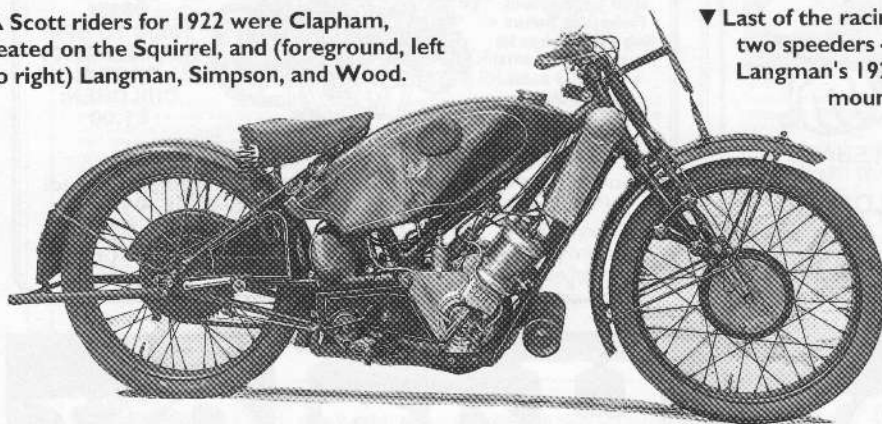
Scott were no longer in a position to contest the Isle of Man TT. The depression hit their sales hard and in 1934 only a derisory 53 machines sold. Scott had lost its struggle to stay ahead.

Yet time was to prove that the two-stroke was more than a match for four-strokes on the race circuits of the world. ■



▲ Scott riders for 1922 were Clapham, seated on the Squirrel, and (foreground, left to right) Langman, Simpson, and Wood.

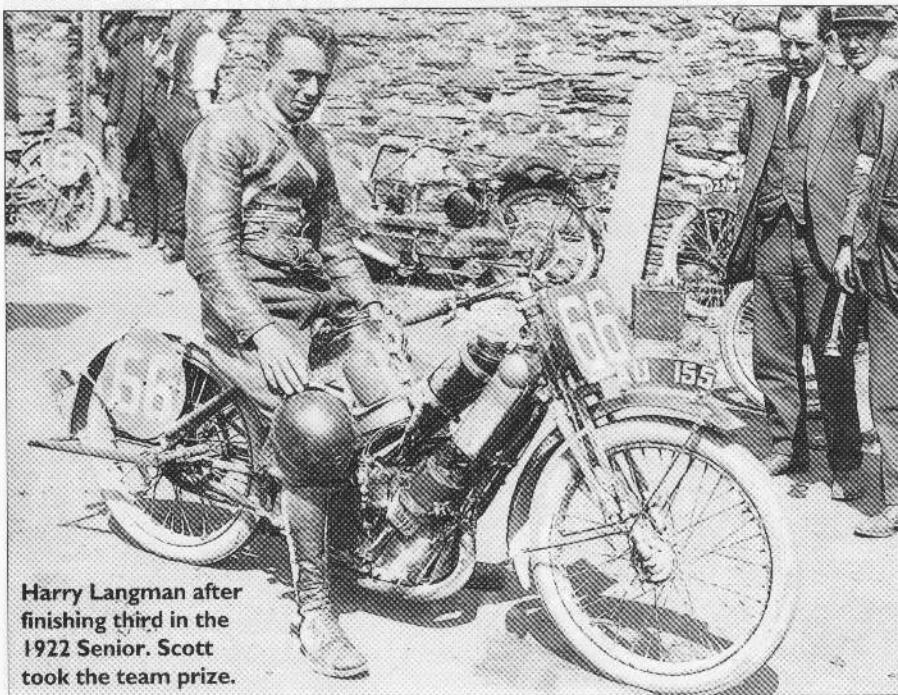
▼ Last of the racing two speeders — Langman's 1925 mount.



words that spring to mind, and the machines weighed 75lb more than the two speeders they replaced. Power output was up, but not in proportion, and speeds were disappointing. Of three entries in the TT only one finished, in a lowly 18th.

For 1927 there were three entries — and

no finishers. Then 1928 saw the introduction of a new engine of 66.6 x 71.4mm. This 498cc engine was known as the Longstroke TT Replica engine. Six machines were entered for the TT which was run in atrocious conditions — so much so that the winning speed, by Charlie Dodson's Sunbeam, was more



Harry Langman after finishing third in the 1922 Senior. Scott took the team prize.