



APRIL, 1978

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two wheels

EXCLUSIVE
ASPES 125MX
FLIER

HOW
TO HOT
XT/TT500
Yams

INTERNATIONAL
VINTAGE RALLY
PREVIEW

3 BIKES TESTED

two wheels

VOLUME 18, No. 2, APRIL 1978

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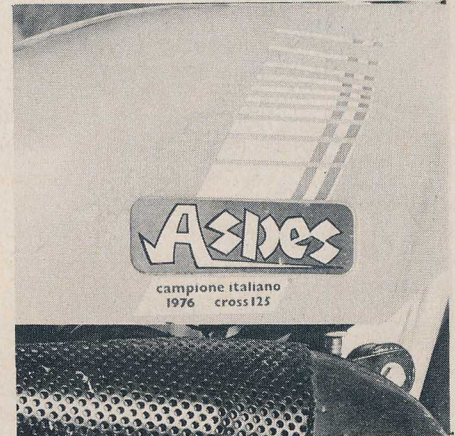
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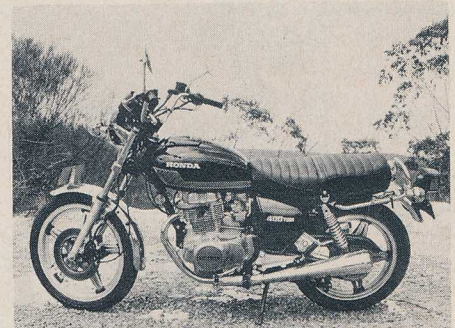
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COVER: The Aspes 125 (test p10) through a crystal stream. Photo by BARRY ROSS.

THE MARSTON MASTERPIECES

To many people Sunbeams are the in-line overhead cam bikes of the '50s, but "proper" Sunbeams began in 1912, and in the short time that John Marston had control of the marque, built an unmatched reputation for quality, epitomised by the use of real gold leaf for the pinstripping!

THE JOHN Marston Sunbeams were legendary for their painstakingly beautiful finish and for the almost incredible attention to minute detail — such as using real gold flake for the pin lining. Deep and lustrous black paintwork so shiny one could literally see one's face in complete clarity, set off by the gold lining, epitomised the quality of the Marston Sunbeams.

The name Sunbeam was still in use until the late '50s, with the BSA group using the name for its unusual, in-line overhead cam twin-cylinder luxury motorcycles, the S7 and S8. Neither deserved the abrupt fate that came their way. In their own fashion they were good motorcycles. But they weren't "proper" Sunbeams . . . John Marston Sunbeams!

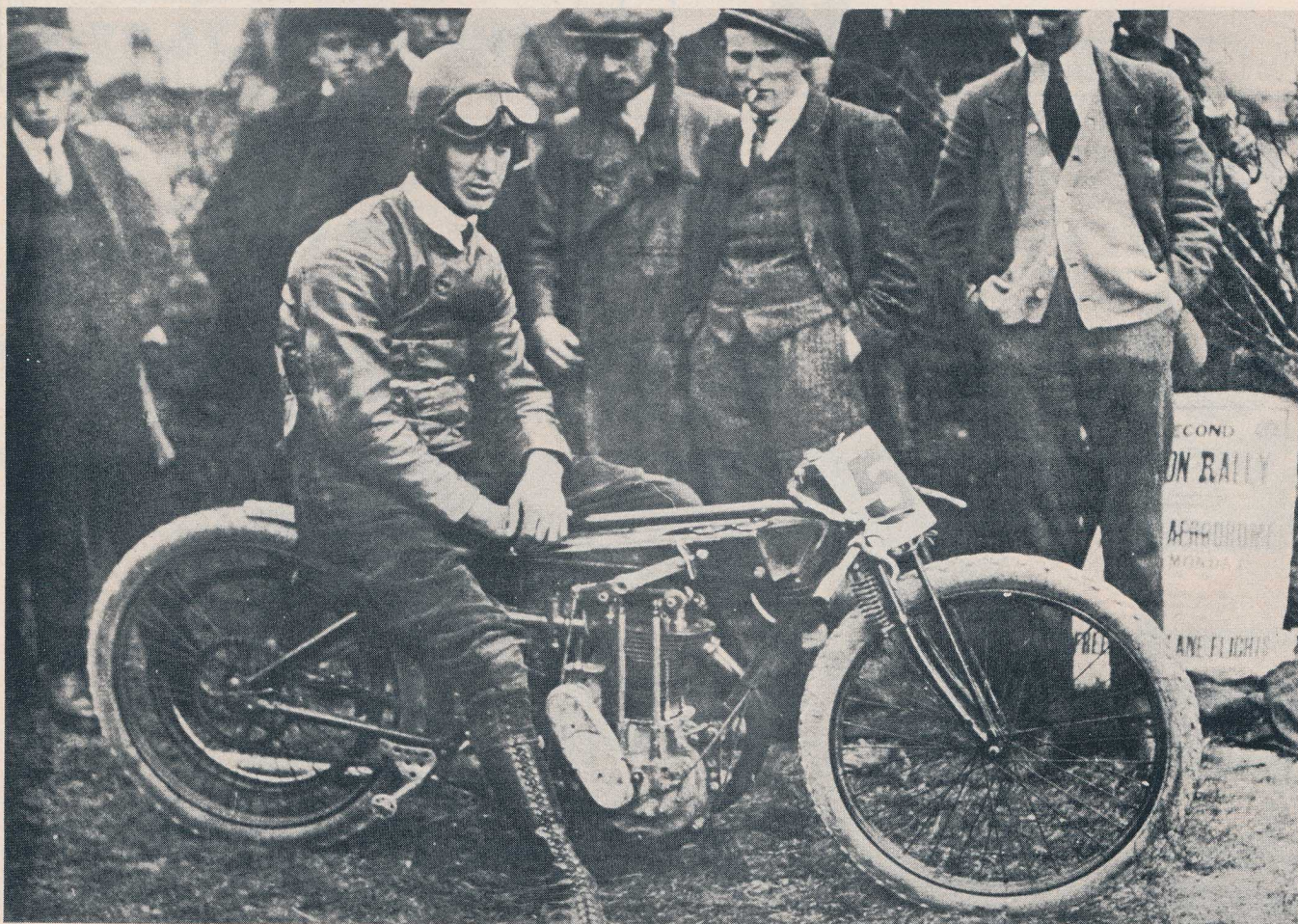
The "real" Sunbeams had a relatively

short life, though a lot was packed into it. From 1912 to 1919 were the Marston Sunbeam years, with a gap of four years for World War One.

Three tragedies hit the firm in such close succession it was, in retrospect, small wonder that it failed to survive. The founder, John Marston, died in 1918. The following year his son Roland and the works manager, Mr Cureton, also died.

Charles, the surviving son, then attempted to carry on but it seems

The nonchalant George Dance in 1921 at Brooklands with the long stroke Model 9. Beaded-edge tyres, abbreviated mudguard, parts drilled for lightness, steeply angled handlebars . . . a pure speed machine.



probable that death duties were too heavy and towards the end of 1919, Nobel Industries acquired Sunbeam. Nobel continued making the illustrious motorcycle for many more years and merged with the much larger ICI group in 1926, but despite all these upheavals the controlling group managed to keep alive the tradition set by John Marston.

Long before Marston began building motor bicycles his firm was famous for its fine bicycles, which had been built from as far back as 1890. It was an age in which transport for the individual became readily available, one where the mechanical age was beginning. The bicycle was an important factor for it enabled almost everyone to have mobility. Where small villages had been all but closed communities, with the bicycle people could for the first time travel freely over quite large distances, and the social and employment situation changed dramatically.

John Marston was part of that era, with his firm producing many thousands of bicycles, all made to the same very high standards and consequently demanding a pretty high price.

As the internal combustion engine

George Dance again at Brooklands, in April 1922, when he lapped at more than 130 km/h on the 350, a record for the Junior class.

was developed small versions were fitted to bicycles — some in most strange places — and gradually the motor bicycle as a complete entity developed. Most used a form of belt drive from the engine to the rear wheel. Apart from the obvious advantage of cheapness, unlike chain drive a broken belt could be easily repaired at the roadside, an enormous advantage in those days.

Chains had been commonly used on bicycles almost since their inception, and certainly by 1900 were common, but the absence of a gearbox on most motor bicycles precluded their use on those new fangled devices. With no clutch to disconnect the drive or to ease the drive into operation the chain would simply break. Roads were another factor; dust, grit, mud and rain all helped to create an almost impossible task for unprotected chains on motor bicycles and their use fell into disrepute for many years.

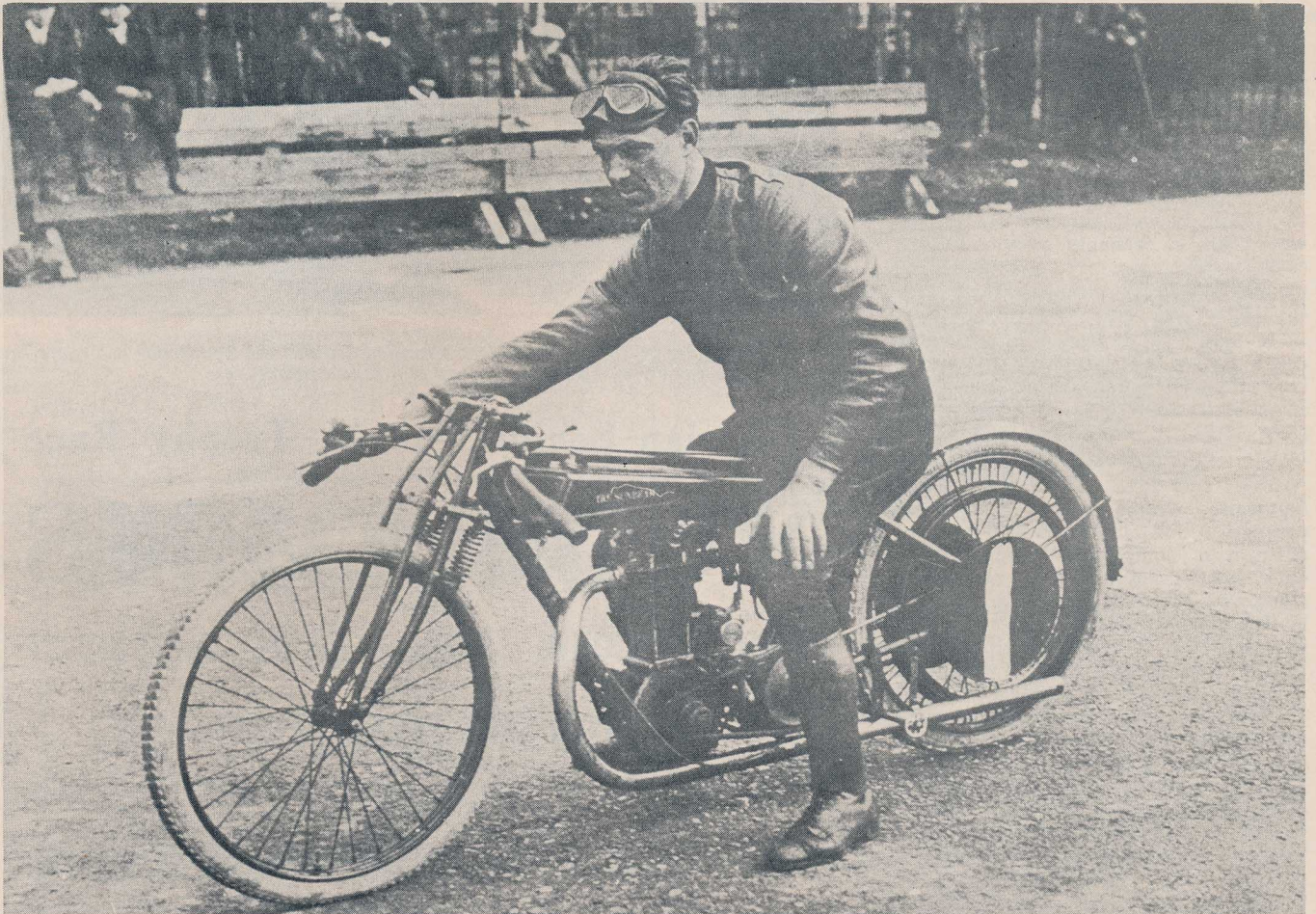
This is not to imply that every firm found the problem insuperable. The John Marston Sunbeam bicycle had led the world with an all-chain drive, fully protected with an oil bath chain case.

Probably the cautious and conservative approach, because John Marston was jealous of his firm's reputation and determined to retain it, was the reason for the long delay in the

introduction of the first Sunbeam motor bicycle. This did not appear until 1912, very late in comparison with other bicycle firms, who had seen much earlier that there would be a big demand for the motor bicycle.

Hasty decisions were not undertaken at the Marston works. But when it was introduced in 1912, the same care and quality that went into their bicycles was also reflected in the motor bicycles. The same superb finish, lustrous black with real gold leaf lining embellished these too, but what set the Sunbeams apart from their competitors was the protection of the two chains, primary and final. Each, as with the bicycles, was enclosed in an oil-filled case, protecting them from the dust, dirt and grit of the roads — the main factors other than breakages, in the demise of chains in those days.

Where almost every motor cyclist expected to spend some time at the roadside almost every time he went out on a run, repairing or shortening a broken belt, the Sunbeam owner never had to stoop to such demeaning activities. Safe in the knowledge that he had an enclosed and protected chain drive, the Sunbeam owner occupied an elevated position in the hierarchy of motor bicyclists. But he had to pay well to achieve that position, for the



Sunbeam was no utility model but a real thoroughbred.

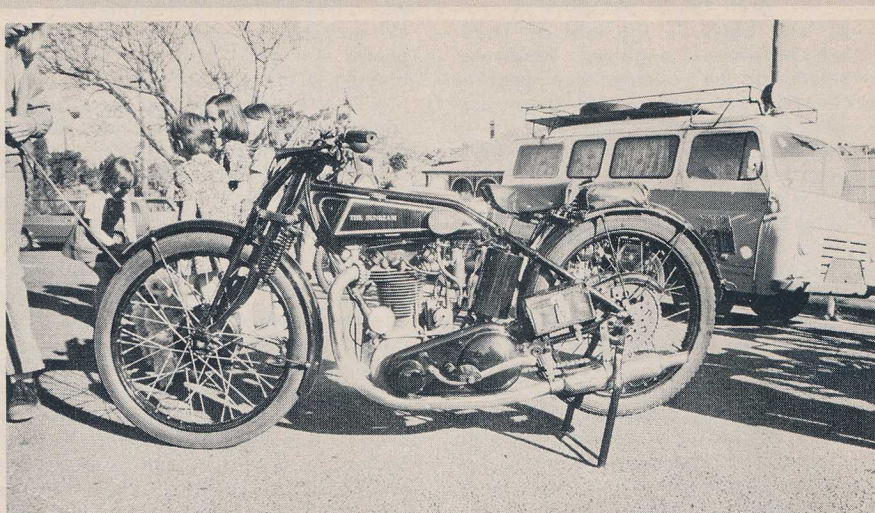
Sunbeam's first motor bicycle was designed by John Greenwood, and had a 350cm³ engine with a two-speed gearbox — with other sizes of proprietary engines soon becoming available. One of the employees was one Howard R. Davies, a lad of 18 who was mad keen on motorcycle racing, hill climbs and trials. He rode a V-twin JAP engined Sunbeam in the roughest reliability trial around then, the Scottish Six Days Trial — but the frame broke. This was not uncommon, and because the motor bicycle was such a frail and uncertain beast the English ACU carefully arranged its reliability trials to be run over easy gradients, not wishing to upset the manufacturers on whose support it relied. The hardy Scots had no such inhibitions and gleefully chose the worst goat tracks they could find.

The major road race was the Tourist Trophy race on the Isle of Man, which had been running since 1907. In 1911 the route of the course had been altered to a mountainous one over Snaefell. It was this more than anything else that doomed the belt drive, for belt-driven machines found it all but impossible to climb the steeper sections. It is more than likely that this factor influenced the decision by John Greenwood to use all-chain drive for his Sunbeams.

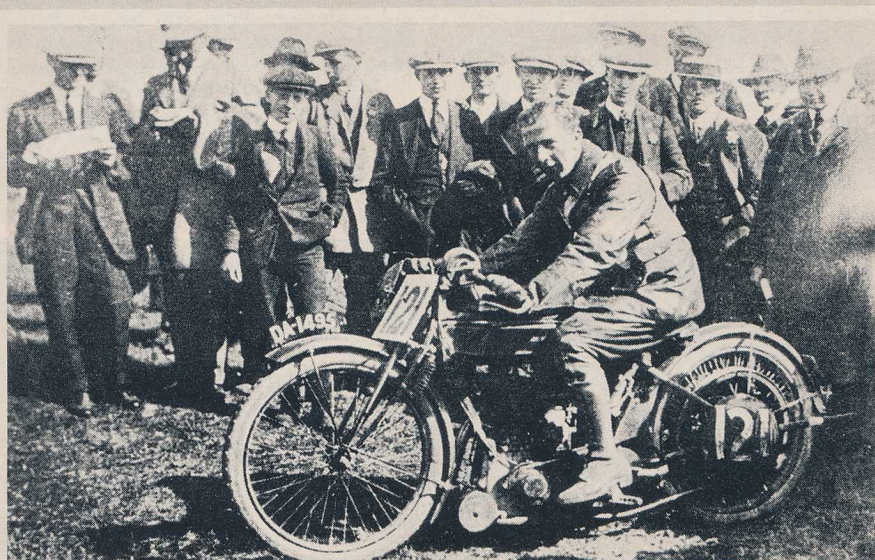
Davies was made the junior member of the Sunbeam TT team for the 1914 race, the last before the war. To everyone's surprise he came home in equal second place with Indian-mounted Oliver Godfrey, a very experienced rider. They were both seven minutes behind Cyril Pullin, Rudge, and for an inexperienced youngster HRD had done exceptionally well. But for the war he would almost certainly have continued as a works rider — and the HRD machines perhaps would have never seen the light of day.

In the hands of Nobel Industries the original Sunbeam concept was retained. One could easily say fortunately, but it is quite accurate to say that the period from 1919 to about 1926 was one of magnificent successes for the Sunbeams.

The side-valve 85mm x 88mm Sunbeam engine was a regular competitor in almost every form of motorcycle competition held in those days and gained a worthy reputation along with the many fine wins and Gold Medals. They started off in 1920 (the first year after the war when things were back to normal) in a manner which left no doubt they were in business and win! Tommy de la Hay convincingly won the Senior TT, with George Dance setting a new record lap speed, with William Brown in third position. All on Sunbeams, of course. Alec Bennett, a Canadian, looked all set to win — which would have given Sunbeam a one-two placing — but after leading on the fourth lap he missed a gear, which caused a valve to stretch. He continued



This magnificent 1927 500cm³ overhead valve Model 9 Sunbeam was restored and rebuilt by a member of the West Australian Vintage Club. The photo was taken during a lunch stop on the Mandurah Rally.



Howard R. Davies in 1914. The object wrapped around the handlebar is a spare inner tube; in those days they had time to stop and repair punctures!

Austrian Senior Tourist Trophy Race
held in the Weiner Wald, May 18th, 1923.

SUNBEAMS

finished
FIRST, SECOND, THIRD, FIFTH and SIXTH
and also
WON THE TEAM PRIZE

All the above were ordinary standard 492 c.c. longstroke Sunbeams as supplied to the public.

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A 1923 advertisement, after success in the Austrian GP.

but was only just able to hold fourth place at the finish.

What made that race of more than passing interest was the new engine the works team riders were using. Where the standard catalogued models had an 85mm x 88mm 449cm³ side-valve engine, the new power house was a lofty model indeed — 77mm x 105.5mm! A larger than standard oil tank was mounted on the seat pillar tube, with a mechanically-operated plunger type oil pump, located on the face of the magneto chain case. To back this up there was also a foot-operated auxiliary oil pump. Previously the petrol tank contained 1.1 litres of oil in a separate compartment, but in long races this quantity was found to be insufficient. The seat pillar oil tank, mounted on the near side, contained 2.2 litres and also helped keep the oil cooler.

The new engine was very tall; the clearance between the top of the overhead valve gear and the lower of the two top rails was less than 10mm!

Long stroke engines were the accepted way to go in the search for more power, then. Norton was just about to unveil its 79mm x 100mm ohv engine, later to gain the company its race winning reputation. Raleigh had its 496cm³ model with a bore and stroke of 79mm x 101mm, where most, such as Rudge, had a stroke of about 88mm

for the 500s. Consequently the 105.5mm stroke of the Sunbeam was the longest of the "conventional" engines, needing great long hollow pushrods too, for the cam wheels were set way down level with the main shaft.

With the advent in recent years of a strong move towards extremely high revs and an oversquare bore/stroke relationship the motorcyclist today has no opportunity to relish one of the delights of the old long stroke engines epitomised by the Sunbeam. Its spread of torque would be enormous by today's standards, giving usable power from the first tremble of the rev counter needle. Four gears were almost a luxury, for once in top gear these long stroke engines would trundle onwards, regardless of hills.

They were no slouches either. George Dance was a wizard at hill climbs and 400 metre sprints riding Sunbeams, with so many wins his name has become a legend. In 1921 Sunbeam was unable to repeat the 1920 Senior TT victory — its pre-war works rider Howard Davies had the cheek to win that with a 350 AJS — but Alec Bennett won the French Grand Prix with a record race time and lap speed, and Tommy de la Hay finished second, to give Sunbeams a one-two placing. The International racing calendar was more circumscribed than now — there was only the French and

Belgian Grands Prix in addition to the TT, and winning just one of them was quite a feat.

The factory decided to capitalise on the new 105.5mm stroke engines, listing them as "the Longstroke" in the catalogues, so snaffling Norton's nom-de-guerre, and bringing another word into our vocabulary. The press extolled the virtues of the longstroke too. Motorcycling magazine had this to say in 1921: "Although an aristocrat at its inception, the Sunbeam has been improved in many respects each year, its performance at the Isle of Man being a great benefit both to the manufacturers and their customers. Messrs John Marston Ltd, the makers, took a very wise step in introducing this sporting model for solo use, it being realised that the average dual-purpose 500 machine had been so strengthened and luxuriously fitted up for sidecar use that it was unnecessarily heavy for solo use. It is remarkable how weight has been saved on this model; when one first lifts the machine on to its stand one is surprised at its lightness, the weight only being 230 lbs (104kg).

"Weight has been saved in many ways such as omitting the kick starter, fitting ordinary coil-spring forks instead of the leaf spring variety, a lighter frame, smaller tank etc. At first we wondered if we should miss the kick

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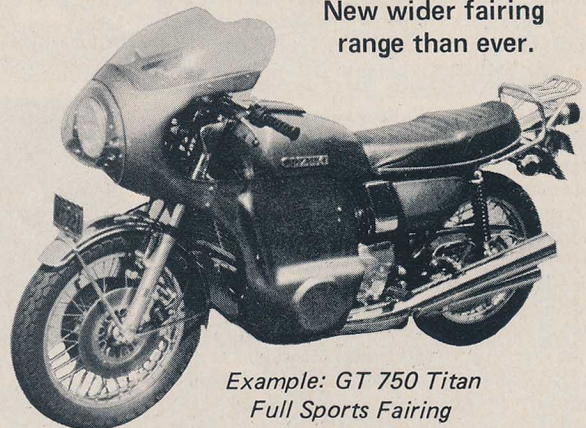
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start, but we soon found this to be a quite unnecessary fitting. The machine will start in a yard or two from cold (in middle gear) at a walking pace, and (when warm) it is easy to paddle off.

"After about 1500 miles' (2413km) experience with this machine we should say that the average rider could easily obtain a consumption of 100 miles per gallon (35.5 km/l). Over the rough and hilly Scotch roads we must have averaged about 90 mpg (32 km/l) during the week. The engine has a decidedly healthy kick, and the long tail pipe, fitted in place of the usual pattern of silencer, results in a pleasing bark.

"Actually we covered about 750 miles (1200km) on the machine before we found a hill which necessitated changing down into middle gear. As regards the Sunbeam's hill climbing capabilities, only really bad driving could possibly cause a failure. The steering leaves nothing to be desired, it being possible to ride the machine on good roads hands off, and the new type of forks, although light, are decidedly efficient. As regards the braking of the machine here again, it is not possible to find fault. It is delightful to have a front brake which can be operated with the left hand."

During 1923 a racing 350 overhead valve model appeared many times in the hands of George Dance, who used the season to experiment with both the 350 and 500 ohv models, with the larger capable of exceeding 144 km/h.

The first Amateur race held on the Isle of Man, for clubman riders not connected with the trade, was held in 1923, with Leslie Randles on a Sunbeam winning and he followed that by repeating the win in '24. And just to round things off the works team took first, second and third in the Austrian TT.

Then Graham Walker joined the firm. Later, Graham was for many years the genial Editor of Motor Cycling magazine, but one of his previous claims to fame was the Model 9 Sunbeam. This was the overhead valve version of the old sidevalve Longstroke, and it did more for the company's reputation than practically any other machine in their range.

Graham won the Swiss Grand Prix in '24, and it was this and so many other competition successes which made him so ideally suited, not only as a racing engine designer, but gave him a vast and experienced background for the position of editor of a motorcycle magazine. In that year Sunbeam took the best solo and sidecar performances in the 4000km German Six Day reliability trial; gained three Gold Medals and the team award in the ACU Six Days trial from only three entries; Alf Long won the 643km Durban to Jo'burg race in South Africa and Robert Francisquet won the Bol d'Or (yes, it was being held as far back as that) with a record distance of 2471km in the 24 hours, averaging about 100 km/h. Quite

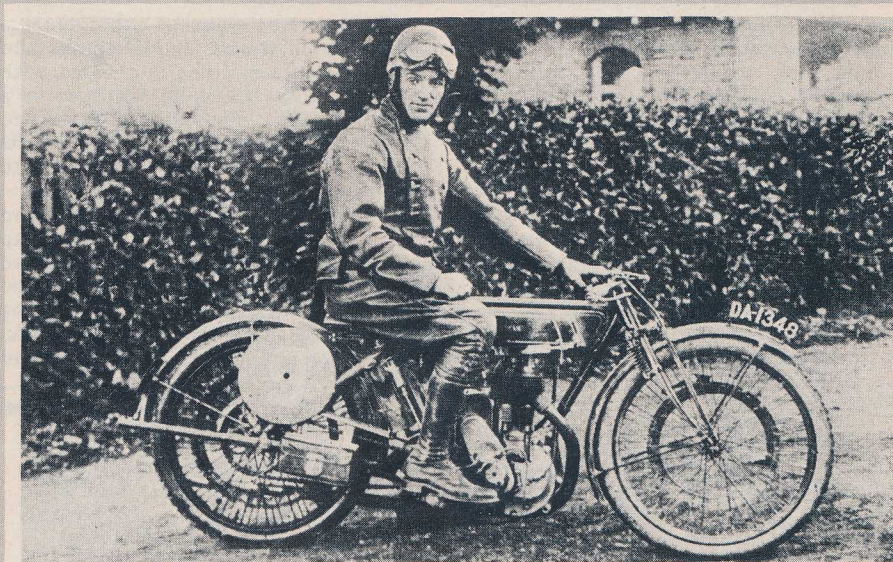
a season for Sunbeam!

At first ordinary coil springs were used on the new overhead valve engines, but later hairpin springs were found to be better and the three-speed gear box shell had a set of carefully designed four-speed gears fitted inside. In the world record sphere George Dance captured the 350 class one and two hour records at 129 km/h and 126 km/h respectively.

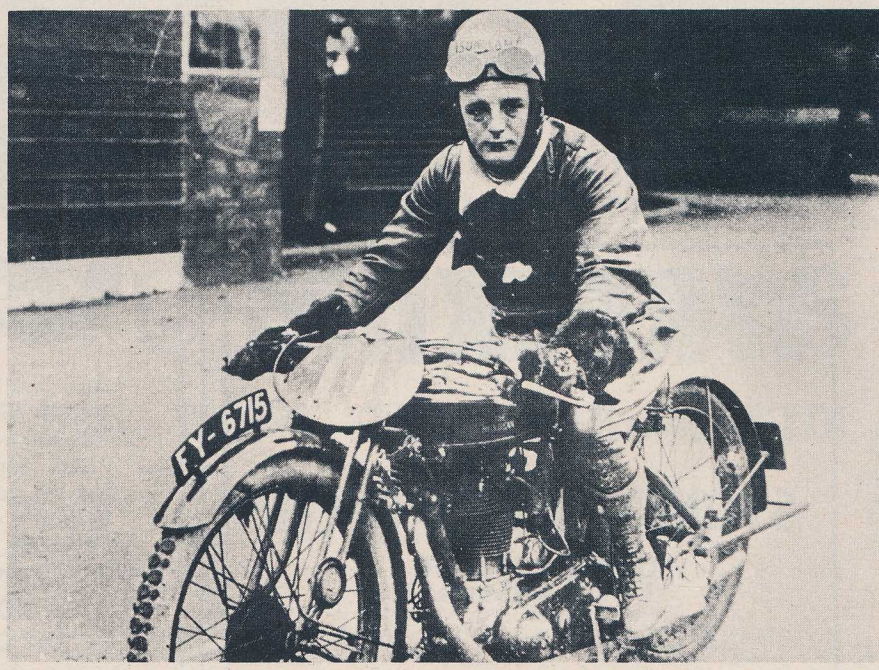
Graham Walker continued his long run of success, gaining a Gold Medal in all the 1925, '26 and '27 International Six Day Trials, with Sunbeam winning the Team Prize. He rode on both the Senior and Sidecar TTs in '25, using an overhead camshaft engine solidly based on the Model 9 Longstroke. It was still

early in its experimental stage then, using a shaft and bevel drive and Walker didn't finish either race.

Sunbeam used hairpin valve springs on this machine, thought to be the first time that these type of springs had been used in an Isle of Man TT race. Graham Walker's luck was not looking good though. In the sidecar race the handlebar broke on the second lap. But this was apparently a small inconvenience to a determined man in those days! Graham pressed on only slightly slower than before, but on the fourth lap while climbing Creg Willys hill a large boulder (the track was rough) dislodged by a spectator tumbled down and the remaining half handlebar just couldn't be persuaded to get the



Alec Bennett in 1921 when he finished fourth in the Senior Isle of Man TT. Note that the machine is road-registered — a racing requirement in those days.



Tony Howard after the 1924 Amateur TT races on the Isle of Man.

outfit out of the way in time! It smashed plumb in the centre, wrecking the machine. Not the fault of the machine, but it does illustrate the kind of road racing that went on back in the good old days!

About this time (1925) another youngster took the eye of the Sunbeam management. This was Charlie Dodson, a one-time apprentice at the Royal Ruby works, who had begun his racing career on one of his firm's machines mostly in sand races and hill climbs. He first rode in the Amateur TT in '24, when he came ninth overall on a 350 Sunbeam. (Between 1923 and 1927 the races were combined events; not until 1928 were separate races for Senior and Junior machines put on.) In 1925 he rode in the Junior TT on the same machine and finished eighth and after this promising start he was invited to join the Sunbeam works team for 1926. It proved to be a wise decision for Dodson was a remarkable rider, at his best when weather conditions were at their worst.

In the Ulster TT, where Graham Walker seemed to almost have a monopoly in winning (see the Rudge story, TWO WHEELS March), he was first on time in the 500 class and second on handicap, with team mate Tommy Spann second on time and fourth on handicap.

Charlie Dodson came third in the 350 class and a year later won it. To add to that he took a close second in the Swiss GP, while Graham Walker continued winning on his Sunbeams, taking the Grand Prix de Europe and so becoming the European Champion in the Senior class. In winning the Ulster GP in 1926 Charlie Dodson was both first on time and on handicap (a rare occurrence) at record speed, which was remarkable because there were showers during the race.

Dodson was a tiny man — he had to have his machines built down to size for him. The only difference between the catalogued Model 9 Sunbeams and the racers was simply that the racing bikes were painstakingly put together.

Charlie Dodson weighed only 54kg and his special machine had the saddle only 390 mm above the footrests. Both the '28 and '29 models were of the then conventional twin-port design, with the valves set at 90 degrees, with a compression ratio of just 7.5:1. The Sunbeam Model 9 was then one of the top racing machines of its time and although the bore and stroke had been changed from the old 77mm x 105.5mm to a more moderate 80mm x 98mm, the power and punch were ferocious. In the hands of men like Dodson they were all but invincible until the dark days of the depression.

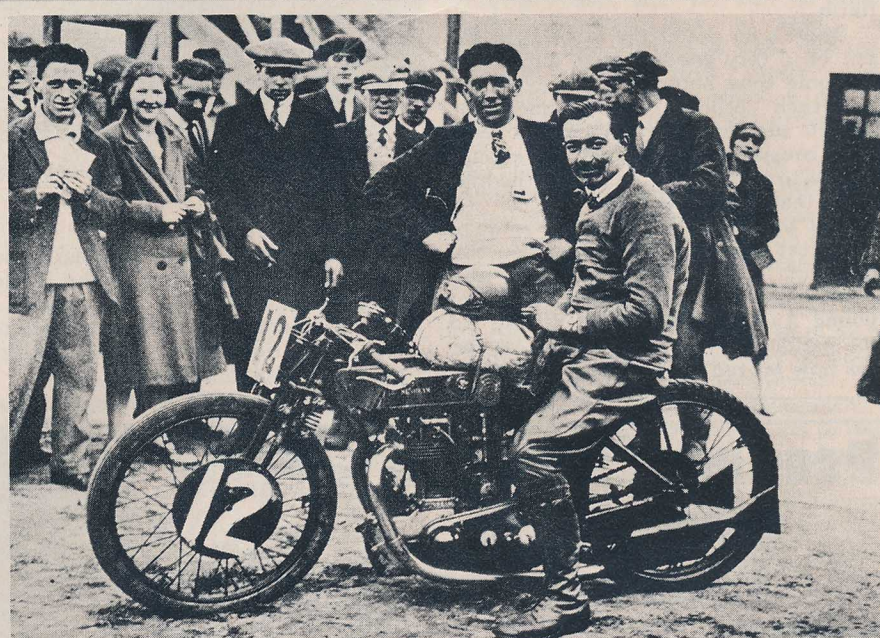
For the 1928 season Graham Walker had gone to Rudge as Competition Manager, leaving Charlie Dodson as the leading works rider, a position he was to vindicate in brilliant fashion. He won a dirty, filthy wet and foggy Senior TT,

when visibility was about a metre or two up on the mountain in the worst parts — to re-read that race report is to be gripped by horror as the stewards let it run its full course — and he won despite a crash which cost two-and-a-half minutes! Dodson also won the Senior classes of both the Belgian and German Grands Prix, but had to give best to Graham Walker in the Ulster Grand Prix, where Dodson finished second. He failed to finish in the '28 French GP, which would have given him a clean sweep of the Internationals, which included the TT, but in 1929 nothing could stop him. For Sunbeam he took all three magnificently. Undoubtedly one of his biggest assets was his light weight and

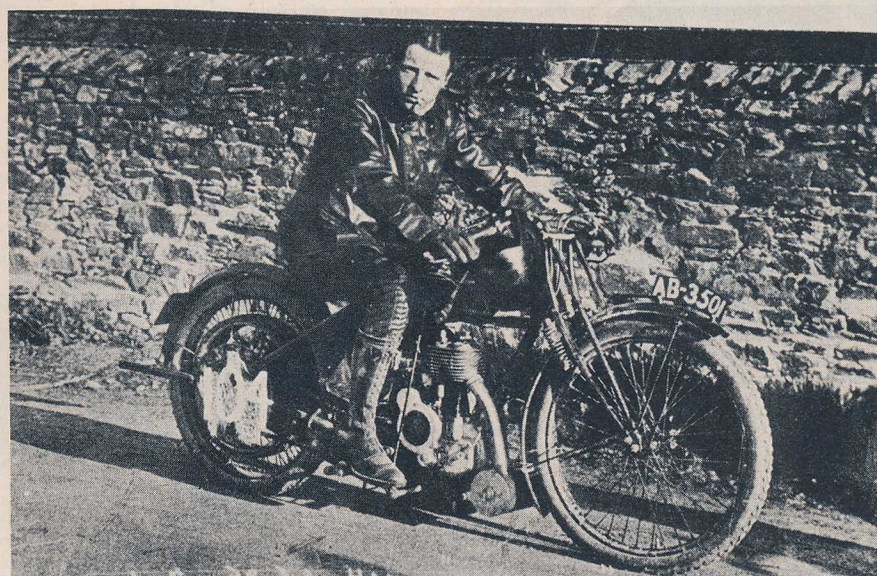
great strength, for he was able to pull a tooth or two higher than anyone else, so gaining a few km/h at the top end, just enough to give him the edge.

Shortage of finances curtailed Sunbeam's ability to carry on with more research for its racing machines and although the bikes continued into 1930 they were outclassed by other firms who had improved models and not long after the depression caused them to cease production.

Things began to look up a few years later and the newly formed Associated Motor Cycles group acquired the name from ICI and continued to make Sunbeams. But these later models were a far cry from the "proper" Marston Sunbeams. *



The later twin-port models retained the Sunbeam quality. This is Bob Gibson on one of the ohc machines after winning the 1927 320km solo race at Brooklands.



Tommy de la Hay after the 1914 TT.