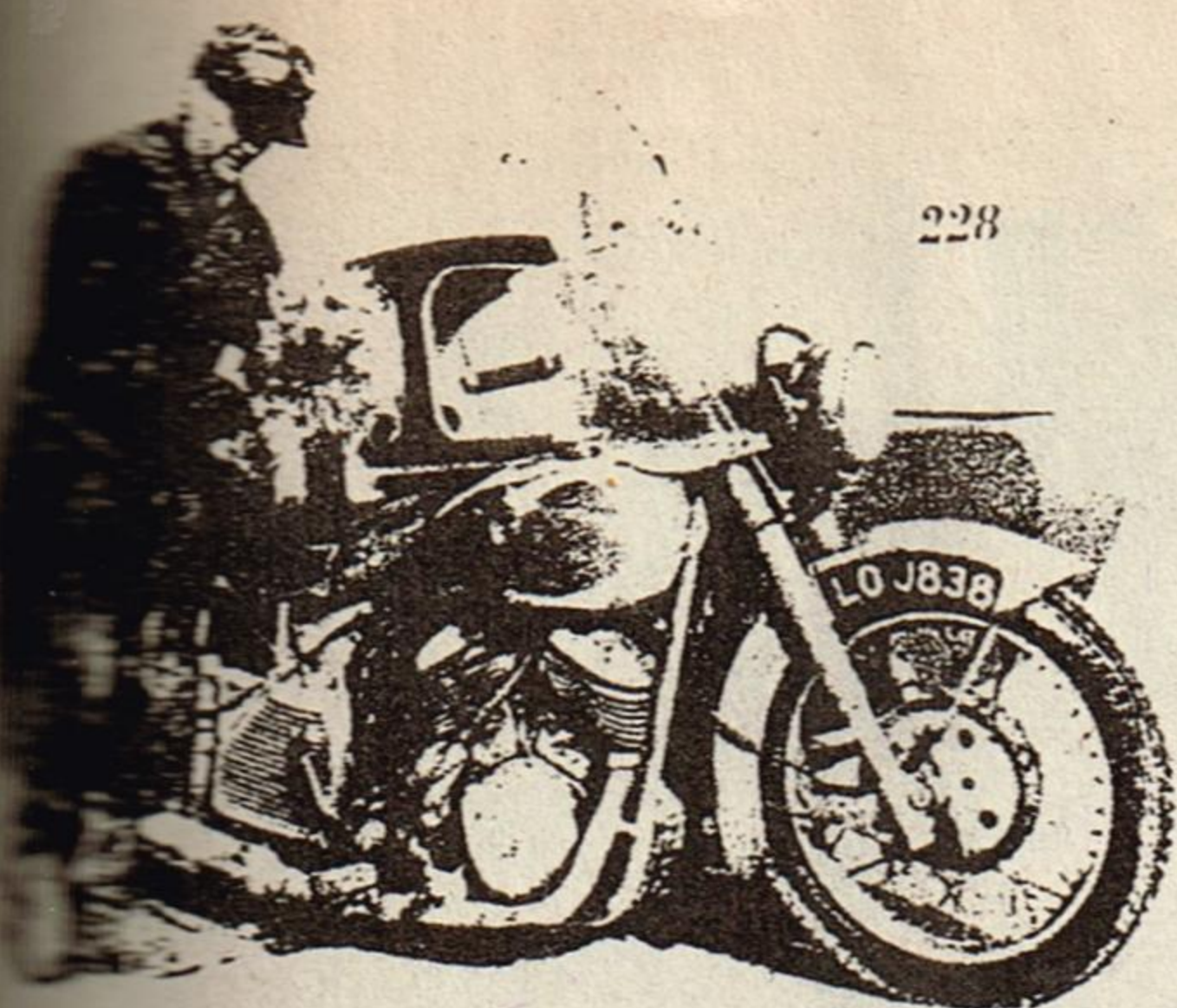


## BIG VEE-TWINS FOR SIDECARRING?

*The Search for an Answer Takes Vic Willoughby and Bill Banks on a Four-day Trip with the Watsonian Outfit*



ANY excuse is better than none for a few days in the saddle. And, though four days in February may not be the holiday-maker's choice for a coastal tour of Wales, no keen motor cyclist would spurn the opportunity for such a trip as an alternative to routine work. Especially is this so when the machine available for the tour is a prototype sidecar outfit, powered by a 996 c.c. side-valve vee-twin engine—a power unit of a type whose absence from the post-war British market is still mourned by many family-sidecar connoisseurs.

My underlying concern during the frolic (or, if you insist, my excuse for the trip) was to appraise the merits of the 1,000 c.c. side-valve twin for heavy-duty sidecar work. Is it true that this type of engine possesses characteristics which render it particularly suitable for family-sidecar duty and which are not provided by any other type of engine in current production? Or do the proponents of the side-valve thousand feel an exaggerated reverence for its charms? Are these folk committing the common human error of viewing the past through rose-tinted spectacles?

Undeniably, specific power outputs have increased since pre-war days. New multi-cylinder engine types have appeared on the market. Might not a modern, large-capacity vertical twin fill the gap left by the demise of the big side-valve vee-twin?

The especial fascination claimed for the side-valve thousand is its capacity for smooth, lusty pulling at low and moderate engine speeds—a power characteristic which prompted the coining of

adjectives such as “beefy,” “car-horse” and “steam-engine” in road-test reports. More technically described as high torque at comparatively low engine speeds, this quality means effortless top-gear hill climbing and acceleration.

Five years ago, convinced of the existence of a market for the big-twin sidecar outfit, Ron Watson, chief of Watsonian Sidecars, planned to go into production with complete outfits. Adequate braking, springing and tankage were other requirements of the proposed layout. Design and construction of a prototype outfit were entrusted to Tim Reid, now on the design staff of the B.S.A. concern. Unfortunately, plans for production had to be abandoned because J.A.P.s were unable to supply the required power units; but the prototype was the outfit used for my recent trip.

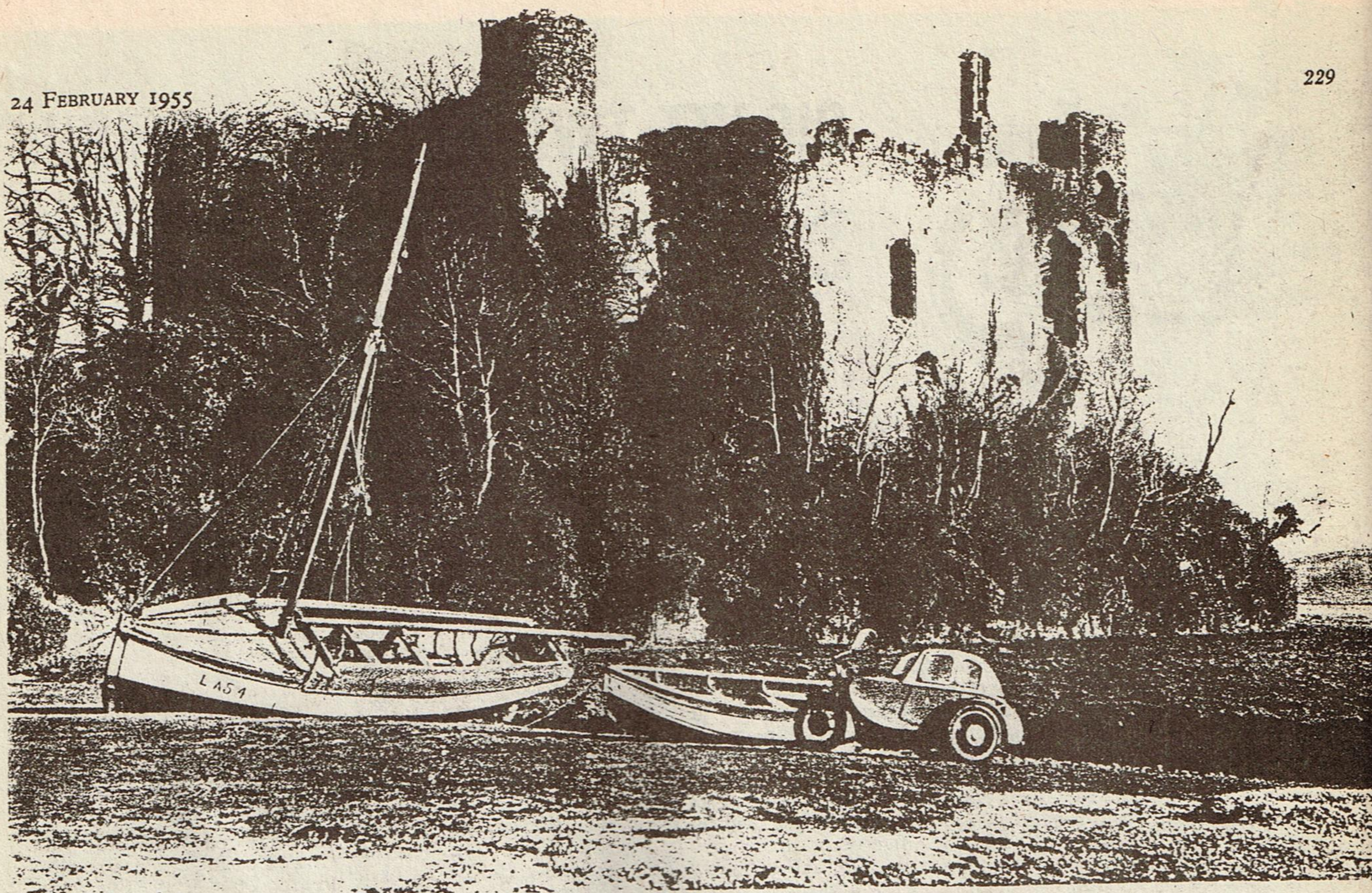
The engine of the outfit is also a prototype—a 996 c.c. J.A.P. 50-degree side-valve twin, with light-alloy cylinder heads and coil ignition; an A.C. generator is housed in the timing cover. The arc-welded frame incorporates plunger-type rear springing, while the front fork is a Dunlop unit employing rubber in compression as the springing medium. (Pivoted-fork wheel suspension, front and rear, was envisaged as the ultimate development.) Identical twin-leading shoe brakes were built into the full-width front and rear hubs. The rear-wheel unit was wrecked through faulty assembly during early tests and was replaced by the present Girling hydraulically operated brake.

Fuel-tank capacity is five gallons, while the ribbed, light-alloy

*Typical of the beautiful scenery in which North Wales abounds is this view from the road which skirts the coast of Tremadoc Bay in Merioneth. Sparsely wooded hillocks and placid waters make an enchanting scene, even in February*







The road from St. Clears to Pendine passes through Laugharne, at the mouth of the River Taf. There, these 13th-century castle ruins provide a fitting background for the boats and the Watsonian outfit

oil container, slung low alongside the rear wheel, holds one gallon. The battery is quickly detachable without the use of tools, and an ingenious footrest mounting furnishes an unusually wide range of adjustment.

When the outfit came into my hands it carried one of the latest Watsonian Albion single-seat saloon bodies. The resiliently mounted sidecar wheel embodied a brake and full-width hub. Weather protection for the driver comprised a Feridax windscreen with one-piece moulded Cobex hand shield.

The cacophony of assorted noises which assailed my eardrums when first I trundled the outfit home indicated that hard work rather than religious maintenance had been its chief lot during its five years of service. A weekend was devoted to maintenance and repair—a task which included restoring correct clearance to all four valves, eliminating air leaks in the induction system, curing blowing cylinder-head joints and fitting terminals and washers to the sparking plugs and caps to the tyre valves in addition to effecting routine adjustments to brakes, chains, controls and riding position. So heavy was the accumulation of silt in the float chamber and in the U-pipe connecting the tank halves, that I was tempted to seek a quotation from the local sand and ballast merchant! Shortcomings in detail design, such as the absence of a reserve fuel tap and of any stands, reflected the early stage of the outfit's development, for "riders' points" were to have been one of the principal attractions of the production models. Notwithstanding the amount of work I put in on the outfit, I took the precaution of packing nearly every tool I possess into the Albion's capacious boot as an insurance against mechanical trouble on the road!

London basked in bright sunshine—an early foretaste of spring—as the outfit rumbled northward over Lambeth Bridge. Even the sonorous notes of Big Ben, striking 11 a.m., seemed to have assumed a joyful tone. My passenger (photographer Bill Banks) insisted on removing the hood of the sidecar and letting in great gusts of invigorating fresh air. Together we revelled in the unaccustomed favour of the weather gods while, to the discordant strains of "Because" from the driver and snatches of Puccini from the passenger, the big twin struck west along A40.

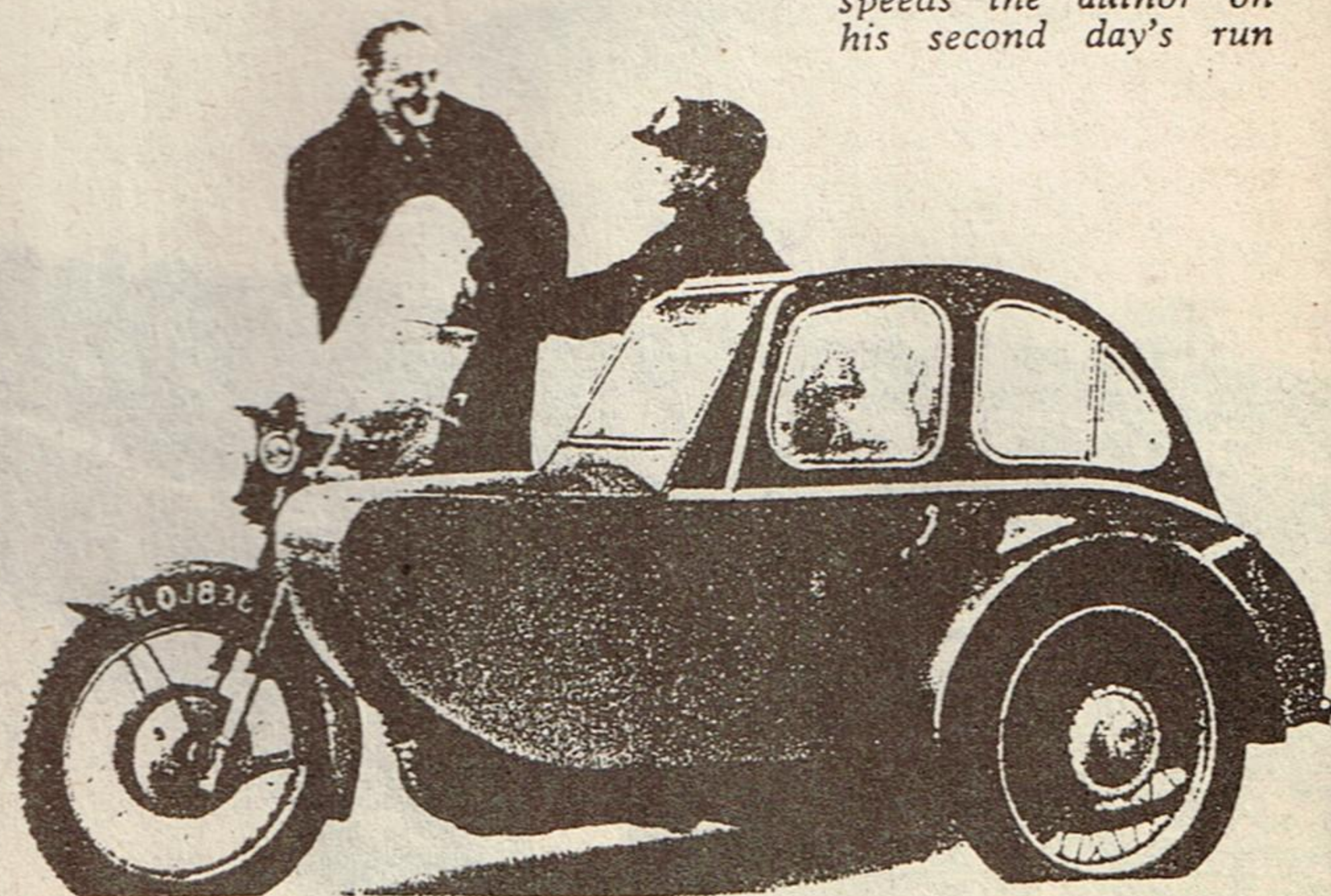
We had planned no rigid itinerary but felt that a ramble round the coast of Wales would test the outfit's appetite for hill climbing, while providing us with interest of a scenic and historic nature. For Wales is a land of contrasts: a land of age-old, wild and

natural beauty in the north; a land rich in the ruins of medieval castles; a land still bearing, in the south, the ugly scars of the industrial revolution.

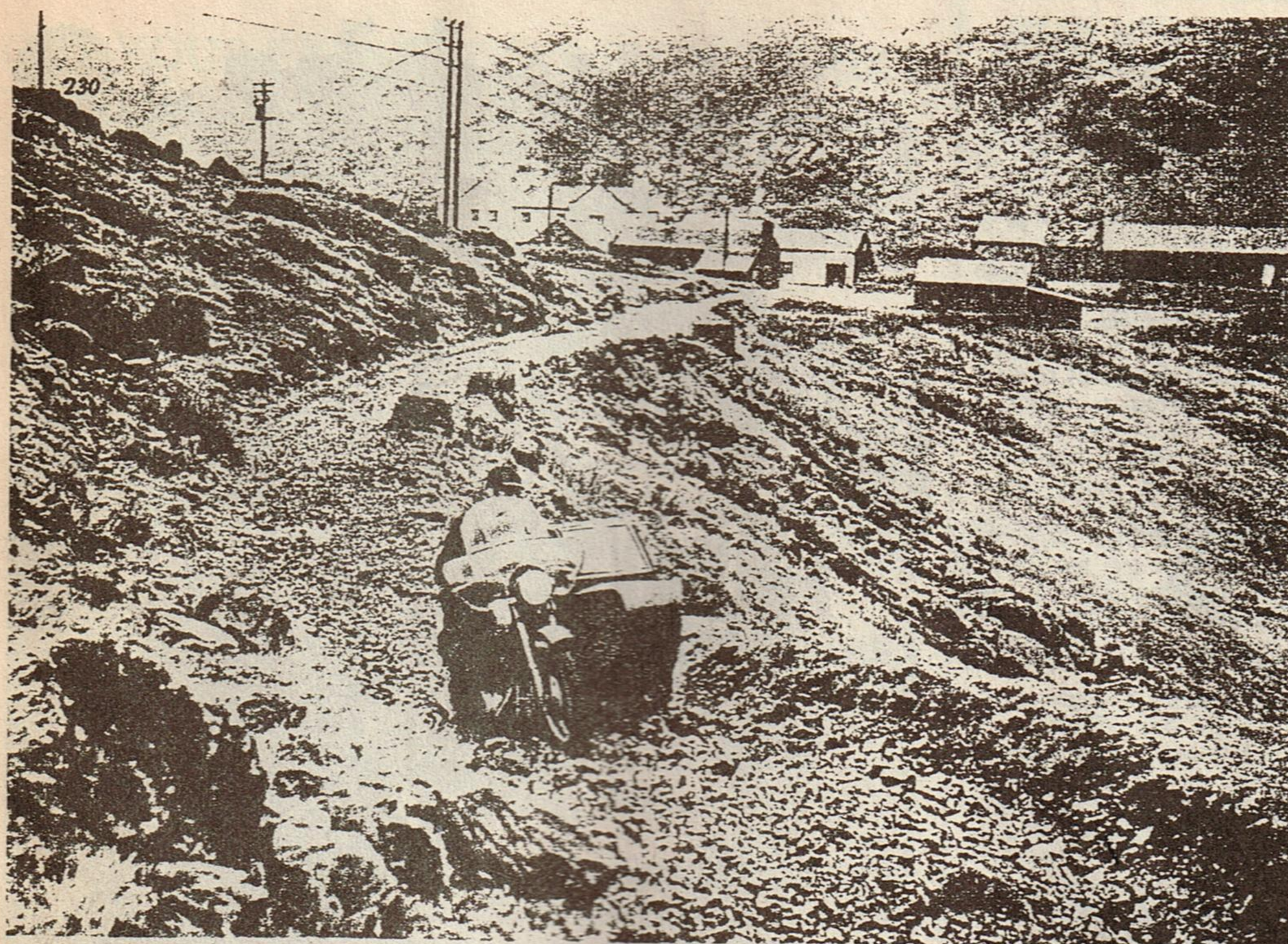
It was soon apparent that it would be difficult to back my assessment of the outfit's potential with cold figures, for the gear box-driven speedometer made no secret of its inaccuracy. Whenever I kept station in a law-abiding queue of city traffic, the instrument registered an irreligious 38 m.p.h. while, under favourable conditions on the open road, the outfit quickly attained an indicated 83 m.p.h. with throttle to spare—a speed which I estimated to be between 65 and 70 m.p.h. Under normal main-road conditions, the engine was quite happy with the speedometer needle hovering between 70 and 75 m.p.h.—probably some 10 m.p.h. less in terms of true speed. In forming my conclusions, I also had, in fairness, to disregard the well-worn condition of this particular outfit and concentrate on the inherent potentialities of the type. Tim Reid assured me that when the outfit was first built it was delightfully sweet to drive.

When we stopped for lunch at Oxford, the trip recorder showed

*In Neath, Fred Rist speeds the author on his second day's run*







*The track leading up Snowdon from the highest point of the Llanberis Pass. The outfit was brought to a standstill on rock outcrop farther up the path*

116 miles from Dorset House—nearly twice the actual distance. A different prospect greeted us when we took to the road again after lunch, for the sun was hidden behind dark, ominous clouds. As if in sympathy, the engine immediately developed an intermittent misfire, denoting partial obstruction of the jet. I decided to carry on, in the hope that the obstruction would clear itself, provided our cruising speed was not reduced below a speedometer 60 m.p.h.

Alignment of the outfit, carried out by Munday's of Brixton, proved to be excellent. Steering was positive and cornering as light as could reasonably be expected having regard to the laden weight of the outfit. For, though the sidecar was of the single-seat variety, our all-up weight was high. The machine had been constructed with scant regard for lightness and the sidecar contained not only our personal kit for four days and a considerable weight of tools, but also a spare two gallons of petrol and Bill's extensive photographic equipment. The thick grips on the 1 1/2-inch diameter handlebar were cumbersome and the brakes required heavy pressure. Banks told me the sidecar springing was reasonably comfortable, but I found the front and rear springing of the machine decidedly firm. The engine pulled vigorously and smoothly at low speeds in top gear—a fact which I appreciated especially because transmission in the indirect gears was noisy and not particularly sweet. Acceleration from low speeds was effortless.

The sun broke through again for a brief while as we threaded our way out of Cheltenham, but it was a despairing effort, for, entering Gloucester, we saw the cathedral silhouetted against a backdrop of angry storm clouds. It was in Gloucester that we first picked up the route used by C. E. ("Tich") Allen during his coastal tour of Britain with a 646 c.c. Ariel Huntmaster outfit last May. Our destination for the first night was Neath, which we intended to reach by Allen's route via Chepstow, Newport, Cardiff and Bridgend. But no sooner had we crossed the River Severn than a road patrol advised us that Chepstow Bridge was closed for repairs. This necessitated a detour further inland by way of Monmouth, Abergavenny and Merthyr Tydfil.

Before we resumed our journey on the alternative route, Banks replaced the hood on the sidecar, for the threatened rain had begun to fall. We turned left on to A4136 and I was relieved to note that the misfire was no longer in evidence, for the road soon began to climb. It was then that I started to appreciate to the full the particular virtues of the side-valve thousand for, without fuss, the big twin slogged up long gradients in its top gear of about 4 1/2 to 1, down to a speed of 25 m.p.h. if required. We arrived in Monmouth in time to see a procession of mud-plastered schoolboys struggling up to the road from the banks of a filthy-looking River Wye; evidently the boys were enjoying the uninhibited joy of a cross-country run.

The 17 miles to Abergavenny were covered in teeming rain with the surrounding hills shrouded in thick mist. On arrival in the town we felt we had earned a stop for a hot drink. But worse driving conditions were in store. We found the high mountain road to Merthyr Tydfil badly potholed and completely awash in many places. A strong southerly wind drove lashing rain horizontally across our path. Altogether, in the failing light, our surroundings presented a bleak, unfriendly picture.

Merthyr's steep streets were streaming wet and inhospitable and, as we embarked on the last stage of the day's run, rain continued to fall with unrelenting force. On the descent to Glyn Neath we ran out of fuel (we had thus averaged about 40 m.p.g. driving fairly hard) but were able to coast for some distance down into the Vale of Neath before stopping to replenish the tank from our spare supply.

In Neath we called on Fred Rist, well-known sand racer and trials rider. Rist was busy attending to the needs of his customers but soon the hospitality and helpfulness which are characteristic of the man were placed at our disposal. Our clothes were dried, the outfit garaged and we were taken to a comfortable hotel.

The following morning, after breakfast, I raised the screen an inch or two, replaced the sparking plugs as a precaution after the earlier jet obstruction, and cleaned the jet well. We then set out in the direction of Carmarthen. Despite pale sunshine, the first part of this run could not be described as anything but depressing. Road surfaces were extremely poor, signposting very sketchy. Tall smoking chimneys of steel and tinplate works did nothing to relieve the drab, colourless aspect of the industrial area.

Soon our route led us into a prettier environment. At Llanelly we again joined Allen's route. Our outfit continued to make light of long main-road drags. In fact, at that stage, I was more concerned for the outfit's braking powers on long descents. At St. Clears we decided to turn south for a glimpse of Pendine sands.

It was 16 months since Banks and I were last on the famous shore. On that occasion the echoes had awakened to the thunderous roar of George Brown's 998 c.c. racing Vincent twin as both George and I had recorded 150 m.p.h. over a measured half-mile. The exhaust note of the J.A.P. was as a feeble sigh compared with the voice of the Vincent, and the fastest thing on the beach on this occasion was a mongrel dog who dashed to welcome us at some 4 m.p.h.

The road out of Pendine climbs nearly 500ft in less than a mile. With a hoarse, throaty crackle the J.A.P. romped up the slope as only a thousand can. Our route lay along the coast of St. Bride's Bay to St. David's, proudly claiming to be the smallest city in the United Kingdom. There we inspected the extensive ruins of a 13th century Bishop's palace.

After lunch we found the road to Fishguard strangely flat. North of Aberystwyth the country became more wild and the



scenery changed to rounded hillocks. Between Machynlleth and Dolgelley our road twisted along the beautiful Tal-y-Llyn valley with the Cader Idris towering on our left. Great black piles of slate on the hillside bore testimony to the nature of the quarries at Corris. Dusk was approaching when we dropped down to Dolgelley for tea.

By this time I had discovered the secret of fully efficient braking on the Watsonian outfit. First depression of the brake pedal (controlling both rear and sidecar brakes) caused the outfit to slew slightly to the left. Another application of the brakes within a short space of time produced straight-ahead retardation, while a third stab at the pedal produced a slight bias to the right but much more powerful retardation. The sidecar brake, being cable-operated, was consistent in its response to the control but the results obtained from the hydraulic rear brake improved if the pedal was "pumped." Evidently a gland was below par. The front brake, too, was not wearing out at the rapid rate I had assumed from the frequent need for adjustment. The cable adjuster was slackening itself off and a turn or two of insulating tape effected a cure.

A tortuous run alongside the Mawddach estuary brought us to Barmouth, where we stayed the night. Drizzle was falling as we set off next morning along the narrow, rock-flanked road through Llanaber, with broad expanses of golden sand on our left. Though the sky was overcast, we were soon relishing the most fascinating scenery of our trip—scenery which was unmistakably North Wales.

The serpentine road twisted and turned on its way to Penrhyn-deudraeth and Beddgelert till one's sense of direction was awry. Up and down the Vale of Ffestiniog we zig-zagged among a multitude of rocky hills and tumbling streams. A kaleidoscope of sparsely wooded slopes, small lakes and rocky heights brought feelings of wonder and desolation.

Eventually, our road levelled across broad plains as we neared Caernarvon, and the weather brightened temporarily. We took the Llanberis Pass for Snowdon. Immediately the country became austere and grim. The extensive slate piles alongside Llyn Padarn and Llyn Peris gave way to towering rock formations as we climbed steeply through low cloud. The relentless gradient and innumerable twists brought out the best in the big engine. Requiring a minimum use of the gear box, it hauled its load lustily upward, responding manfully to mere "wafting" of the throttle. We lunched at the isolated Gorphwysfa Hotel at Pen-y-Pass, the highest point reached by the road. After our meal we decided to explore the bridle path, in an effort to climb still higher, but within half-a-mile found that the limited ground clearance of crankcase and sidecar chassis brought us to a halt on the rock outcrop.

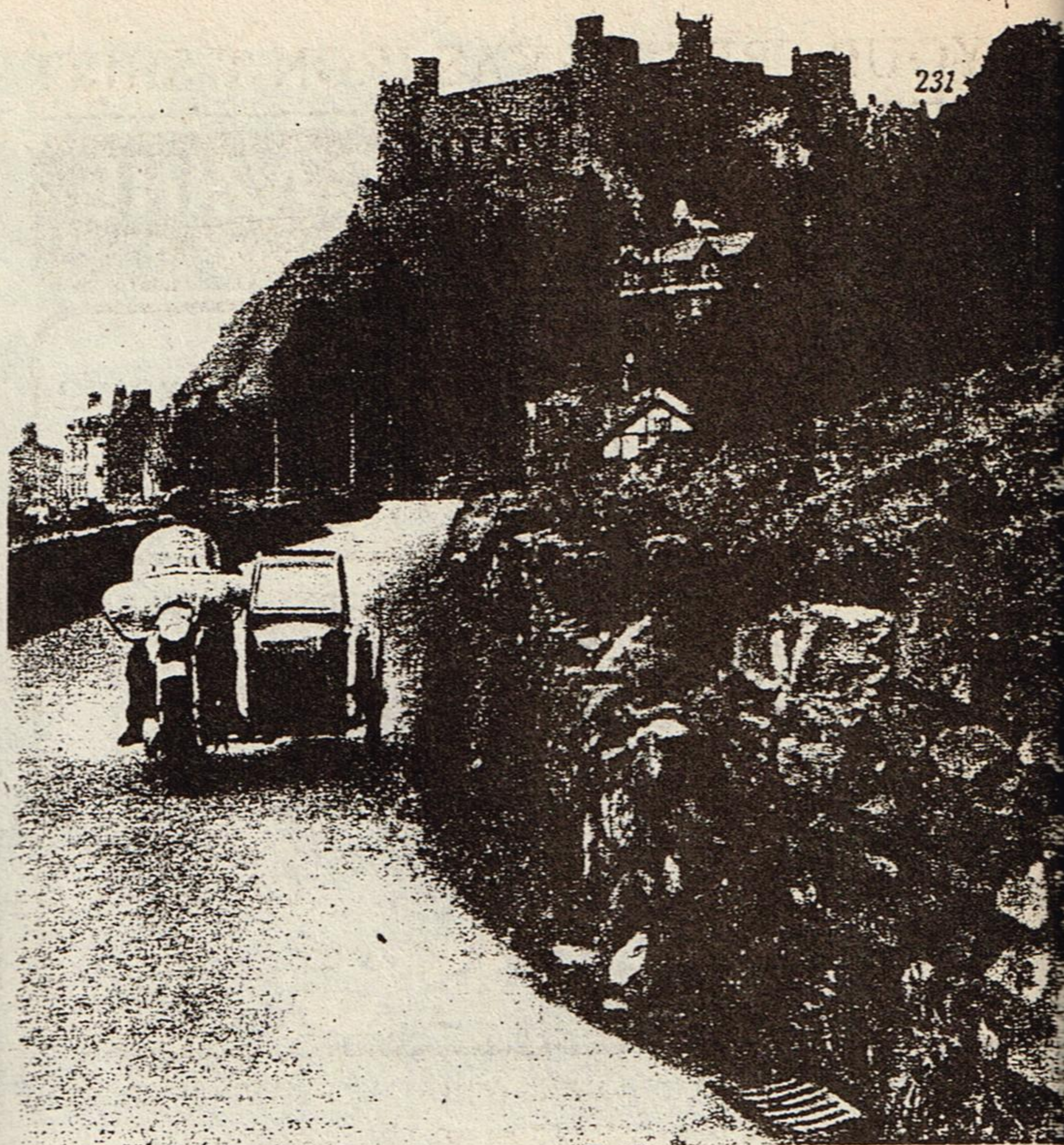
### Back to Fast Cruising

A couple of readers of *The Motor Cycle* appeared from nowhere and helped us to turn the outfit round and we regained the road. From there it was a downhill run to Capel Curig, whence the broad sweeps of A5, flanked by evergreens on the surrounding slopes, led us to Bettws-y-Coed.

We were then able to resume our main-road cruising speed of an indicated 70-75 m.p.h. on the run to Corwen and Llangollen. Suddenly, the engine spluttered and died. I eventually discovered a severed earth lead on the distributor body beneath a mass of improvised waterproofing. The defect repaired, we pressed on to Shrewsbury and Wellington. There we called on Bill Doran and Matt Wright, erstwhile members of the A.J.S. factory racing organization. We found the partners working very hard to consolidate their business. At least, Wright was working, while Doran, displaying a snow-white coat and a beaming smile, was dispensing petrol to a seemingly endless queue of vehicles! Later that night, we reminisced into the early hours over one of Mrs. Wright's delicious suppers.

Our final day's run brought us into Birmingham for lunch with Tim Reid, creator of the Watsonian outfit, followed by a diabolically wet trip to London.

What, then, of the side-valve big twin for heavy-duty sidecar work? Is there a market for an outfit powered by such an engine? There is no denying the attraction of the engine's effortless low-speed pulling and hill climbing and the easy way in which it lopes along on a high top gear. However, there are vertical twins of over 500 c.c. which have comparable power outputs, and torque characteristics somewhat similar to those of the side-valve big twin. Unquestionably the latter type of engine exhibits better

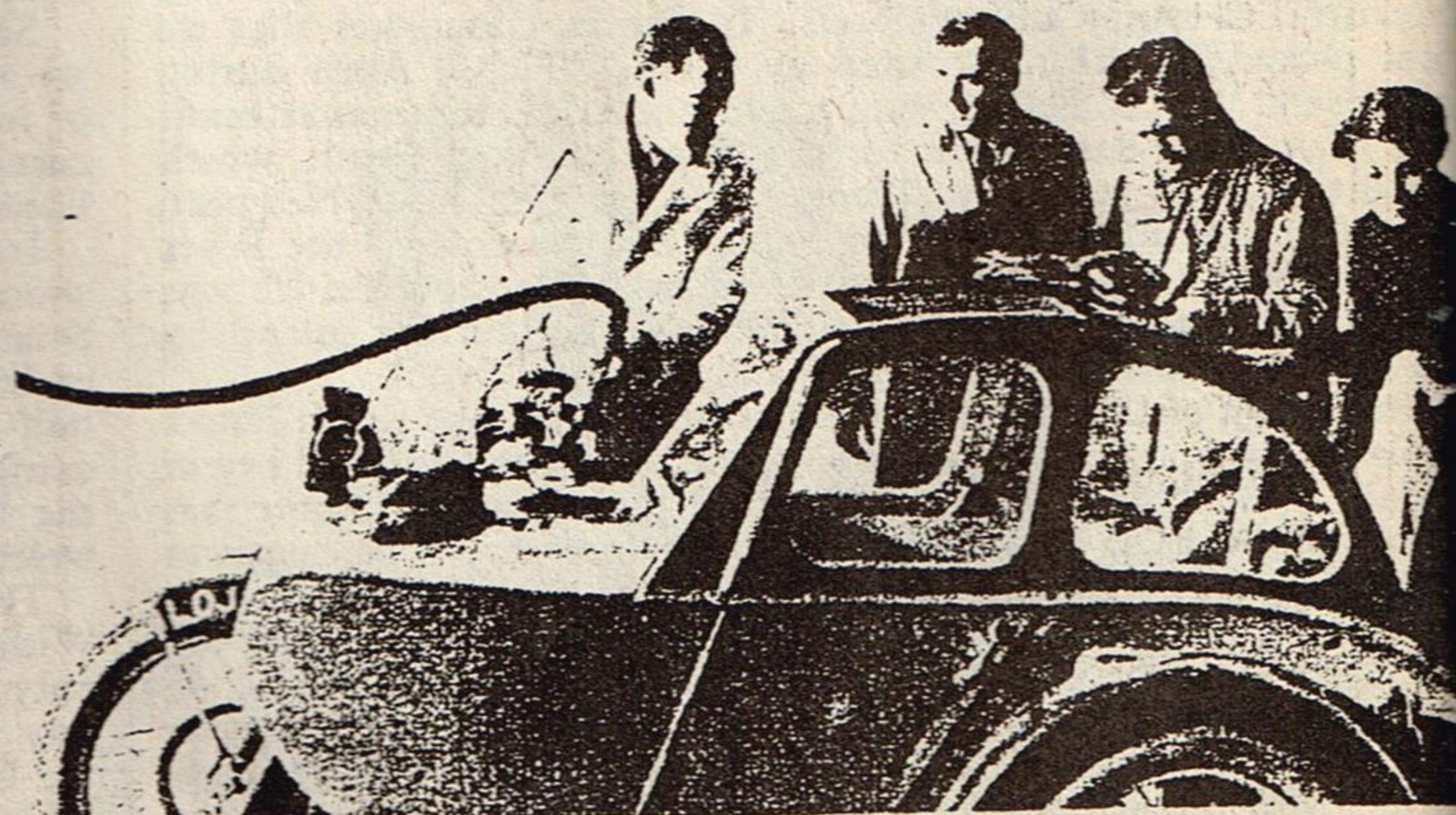


Ancient and modern. More than seven centuries span the origins of Harlech castle and the Watsonian outfit

low-speed effortlessness and pulling power than does the large-capacity vertical twin.

Another fundamental advantage enjoyed by the vee-twin is the hefty pair of flywheels which can be accommodated in its crankcase—a feature which contributes largely to the engine's smooth low-speed running. In contrast, the conventional vertical-twin crankshaft layout imposes a strict limitation on the size of an internal flywheel. Because of the larger capacity and higher gearing of the vee-twin, it would not be unreasonable to expect it to score in the matter of longevity.

On the other hand, because large numbers are made, vertical twins are probably cheaper to produce; and under almost all conditions of usage, they are likely to be more economical on fuel. I feel that many sidecarists must find the large-capacity vertical twins quite suitable to their needs, but I have no doubt that there is a restricted, select market among sidecar connoisseurs for the side-valve thousand. The demand would no doubt be higher if a proprietary unit could be produced at a competitive price and if the design incorporated the very latest in cylinder-head layout schemed for greater thermal efficiency or, more specifically, improved fuel economy. On the whole, I come down in favour of the 650 and 700 c.c. vertical twins. What are the views of present-day family sidecarists, especially those who have used both types of engine for their travels?



Ex-road racer Bill Doran dispenses petrol with a practised air, while Matt Wright and his wife appraise the outfit