

# **TIMELINE OF MOTOR CYCLING**

## **Volume Nine**

**1940- 1944**



**Compiled & edited by  
Dave Richmond**



Compiled, edited and written by Dave Richmond  
[motorcyclimeline.com](http://motorcyclimeline.com)

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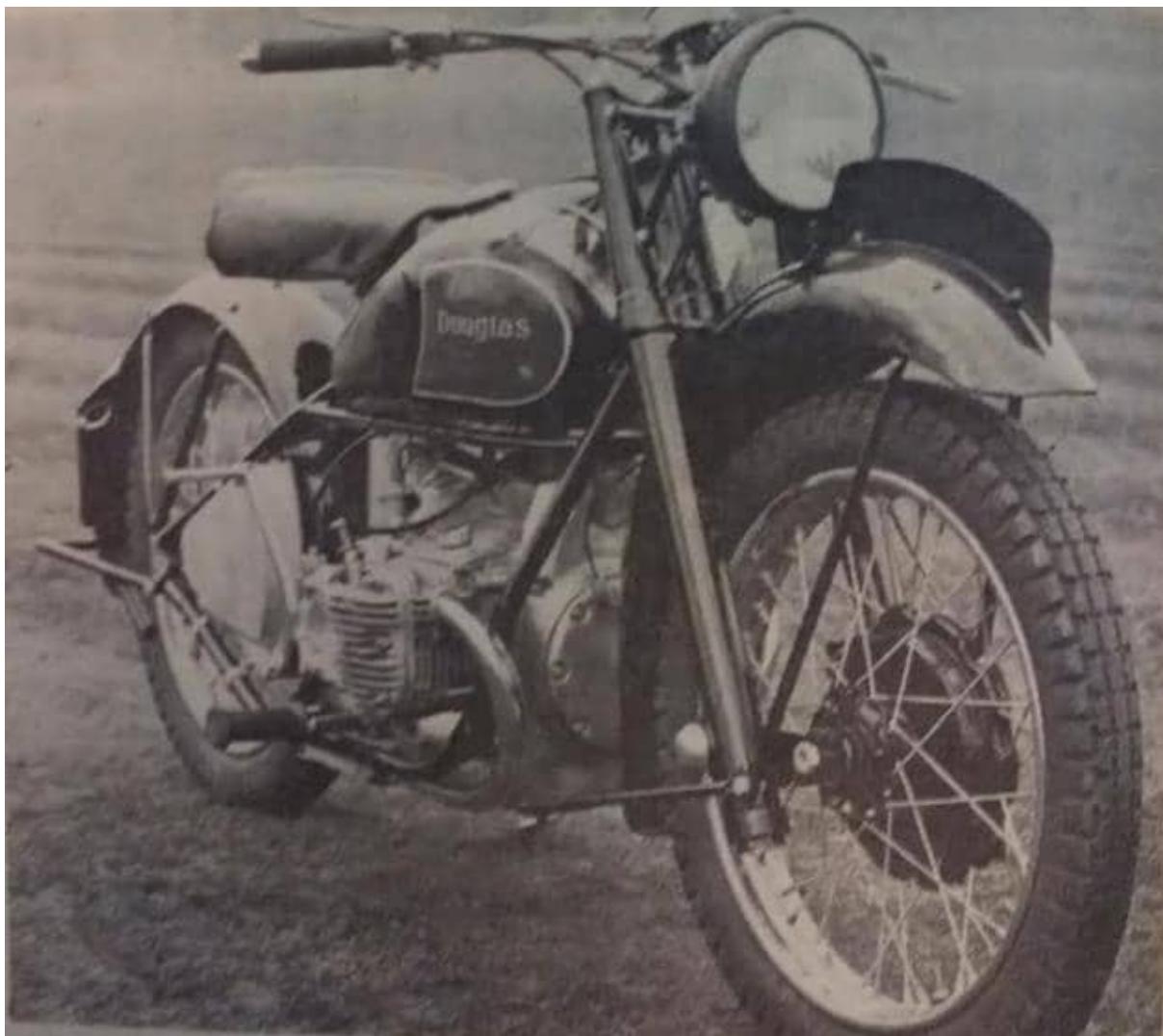
**[motorcyclimeline.com](http://motorcyclimeline.com)**



1940

NOT A FACT BUT A WHIMSY, courtesy of *Motor Cycle* technical editor Vic Willoughby who, in a 1969 technical review of the blown Beemer that carried Georg Meier to victory in the 1939 TT, suggested: "Had the war been averted the 1940 Senior TT must have been one of the most thrilling ever, with supercharged multis entered by BMW, Gilera, Velocette and AJS, and probably by DKW and NSU too."

ALL ROYAL NAVY DRs were women, mainly riding 250c BSA C10s and 11s and 350cc Triumph 3HVs and Royal Enfield WD/Cs. Of the 303 women who died on active service during the war, a third were DRs.



DOUGLAS CAME UP with a 600cc sidevalve flat-twin military model. It didn't go into production but served as a basis for the spring-frame ohv 350cc post-war model.

THE LUFTWAFFE DESTROYED Triumph's Coventry base where production had started on a batch of 50 lightweight (247lb) 350cc twins for the Army.

FROM THE AUSSIE *Daily News*: "When his motorcycle and sidecar outfit struck a straying cow at Belmont early today 34-year-old Arthur McIver Ball, patrolman of the

Royal Automobile Club, received severe injuries. A St John ambulance took him to Perth Hospital, where he was admitted suffering from a fractured skull. His condition was later reported to be very fair. It is understood that Ball had been called out to give help to a stranded motorist. He was travelling east along Great Eastern-highway and just near the corner of Norwood-street collided with a black cow. The motorcycle and sidecar overturned and Ball was thrown to the roadway. The cow was not seriously injured."

LIKE THE NAZIS, The Japanese military government had taken control of industrial production. It named Tohatsu as the sole supplier of small petrol engines.

THE ARIZONA HIGHWAY Patrol acquired 10 1,000cc Crockers which was bad news from speeders as the Crocker was, probably, the fastest production motorcycle on the planet.



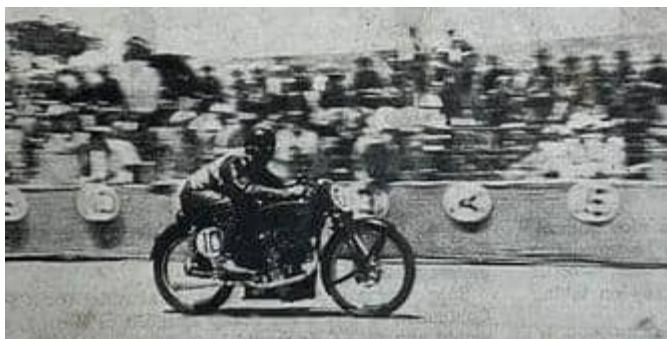
Al Crocker with factory rider Sam Parriot at Muroc Dry Lake. No wonder they look so pleased with themselves; Sam had just done 136.87mph.

A HUGE NUMBER of WD bikes were lost in the evacuation from France so emergency orders were placed with all the major manufacturers. The War Office also snapped up civvy models from factories and dealers; thousands more were donated by patriotic enthusiasts. Harleys and Indians began to arrive from the US under the Lend-Lease programme.

VELOCETTE PRODUCED the MDD, a military version of the MAC ohv 350 with a lower compression ratio and a cylindrical silencer that offered greater ground clearance than the famous fishtail. A consignment produced for the French government was acquired by the War Department following the fall of France.

MATCHLESS ALSO modified a pre-war ohv 350 for military use. The G3 became the G3/L (Lightweight) and was noteworthy for its use of Teledraulic oil-damped telescopic forks.

FRANK MUSSETT, service manager of Australian Velocette, AJS, Scott and Wolf importer Stillwell and Parry travelled 2,000 miles from Melbourne to Albany in West Australia for the Australian TT. (The Aussie ACU ran an annual lottery to decide which state would host the national TT.) He took a brace of cammy Velos with him and rode them to victory in the 75-mile Junior and 100-mile Senior races. Musset's Junior time was 70min 20sec, 4½min ahead of the runner-up. He won the Senior in 1hr 30min.



Frank Mussett passes the pits on his way to winning the Australian Junior TT.

“ONLY THOSE WHO have competed in both periods can appreciate the difference between our sport in its present-day form and that which it enjoyed prior to the summer of 1925, when speed events on the public highway were banned by law. In our opinion the decreased popularity of motorcycling can be traced to that enactment, because it is the sporting appeal which is the motorcycle's greatest asset and the competitions of to-day do not attract the majority of riders. whereas those of the pre-1926 era definitely did so. After the war this country will owe a great debt to its motorcyclists. After the war, too, there should be—indeed, must be—a great road-building programme. Many suitable hills and straight stretches will be by-passed by the new arterial highways and it would be a fitting recognition of our services if the law permitted such disused sections to be closed for organized competitions on suitable occasions. Probable? No! Possible? Yes!”

“THE MINISTRY OF Transport figures of fatal accident statistics for the month of August, 1940, are of great interest because they are compared with those for the corresponding period in 1939—the last month of peace. Unfortunately, fatal accidents to motorcyclists totalled 143 in the eighth month of 1940, whereas the 1939 figure was 112. As civilian motor-cycling has been reduced drastically it is reasonable to assume that the majority of 1940 casualties occurred to Army riders and it is disturbing to consider a possible

increase in the figures now that autumn is here with its treacherous road conditions. The black-out must not receive an undue share of the blame, for 84 deaths occurred in daylight compared with 57 during hours of darkness. Furthermore, 98 occurred on roads not subject to a speed limit compared with 45 in restricted areas. The fact must be faced that many military riders are lacking in judgment of speed and it is to be hoped that the improved methods of training now in force will tend to put a brake on this tragic loss of valuable manpower."

"A SMALL BAND of motorcyclists, stars of the road-racing and trials games or technical journalists, whose names make news in peace time now proudly wear on their battle-dress the three black stripes of sergeants in the King's Royal Rifle Corps. And why, you ask, should famous motorcyclists be needed in a Rifle Corps? The answer is easy. The KRRC is now largely mechanized and although many in its ranks still do the distinctive quick-step march of the Corps, hundreds of others are required to know all there is to know about motorcycles and to gain that knowledge in the shortest possible time. When the decision was taken to greatly increase our military motorcycling strength, I was invited by the Director of Military Training to provide a group of skilled instructors. He did not beat about the bush—the men must be the finest experts available, for their's would be the task of training selected NC0s and men dent from units all over the country with a view to their becoming, in turn, instructors in their own areas. Furthermore, a considerable number of officers would also pass through the instructional course. Any anxieties I might have had were quickly allayed by a most encouraging letter from the Commandant of the Driving and Maintenance School to which the selected volunteers were attached. You know their names—Bob MacGregor—all 'old soldier' in more ways than one, with service in the last war and a man with the proud record of having ridden successfully in the International Six Days Vase Team more often than anyone else; Jack Williams—certainly one of the finest all-round riders we have ever produced, equally at home in a scramble. the TT or as a member of the Britlsh Trophy Team in the Six Days; Alfy West—ace scrambler and Vase Team member; Peter Chamberlain—probably the most brilliant motor-cycling journalist of all time and man to whom we owe a great deal for his tremendous efforts on behalf of the ISDT and his sane counsels concerning the sport generally; J White—erstwhile schoolmaster, winner of the Manx Grand Prix and a member of the famous Norton TT Team; H McKeever Phillips and Harry Louis—respectively responsible for technical articles in Motor Cycling and The Motor Cycle, and Maurice Laidlaw—a South of England sidecar exponent with a known ability to lecture on and to



“This mild-looking chalk outcrop is a really punishing test. It is virtually impossible to ride through it under power but pupils quickly learn how to cope with such difficulties under Sergeant West’s instructions.”

demonstrate this most difficult art. The letter I mentioned contained an invitation to visit the School and to examine the system of training approved by the Commanding Officer, who has made every possible use of the advice given by his specialist sergeants...when we went down to ‘Somewhere in the South’ we found our mea looking almost disgustingly fit. When I had seen a sample of their work and the surroundings is which it is performed I could understand why they looked so bronzed and why more than one had lost the odd stone or two of surplus weight. This particular area of England has not the wide variety of difficult going which can be found around Camberley, for example, but our trials experts have ferreted out sections which can try the stoutest scrambler and, although I did not see them, I was assured that sand, mud and stones were to be had for the asking if one knew where to look for them. The main obstacles, however, consist of great rolling chalk down with fearsome gradients and turf which is so slippery that rubber tyres certainly seem safer than leather soles—as I found to my acute discomfort on more than one occasion!...The last day of the short course is devoted to maintenance and a straightforward routine examination. followed by the handing in of machines with the inevitable checking of tools and equipment...pupils on the long course must learn the duties of a full-blown Despatch Rider, including Map Reading, Route Finding for Columns, Reconnaissance, Traffic Control in a Concentration Area and Message Writing...They are also given considerably more instruction in the theory of motorcycles and in maintenance, together with lessons in chair dicing. Mention of

chairs reminds me that Sergeant Laidlaw provided an unrehearsed thrill which was more than somewhat spectacular. With the two wheeled drive of the big 633cc Norton engaged, he charged up a long 1 in 4 slope, only to hit an unseen gully. The gradient promptly became 1 in 1, whereupon the model stood upon its tail casting Laidlaw off. He shouted to his corporal passenger to abandon ship whilst the going was good, but, like Casabianca, who stuck it to the last when all but he had fled, the latter made an heroic (and almost successful) attempt to steer the plot in reverse from the sidecar. Realising it was hopeless, however, he leaped to safety and the outfit went over and over, bump—Bump—BUMP—CRASH—to the bottom of the 300 yards gradient. And yet the only damage was a slightly splintered locker lid. Tough stuff, these Nortons! It was due to a similar spot of bother that poor Louis bust his leg. I handwritten a lot about the sergeants instructing their pupils, but they themselves had a lot to learn. They are stationed in a distinctly 'Active Service' area where everyone must be on constant alert. For this reason they have to carry that extremely useful but infernally awkward instrument, the service rifle, complete with ammunition, wherever they go. Now it's no use having one of these lethal weapons if you don't know how to use it, so they have had much musketry instruction and, lest it falls to their lot to rejoin their regiment in an emergency, they have had to study infantry drill, which is essential knowledge in a man wearing three stripes, who will be looked to by Other ranks for instructions in awkward moments...Army life is what you make it. It can be darned good fun or it can be purgatory, according to whether you decide it like or dislike it. Thy heroes of this tale all wisely adopted the former policy. The place in which they are situated is hardly a maze of music halls and picture palaces, so that they have to provide their own amusement, but if you have ever seen a crowd of Six Days or TT fellows together you will appreciate that this would be easy even in the Sahara! I was told by one sergeant, who is well qualified to pass an opinion, that the, beauties of the South Downs are not confined to the scenery! Moreover they have an excellent Sergeant's Mess with everything laid on, including beer of magic quality, and it would lie a poor motorcyclist who did not rejoice at the sight of the excellent quarters where the machines are garaged...I hope the success of this scheme will lead eventually to some of those other hundreds of applicants being enlisted. This first group is doing a grand job of work and their efforts are spoken of with enthusiasm by their officers. I remember an officer once saying of a certain NCO that he was highly efficient because 'he had the advantage of a board school education'.

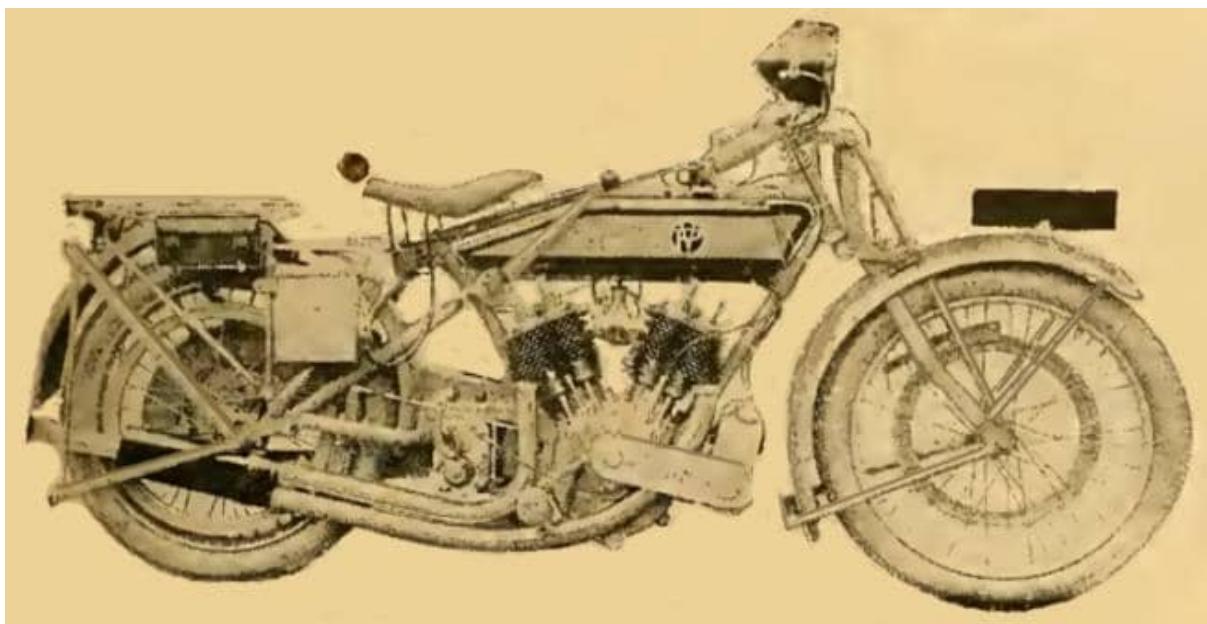


"Watched by the CSM and Sergeant MacGregor, another New Zealand pupil jockeys his BSA up the fearsome gradient. After only four days' riding this pupil is completely confident."

As a witty wisecrack, the quip was not without its humour, but from a practical viewpoint it was a darn silly remark. The 'tough' type of sergeant may have been all right in the Boer War, but nowadays an NCO must possess imagination and initiative, and they are not the prerogative of any particular type of education. As a matter of fact, the original 1914 DRs consisted very largely of University and Public School men and they were every bit the equal as NCOs of the Trade riders from the Midlands, and the fellow who was one of my greatest Army pals—a costermonger in 'Civvy Street'. No, a Public School education is no drawback, and when it comes to lecturing it can be a great asset. Neither does it affect discipline, because, whatever the NCO may think, he never says it out loud! Thank heavens, there are no class distinctions in our game, and that is why a small section of ex-civilian motorcyclists from all walks of life remain entirely unaltered now that they are in uniform, passing on knowledge which is vital to the Army and learning something in return which can be of great value to the competition world when peace returns."—Graham Walker

"THERE WAS A KNOCK of a friend's front door last week, and on opening it he was met by a middle-aged man in full motor cycling kit. He had called, he said, on behalf of the local council to see if it would be convenient for his men to replace the tiles dislodged

by a recent bomb explosion. Business settled, the talk naturally turned to motor cycles, and he invited my friend to inspect his 'old crate' which, he said, he had been riding since 1922. At the kerbside stood the smartest vintage outfit my friend had seen for many a long year—it positively glistened, from its heavy 'Bi-flex' front forks to its huge domed rear mudguard and its shapely top-tube tank. And what is more, it had a fully sprung rear frame and a sprung sidecar wheel—both so unobtrusive as to be almost unnoticeable to the casual observer! Old memories came flooding back—to those far-off days in the early twenties when my friend greatly coveted one of the most 'modern' machines of the period—the PV. Do you remember it? In case you don't, let me add that the springing of both machine and sidecar in of the central-pivot type, with a long coil spring carried in a kind of sub-frame. The owner was duly complimented on the way he had kept his outfit, but the biggest surprise came at the end 'Well,' he said, 'I should know how to maintain one: you see, I've made hundreds of them in my time.' Yes, thanks to a trick of Fate it had taken a war to introduce the actual maker of a once-famous machine!"



This is the PV, as pictured in 1922 with the report: "That it has survived so many years successfully when other systems appear and disappear in the course of a 12-month proves that the PV spring frame is worthwhile. It is a simple design. Two pivoted arms, which carry the rear wheel, are extended to the saddle tube and connected with coil shock and rebound springs enclosed in the last-mentioned member. For 1923 the wheelbase has been considerably shortened by the simple expedient of moving the saddle tube forward so that its lower end is in front of the bottom bracket. The model at present under discussion is...an entirely new model with the 976cc JAP engine."

"TRAFFIC POLICE, a proportion of them, are to be restored to the London streets. The Commissioner of Police for the Metropolis announces that he is doing this on account of the number of accidents, and that he has given instructions for the prosecution of

offenders. The view expressed is that a sense of immunity from prosecution has encouraged road users to commit offences. Dangerous and careless driving, exceeding speed limits, and disregarding traffic lights, are specifically mentioned. All who ride or drive in London will say 'Thank you for the warning', and the majority, we feel, will be inclined to agree that, owing to war, the present shortness of the working day and that feeling of immunity from prosecution, there has been a lot of licence."

"SO THEY CALLED IN the cavalry and motor cycle units to continue the chase.' Thus runs a newspaper account of the Greeks' successes last week. The Italians were retreating too fast for the Greeks to keep contact with them. Hence the call for motor cycle troops. This is but one of the many possible military uses of motor cycles. All are aware how the Germans employed solos and sidecar outfits for marauding in the Battle of France and how Britain has motor cyclist battalions and motor cycle reconnaissance platoons. For anti-invasion work, too, the motor cycle, with its speed and mobility, is of supreme importance, a fact that is fully realised. Obviously it would be indiscreet in time of war to discuss in detail all the possible uses of motor cycles. Our feeling is that not only are there still further uses of great potential value, but, with the keen interest in the possibilities of motor cycles that is being displayed by the General Staff, these are certain to be exploited to the full."

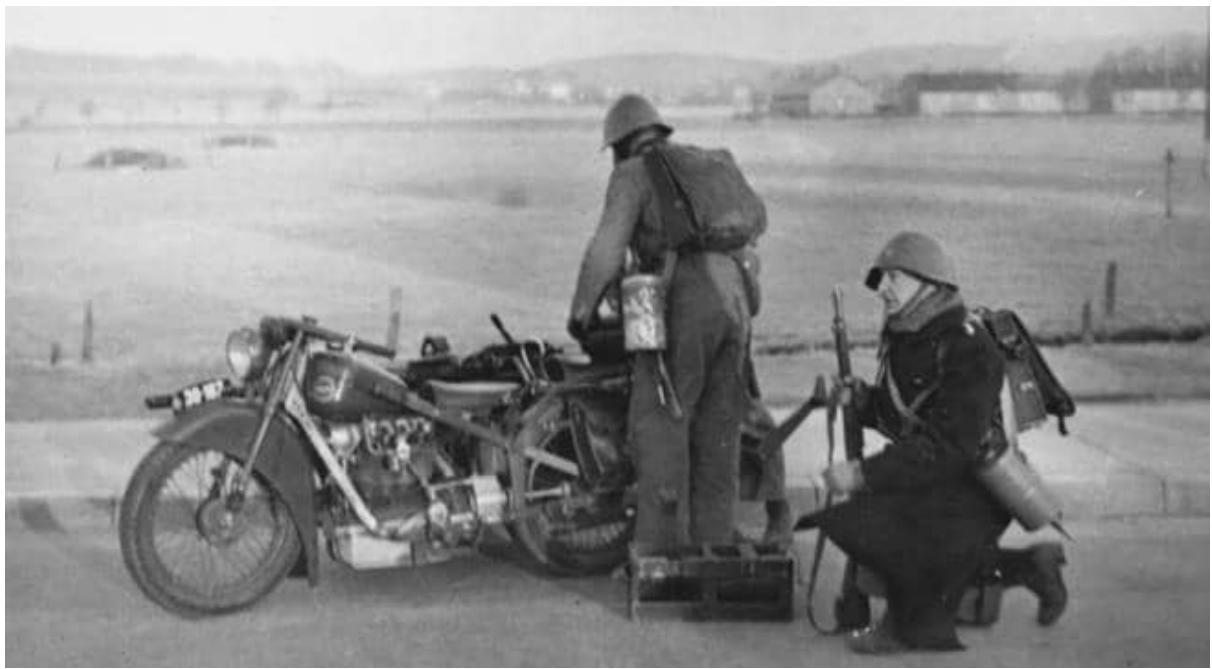
FROM THE NOTTINGHAM EVENING POST: "If they could make a successful landing, Hitler has many motorcycle troops who are familiar with British roads, even if they are no longer signposted. German motorcyclists have formed the advance guard of every occupation of the war. This may be one of the reasons why in recent years Germany developed a motor cycling industry and in motor cycle sport reached a place second only to Great Britain. In the last few years, and especially since Hitler came to power, German motor cyclists have taken part in events in practically every country in Europe; and whether by accident or design, many of them were serving soldiers. Britain is one of the places in which they competed. In 1937, and again in 1938 (little more than a year before the war started) Nazi storm troopers, and even SS men from the Führer's own bodyguard, took part in the International Six Days Trial in England and Wales. There were, of course, many civilian riders, if anybody in Germany regimented sports could be termed a 'civilian'. A military type of discipline governed the German parties—riders, competitors, officials and even journalists—who 'invaded' this country and other countries, ostensibly for the sport. In both years, the German riders had ample opportunity for studying British roads for they travelled from the port at which they arrived through the Midlands to Wales, and for five days of the trials covered nearly 300 miles a day on all class of roads, chiefly in Wales. The final day in both events consisted of travelling to the Midlands again for speed trials on the famous Donington Park course, which incidentally was a prison camp in the last war. Germany had no fewer than 79 riders in the 1937 event. In addition, there were mechanics and others who made the little 'army' led by the Duke of Saxe-Coburg and Gotha total about 150 men. The Nazi

teams, tight-lipped and deadly serious, with the innumerable Nazi salutes, had only one idea in all events in which they took part—to win, as the Duke of Saxe-Coburg and Gotha said when he addressed the Germans before the 1937 trial. They were here to 'fight for their country'. For the trial the following year, held in this country again because of a British win in 1937, Adolf Hunlein, Nazi motor sport 'Führer', presented a special trophy for which Army regiments as well as clubs could compete. So once more many German soldiers, SS men and Nazi 'motor cycle volunteers' completed that year. They were led by Baron Falkenhayn and, as before, a large number of mechanics and others came with them. George Meier, one of German's 'crack' motor cyclists, who has ridden in the Isle of Man as well, was among them, and was even then an army officer. The British Army entered teams for the first time in 1938 and 'learned a lot' from the trial. British soldiers went to Germany for last year's event, which was held only a few days before the outbreak of war, but they withdrew from the trial on the fifth day, and returned home. Two days later Germany invaded Poland, her motor cycle troops playing a prominent part."

***Here's a selection of images from 1940, kindly supplied by my amigo Francois. You'll find more in the World War Two gallery (in the main menu) which will grow to include more than 300 pics.***



At the height of the German invasion scare a British Army officer devised a mobile Bren-gun post comprising an armour plate bolted to the side of a bike—in this case a Triumph WO 3SW.



Danish motor cycle troops with their Nimbus combos stand to on 9 April, the day of the German invasion.



A reconnaissance unit of the Polish Independent Podhalan Rifle brigade on Sokól 1000 combos at Borkenes on 25 May during the defence of Norway.



A 'fighting column' of the South Wales Borderers in Bootle, Liverpool on 16 August, training for the expected German invasion.



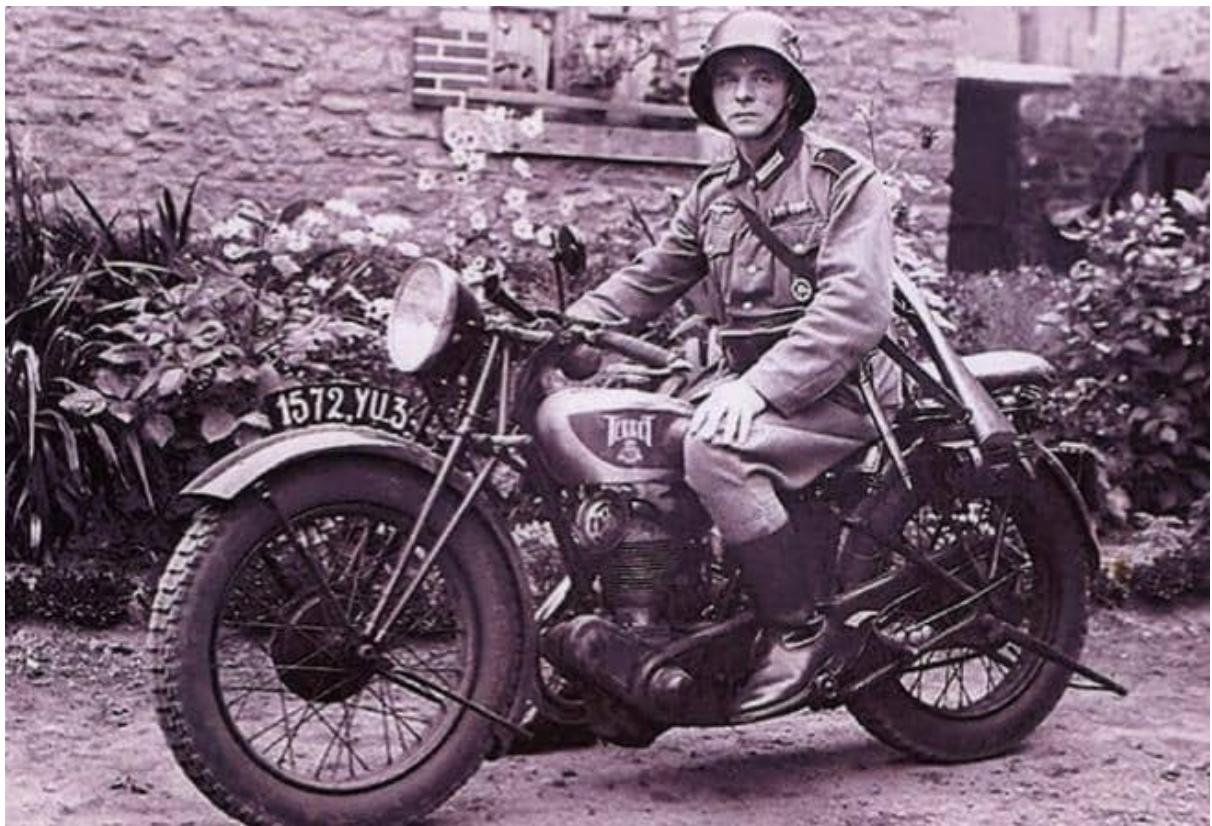
These Swedes were part of the Nordic Volunteer Corps, fighting for Finland in the Winter War against the invading Red Army.



Poiluts with a French  
Regiment des Curassiers on an 800cc Gnome et Rhone AX2 combo.



Wermacht outriders study their maps during the battle for France.



As if attempting global domination wasn't bad enough, the Jerries were not averse to nicking bikes. Despite being forced to concentrate on producing generators for Zündapps, Terrot designed a 100cc two-stroke that went into production after the war.



Italian riders in a Greek valley during the Greco-Italian war.



In the early days of the war motor cycle sport continued in Germany.



The USA had not yet been dragged into the conflict; enthusiasts were still enjoying events such as this hillclimb, near St Francisco.

***Here are some contemporary adverts.***



*Des Moines prefers*

## DEPENDABLE HARLEY-DAVIDSONS

Another of America's competent police departments recognizes the superior performance of Harley-Davidson Police Motorcycles! Des Moines, Iowa — like more than 3500 cities in the United States — has found from experience that Harley-Davidsons have no equal for reliability and economy. Des Moines' able motorcycle squad played an important role in establishing that city's traffic safety record,

which for the first eleven months of 1939 is considerably better than the average for cities in its class.

It will prove well worth your while to learn why Harley-Davidson Police

Motorcycles are the nation's choice as modern, efficient traffic law-enforcing vehicles. Phone your Harley-Davidson dealer and have him bring over a new 1940 model for your inspection.

HARLEY-DAVIDSON  
MOTOR COMPANY  
MILWAUKEE, WISCONSIN

### A 1940 FEATURE!

Among the many important advancements featured on the 1940 models, and especially valuable in police service, is the Harley-Davidson Instant Gas Reserve Valve with Interconnected Gas Tanks. When main gas supply is exhausted merely pull up rod and reserve gas immediately flows to carburetor. Same gas level maintained in both tanks. Simple . . . Safe . . . Sure.

**HARLEY-DAVIDSON**  
THE POLICE MOTORCYCLE

Do you receive THE AMERICAN CITY? Please do.

*When you see the Winged 'M'*



*You know it is a  
Gem of a Motorcycle!*

The Matchless winged "M" has always been the symbol of Matchless reliability and performance . . . two of the chief reasons why the Matchless was adopted by the Army over five years ago. Since then thousands of Matchless motor cycles have been and are still being supplied to our fighting forces. It is just the job for army work, and it will be just the job for civilian riding when peace-time comes again. Remember, the winged "M" is your symbol of reliability and performance.



**MATCHLESS**

MATCHLESS = A.J.S. = SUNBEAM

ASSOCIATED MOTOR CYCLES LTD., PLUMSTEAD ROAD, LONDON, S.E.18

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SUNBEAM •

MATCHLESS • A.J.S. • SUNBEAM • A.J.S. • MATCHLESS • A.J.S. • SUNBEAM

The illustration shows an oxy-acetylene welding operation on a steel tank. The success of this operation depends entirely on the skill of the welder, which is checked by rigorous inspection.



*We are proud—  
of our Craftsmanship*

SUNBEAM • A.J.S.

DESPITE the amazing development of machine technique in recent years, the machine has not yet entirely ousted human skill in motorcycle production. There are still, and will probably always be, many operations which call for skilled craftsmanship.

We are proud of our Craftsmen whose skill, added to the long experience of our designers, and to our modern machine tool equipment, has resulted in our being called upon to produce thousands of motorcycles of outstanding performance and reliability for the Fighting Services.

Remember, that the same qualities which are built into our Army machines are also to be found in equal measure in our standard models.

If you are thinking of a new motorcycle, you cannot do better than invest in an A.J.S., MATCHLESS or SUNBEAM. Most dealers have 1940 models in stock.

N.B.—We recommend you to buy now while machines are still available.

**MATCHLESS = A.J.S. = SUNBEAM**

Associated Motor Cycles Ltd., 44, Plumstead Road, London, S.E.18

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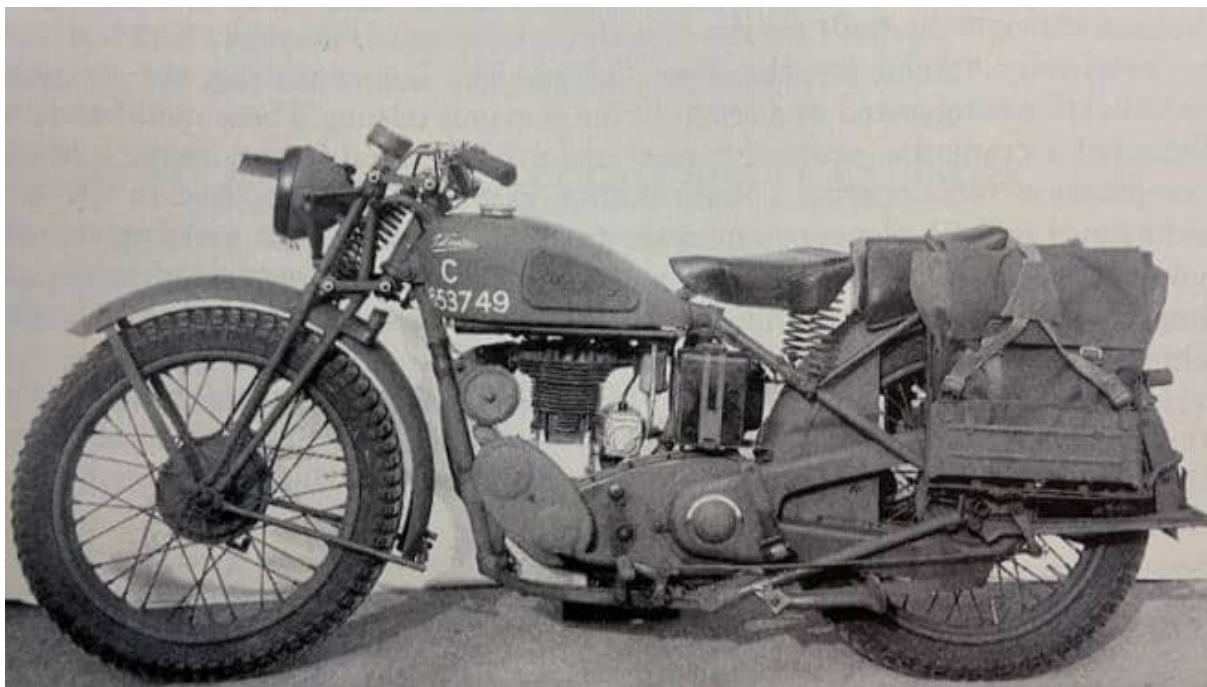
1941

HAVING BEEN BOMBED OUT of its Coventry base, Triumph was back in business. Its Meriden site was the only modern motor cycle factory in the country.

MIYATA WAS MAKING a 350 four-stroke and 150-200cc two-strokes for military and civvy use, as well as a folding backpack bicycle for Japanese paratroops.

CRASH HELMETS were in general use by motor cyclists in the armed forces. The design of what is now generally known as the pudding-basin helmet was the work of Nobel Prize-winning Aussie neurosurgeon Hugh Cairns who had treated TE Lawrence (of Arabia) in 1935.

THE STOP-GAP Velocette MDD 350, a militarised MAC, was developed into by the MAF (for Armed Forces) with a beefed up frame, sump guard, carrier and pannier frames, lower bottom gear and a host of minor tweaks. Development work was handled by Phil Irving, who went on to earn worldwide fame for his work on Vincents. The MAF was certainly fit for military service but it cost £68 per machine while the ohv WD models from Ariel, Matchless, Royal Enfield and Triumph were all under £60. Meanwhile BSA M20s and Norton 16Hs were pouring out of the BSA and Norton plants; within a few months Velocette was directed to take on other war work after making fewer than 1,000 MAFs. Many were used on RAF bases throughout the UK.



The MAF was a sound machine but only a few hundred were made.



FOLLOWING THE MOBILISATION of the Swedish army in 1939 a large number of motor cycles were bought from Germany as a stop-gap while the Swedish company Monark, which had been making bikes since 1920, developed a military model. At the start of 1941 Monark began production of a 500 ohv single, the M/42. Some 3,300 were built; it remained in service until 1963. Monark also supplied the Swedish army with electric trikes.



The Monark stayed in service until 1963.

FOLLOWING THE GERMAN invasion of Belgium petrol was almost unobtainable. Brussels-based brothers Albert and Maurice de Limelette saw this as a challenge and set up Société pour l'Etude et la Construction de Véhicules Electriques to produce an electric scooter which they marketed as the Socovel. It was powered by a 36V electric motor supplied by three 12V batteries that gave a range of 25 miles at 20mph. Several hundred were made by the end of the war, at which point they switched to two-stroke motor cycles.



The Socovel had a range of 25 miles with a top speed of 20mph.

“DESPITE THE FACT that the date was the last Sunday in the month, when fuel rations were presumably at low ebb, the Kensal Rise & DMCC’s open-to-Centre scramble at Bagshot Heath on Sunday was a decided success. The event once again proved that this type of racing is very popular, for there was an excellent list of entrants and a considerable crowd of spectators who were treated to a splendid afternoon’s sport. The first race was a six-lap event for 250cc models which resulted in a walkover, more or less, for GF Robertson on a Triumph, the second man being EA Watson (AJS). In the 350cc race, which was fought out over eight laps, the two most fancied contestants fell by the roadside very early in the proceedings, curiously enough through the same trouble—flat back tyres. They were GM Berry and AF Gaymer (Triumphs). The former just managed to complete one lap, whilst Gaymer retired on the fifth circuit, when leading. In the four previous laps he was hotly pursued by EG Wilmott (AJS), after which the latter continued to lead the field and finished an easy winner. EC Bessant (Matchless) came second. Berry and Gaymer both repaired their tyre troubles before the start of the Unlimited cc event, the distance of which was 10 laps, and an exceptionally keen contest was anticipated in view of the fact that the club’s president, Flight Lieut JM West, had wired the officials to the effect that he was presenting a cup for the fastest time of the day. Gaymer set a cracking pace and rode with such determination and skill that he led easily from start to finish. Berry and F Hayward (AJS) chased him hard on the first three laps, but the former was obviously in trouble as his engine showed signs of a serious oil leakage, added to which he had lost his exhaust system completely. Once he retired Gaymer was virtually unchallenged, the rest, of the field being led by J Botting (Sunbeam), with EG Wilmott (AJS) working hard to maintain third place because of a badly misfiring engine. The meeting concluded with a sidecar race for which there were seven starters, the distance being five laps on a somewhat modified course. The inevitable, of course, happened, inasmuch as there was a glut of retirements, only three men finishing, the winner being P Seymour (Ariel), with RA Tracey (Norton) runner-up. During an interval, the awards which were won in the club’s recent Kensal Rise Cup Trial were presented by ‘Cyclops’ of *Motor Cycling*.”



"RUSSIA SEEKS WELL aware of the wartime value of motorcycles judging by these pictures of a woman member of the Moscow ARP and a motorcycling detachment going into action. They are the first wireless pictures ever transmitted from Russia to the US."

THE US ARMY, no doubt impressed by the performance of the BMW shaft-drive flat twin, ordered shaft-drive models suitable for desert fighting from Indian and Harley-Davidson. Indian came up with the 90° transverse V-twin 841; Harley's solution was the transverse flat-twin XA. Like their existing V-twin military models, the Indian 741B and the Harley WLA Liberator, the shafties were side-valves; unlike them the prototypes sported foot gearchange. To control costs they shared components with the existing military models. Indian and Harley each produced 1,000 examples, but neither was adopted for wider military use—the US army decided that the Jeep was more suitable for the roles for which they were intended.



Harley-Davidson XA transverse flat twin complete with plunger rear suspension. Its springer fork was subsequently replaced with Harley-Davidson's first telescopic fork; a few were supplied with solid disc wheels.



Following its rejection by the military some Indian 841s were civilianised. [This example is cute as ninepence but...mudguard fringes? Good grief.]



“Wren despatch riders of the Women’s Royal Naval Service (WRNS) attached to WRNS London Headquarters with their Triumph 350cc 3SW motorcycles. London, England, 11th March 1941”



A few weeks before Pearl Harbour these enthusiasts were enjoying the autumnal colours along the Mohawk Trail in western Massachusetts.



British Home Guard outfits on manoeuvres near Exeter in July.



July, peacetime USA: A Harley Liberator DR hands a message to a 4x4 Dodge Command Reconnaissance Car during a training exercise.



Bulgaria was allied with the Nazis for most of the war though these nippers don't look too happy. Note the Steib sidecar in military colours.



The first M72s made in Moscow set off to confront the Wermacht Beemers.

***Many more pics of motor cycles at war in 1941 will be found in the World War 2 Gallery via the main menu; here's a selection of contemporary ads.***

# "STILL AT YOUR SERVICE"

YOU CAN'T DO BETTER THAN CONSULT ANY OF THESE DEALERS FOR YOUR MOTORCYCLE SPARES OR REPAIRS. ALL HAVE ESTABLISHED A FIRM REPUTATION AND WILL CONTINUE TO OFFER THE BEST SERVICE POSSIBLE

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27, 72-74, Shortmead Street,  
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for modern second-hands, but mechanical condition and appearance must be good. All types required — from 98 c.c. to 1000 c.c. Nothing older than 1936. Existing hire purchase accounts settled.

**COLMORE DEPOT**  
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ALL ENQUIRIES  
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**CASH** FOR MOTORCYCLES  
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MOTORCYCLISTS SERVING IN H.M. FORCES

*Motor Cycling* announces to all motorcyclists serving in the Navy, Army and R.A.F. that the special revised rate of subscription is

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instead of 6/- Other periods pro rata. Send your remittance, together with rank, number and unit address, to *Motor Cycling* Offices, Bowring Green Lane, London, E.C.1.

SPEED OF THE WIND

on

**Scott**

**MOTOR CYCLES!**

Write to-night for copy of Free Brochure!

THE SCOTT MOTOR CYCLE CO. SHIPLEY, YORKS

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**T. J. ROSS LTD.**

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New Spares and Accessories,

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500 MACHINES IN STOCK

*Photo by courtesy of Motor Cycling*

*How B.S.A. brought home the Colmore in 1937—coveted award of motor cycling experts. Above: Bert (B.S.A.) Perrigo demonstrates the meaning of perfect performance—in spite of mud!*

**THE HAZARDS OF THE 1937 COLMORE CUP**

**"THE COLMORE"**

—if you didn't see this amazing event in 1937 you certainly read how Bert Perrigo, on the top of his form, took his B.S.A. over a "glue-pot" course, mastering faultlessly the difficult Meon, Warren, and Camp hills, neatly cornering tricky hairpins, through mud and over rocks, to win the Colmore Cup. Dead safe, neat riding on a perfect machine took Bert to victory—gave him and his B.S.A. the cup for which Britain's greatest experts aspire.

To-day's aspiration is Victory of another order, but there will be more "Colmores" and B.S.A. will be there to win them. So let's not forget the good times to come—nor the B.S.A.'s around which they will centre.

*B.S.A. Cycles, Ltd., 47, Armoury Rd., Birmingham 11*

**A PROMISE OF GOOD TIMES TO COME**

**Comerford's**  
THE MOTOR CYCLE DISTRIBUTORS & BUYERS

## WANTED

**TRIUMPH**  
"TIGER 100"  
AND  
SPEED TWINS

We are definitely the best buyers of these machines and pay

## IMMEDIATE CASH

We also require a large number of 1938 and 1939 machines in sound condition.

DO NOT FAIL TO  
OBTAIN OUR OFFER

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IF YOU WANT TO SELL MOTOR CYCLES  
YOU WANT TO BUY CYCLES

**RENNOS** SQUARE DEAL **SERVICE**

GUARANTEE SATISFACTION

WRITE AT ONCE FOR MY  
LISTS, TERMS EASY AS EVER

**LOWEST DEPOSITS**

		Deposit, Gns.
35	1940 FRANCIS BARNETT, 150 c.c., T.S., dry, spdo.	12
64	1939 B.S.A., 250 c.c., O.H.V., de Luxe, speedo.	22
55	1939 ZENITH, 500 c.c., O.H.V., foot change	19
69	1939 ENFIELD, 500 c.c., O.H.V. & Noxal sidecar	23
68	1939 A.J.S., 350 c.c., O.H.V., de Luxe	22
32	1938 NEW IMPERIAL, 150 c.c., O.H.V.	11
25	1936 NEW IMPERIAL, 150 c.c., O.H.V.	8
39	1937 B.S.A., 250 c.c., O.H.V., Sports	13
29	1936 O.K.-SUPREME, 350 c.c., O.H.V., foot change	10
45	1935 VELOCETTE, 250 c.c., full camshaft	16
49	1938 B.S.A., 600 c.c., S.V., foot change	17
39	1937 NEW IMPERIAL, 350 c.c., O.H.V., sprg. frame	13
27	1937 PANTHER, 250 c.c., O.H.V.	9
48	1938 A.J.S., 350 c.c., O.H.V., de Luxe	17
19	1938 JAMES, 250 c.c., O.H.V., foot change	7

**CASH WAITING  
FOR GOOD MOTORCYCLES,  
CARS, SIDECARS, CYCLES.  
EXCHANGES**

**ALSO 50 BARGAINS IN CARS**

		Deposit, Gns.
1938	B.S.A., Scott Sports 4-seater	125
1938	FORD 10 Saloon, excellent	98
1936	MORRIS 8 Saloon, nice car	69
1935	MORRIS 8 Saloon, de Luxe	59
1937	FORD 8 Saloon, smart	66
1934	AUSTIN 7 Saloon, sound	40
1934	SINGER 9, Open 4, Sports	50
1936	AUSTIN 7, 2-seater, open	50

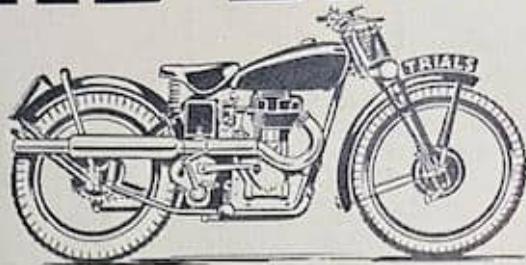
**NEW AUTOCYCLES IMMEDIATE DELIVERY**

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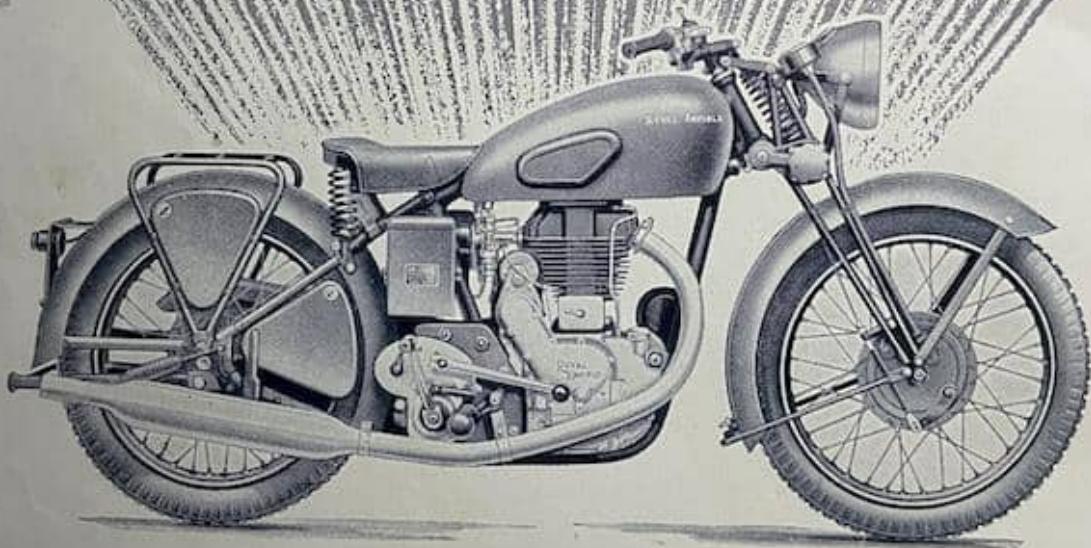
232-3-4, UPPER STREET, ISLINGTON, N.1

Phone: Canterbury 2021-2.

# ROYAL ENFIELD



TRIALS WINNER OF YESTERDAY



WAR WEAPON OF TO-DAY

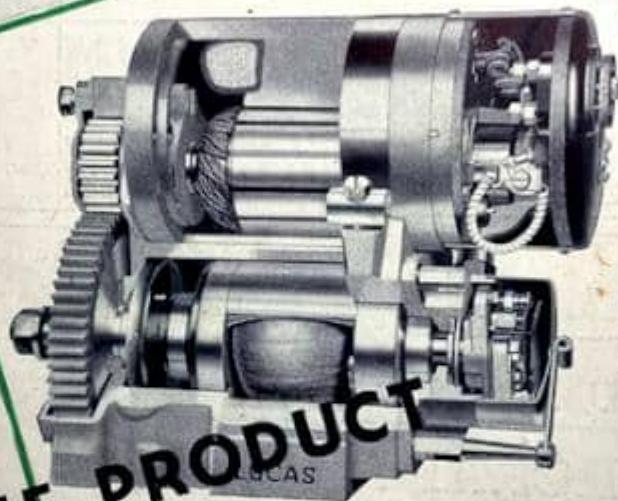
TRADE MARK



MADE LIKE A GUN

THE ENFIELD CYCLE CO LTD Head Office and Works, REDDITCH.

# THE NAME BEHIND **LUCAS**



The famous Lucas "Mag-dyno" Lighting and Ignition equipment is fitted on most motorcycles, civil and military.

THE PRODUCT

**IS YOUR GUARANTEE  
OF QUALITY AND OF  
WORLD-WIDE SERVICE**



JOSEPH LUCAS LTD

BIRMINGHAM 19

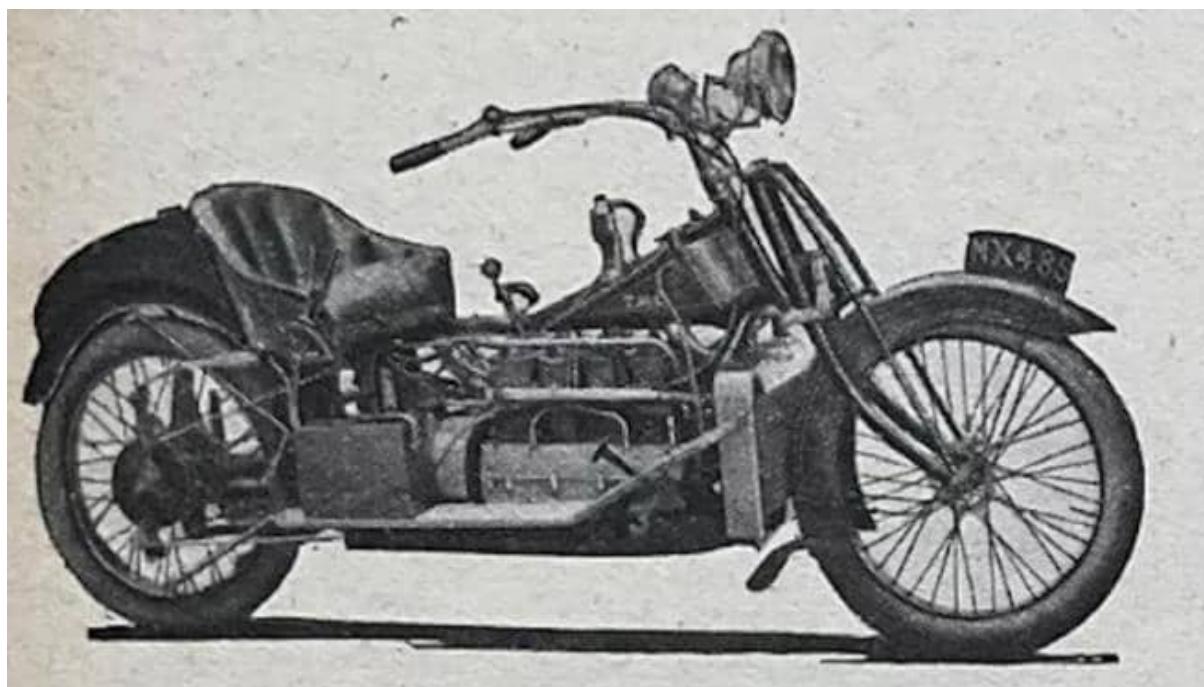


Meet the Defence  
complete with **Norton**

1942

"YOU ARE STILL being exhorted by correspondents to press for a quiet, clean, comfortable and generally refined motor cycle. You have, I believe, been doing that for nearly 40 years. I remember as a small schoolboy waxing enthusiastic over a machine called the TMC, of about 1907. It had a four-cylinder water-cooled engine, three-speed gear-box, shaft and bevel drive, both wheels properly sprung and adequately mud guarded, and an upholstered pan seat. If that machine had survived, and embodied all the intervening improvements in design and metallurgy, the 1942 TMC would render your correspondents' exhortations unnecessary. I have owned and ridden a 2 $\frac{3}{4}$ hp 1914 Douglas; a 1920 4hp Douglas to which I fitted rear-wheel springing; a 1923 Coulson-Blackburne, to which I fitted an effective silencer; and a Scott Super Squirrel, to which I fitted coil ignition, a needle-jet carburettor, and an effective silencer—and its performance astonished many people, especially the police! But they all lacked points embodied in the TMC. What is required is not the ideal motor cycle but the ideal motor cycling community. Manufacturers do not make what they think their clients ought to demand, but what the latter actually do demand: which is, terrific speed and violent acceleration, with all possible dramatic sensationalism and noisy ostentation. As a result, we have that barking, clattering, buck-jumping mechanical monstrosity, the hyper-super-sports ohv single, which excels in all the above qualities, as well as annoying everyone in its vicinity (but its rider) with its ear-shattering-din. And there is no TMC for eccentric people like me who do want comfort, silence, smooth running, cleanliness, weather protection and the minimum of upkeep work; and who, as a result, must resort to a car for utility and convenience, and a bicycle for pleasure.

**WH Spoor, MA Cantab, Saltash."**



"A four-cylinder, water-cooled TMC with shaft drive and rear springing."

"IN SOME DIRECTIONS war is a drug; in others, the greatest of all stimulants. So far as motor cycles are concerned the present war would seem to come into the former category, for none of the machines in Service use is in any way 'advanced' in design. The majority, indeed, are old-fashioned and there are no signs of fresh developments of a major character, which seems a pity, if not an error. By no means everything is on the debit side. War inevitably has a great broadening influence on the engineering world. New special-purpose machine tools are constantly being introduced, there are fresh methods of construction and fabrication and new materials, while materials which in the past were expensive are produced in quantity and, therefore, give promise of being available eventually at a cost that will permit their use commercially. The motor cycle industry is gaining fresh knowledge in many directions, for its work at present covers many spheres. A proportion of this knowledge, it is certain, will be reflected in the motor cycles of the future. The broadening influences will not be without tangible value."

"WEST BRISTOL CLUB will hold a training event for DRs at Lansdown on October 4th, starting at 10.30am. The event is for individuals and teams of three riders, and will 'take the form of an Army-type trial'. Competitors are asked to bring a picnic lunch. In the afternoon there will be a scramble. Details are obtainable from WH Brown, 58, Worthing Road, Patchway, Bristol."



"DUSTY the DR, as an expert in quick decision."

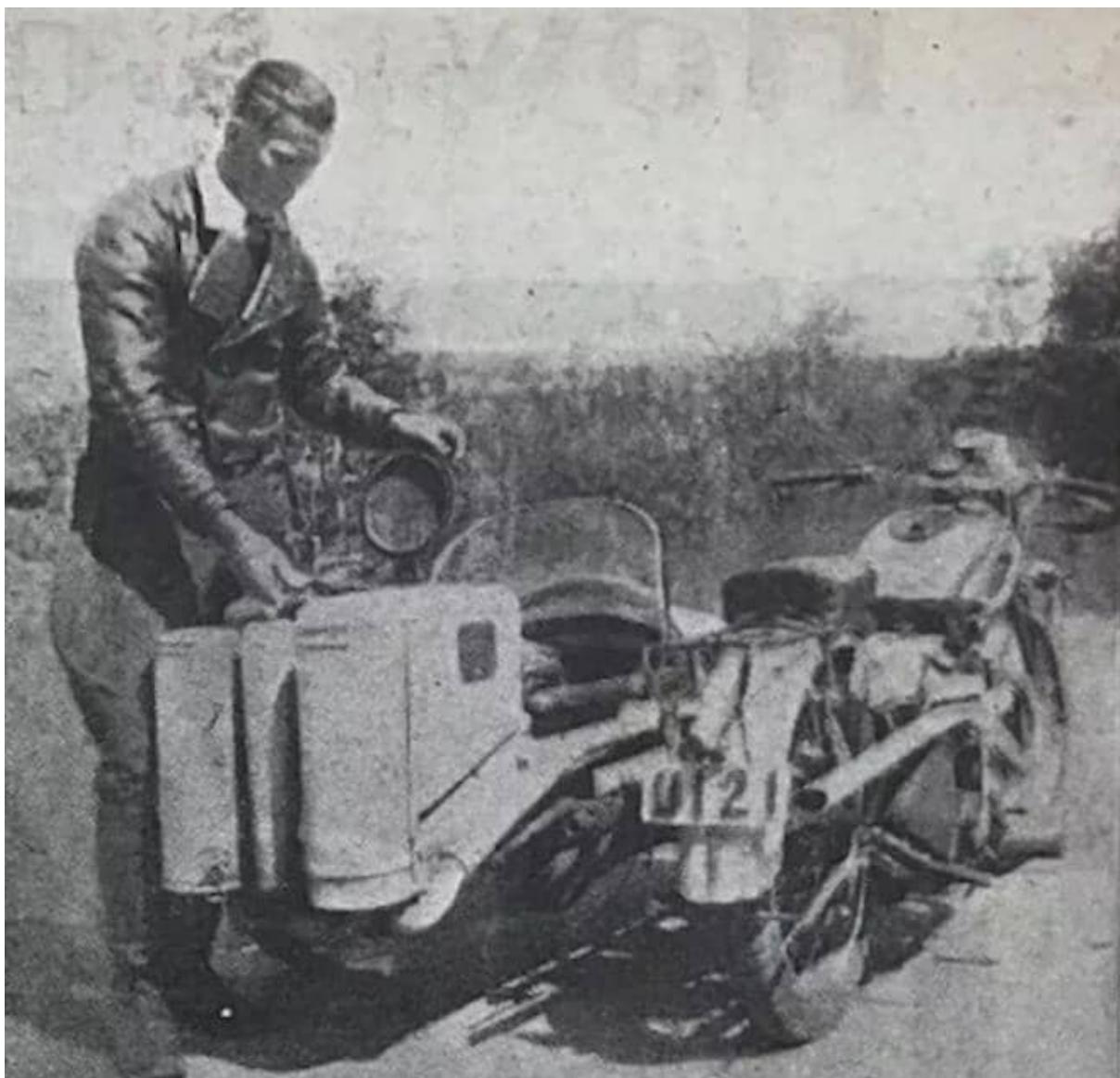
TO REDUCE PETROL consumption to a minimum, the Rugby, Club's training trial 'or Home Guard and Civil Defence DRs was held in a field within three miles of Rugby. Riders had to do four laps—one with respirators worn—of a circuit which included several hazards. There were 45 entries, including eight teams. Machines were examined and marks lost for missing or defective equipment. As a further test, riders were given a verbal message at the beginning of the trial, and subsequently had to repeat it to a marshal; marks were lost for each incorrect fact. Three officers from a Coventry Home Guard company gave a polished display of riding and put up the best team performance, closely followed by another Coventry Home Guard team. A Rugby Home Guard team was third. Later, an advanced trial was held for the more experienced riders, to serve as a demonstration for the remainder."

“IN THE FOREFRONT of the German advance in Russia are motor cyclists with anti-tank rifles mounted on their handlebars, according to a radio announcement last Friday. An obvious question framed by any motor cyclist is: ‘Are we, who in trials and races have been the unwitting mentors of the Germans in motor cycle matters, adopting similar tactics?’ Naturally, information on this subject is not likely to be vouchsafed. So far the British Army has made little, if any, use of motor cyclists in an offensive role, in direct contrast with Germany. In France the latter employed them with demoralising effect in conjunction with the Panzer divisions, using them as spearheads and to scour side roads and lanes. In Norway motor cyclists were widely used to probe the Allied defences. Strange as it may seem, it appears that the German methods in France tended to cloud the issue so far as our own authorities were concerned. There were instances in which the Germans unwisely used motor cycle troops en masse, and when the leading men were picked off by rifle or machine-gun fire the remainder were killed or injured in the ensuing crash. Are there not ways and means of employing motor cycles for offensive purposes which afford the riders a reasonable degree of safety? Obviously, no one would advocate using them in a body in the way adopted by Germany in France. Has the tactical use of motor cyclists ever been thoroughly explored—needless to say, in conjunction with the question of suitable, really quiet and light motor cycles?”



In response to fuel

shortages the Swedes produced a number of electric lightweights including the Elcykel, which was made by a General Motor's subsidiary.



"This picture of a Triumph speed twin outfit being run on producer gas comes from Gothenburg, Sweden. No details of the home-made equipment are available, but it looks neat and is reported to operate satisfactorily. The owner found his experiments somewhat costly, and experienced some difficulty in obtaining a licence."

"THE AMERICAN 'JEEP' or bantam car has entered the fray, proved itself and reached large-scale production. Its capabilities across country are remarkable, and teaching a man to handle it efficiently takes less time than it does to teach him to make the best possible use of a sidecar-wheel-drive outfit. For special purposes, however, the latter would still seem to have a place. It is appreciably lighter, turns round in little more than its own length, and demands less rubber, steel, aluminium and fuel. That the Germans have made great use of sidecar machines is only too well known. Motor cycles have, of course, been employed by the 8th Army in many cases where difficulties of navigation and over supplies do not arise, as witness the various photographs we have published. DR work in the desert is but one phase of the present war. Motor cycles, which often

proved worth their weight in gold during the retreat to Dunkirk, will almost certainly play a great part in the offensives of the future."

The War Office did indeed decide that military outfits were rendered obsolete for cross-country work by the Jeep, but M20 and 16H outfits were still supplied for cheap passenger and stores transport, particularly with the RAF and the Home Guard. Sidecar-wheel-drive combos continued to earn their keep in the North African deserts.

"AT A TIME WHEN many clubs are hard put to it to find ways and means of carrying on now that club motor cycling is out of the question, it is encouraging to find that a new club has come into being. The recently formed Reading Ace MCC has secured a clubroom at the Crown, Crown Street, Reading, for use every Friday, from 7.30-10pm; all motor cycle clubmen in the district are invited. Tomorrow evening (Friday) there will be talkie film show. A library is being formed. The hon secretary is D Broughton, 25, Beresford Road, Reading."

"ON NOVEMBER 21st a training event was held at Bagshot for Home Guard despatch riders of L and M Zones. Training on six different types of hazard, with a demonstration at each, was followed by a competitive event, and the Home Guard authorities seemed well satisfied with the progress made."

"WEST BRISTOL CLUB supplied the 'civilian experts' to demonstrate to and instruct some 96 Home Guard despatch riders on Sunday in a special DR training scheme sponsored by Gloucester Home Guard."



Rikuo, having made 18,000 1,200cc VL side-valve Harley clones, was switched to armament production by the Japanese government.



Back in the US of A Indian ceased production of its in-line four.

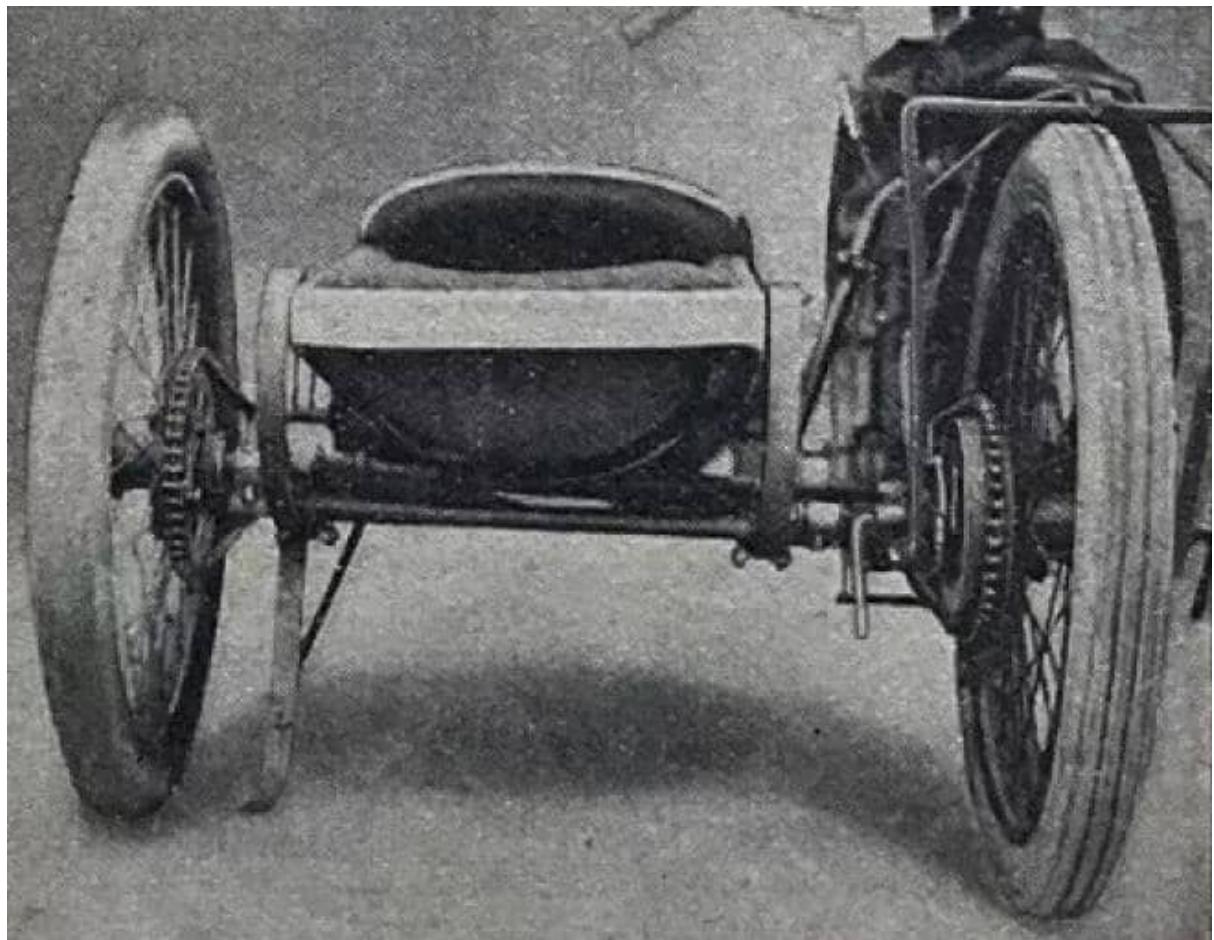
"MOTORISTS ARE REQUESTED not to exceed 40mph. The request comes from the Government. No Order or Art is to be introduced. Lord Templemore made this announcement in the House of Lords last week. The Government had been asked whether it was proposed, during the present emergency, to prevent high-speed driving, thus bringing about economies in tyres, petrol, oil and maintenance generally. It was pointed out in reply that as private motoring is, to all intents and purposes, to cease at the end of the month with the withdrawal of the basic petrol ration for cars, the saving of rubber by the imposition of a 40mph speed limit on private cars, as in America, would be small, also such a speed limit could not be enforced without greatly increased police supervision. Various measures for saving rubber were announced, such as the use of fewer and smaller cars for staff purposes, both by the Army and Government departments, and the issuing of instructions that 40mph is not to be exceeded by the drivers of these vehicles save in exceptional circumstance. (The Fighting Forces, of course, already have a comparatively low maximum speed for each type of vehicle.)"

MOTOR CYCLE RACING in the USA was suspended for the duration. At the final dirt-track meeting nearly every bike on the track was British; most of the trophies at the last road race on the Pacific Coast went to Triumphs or Ariels.

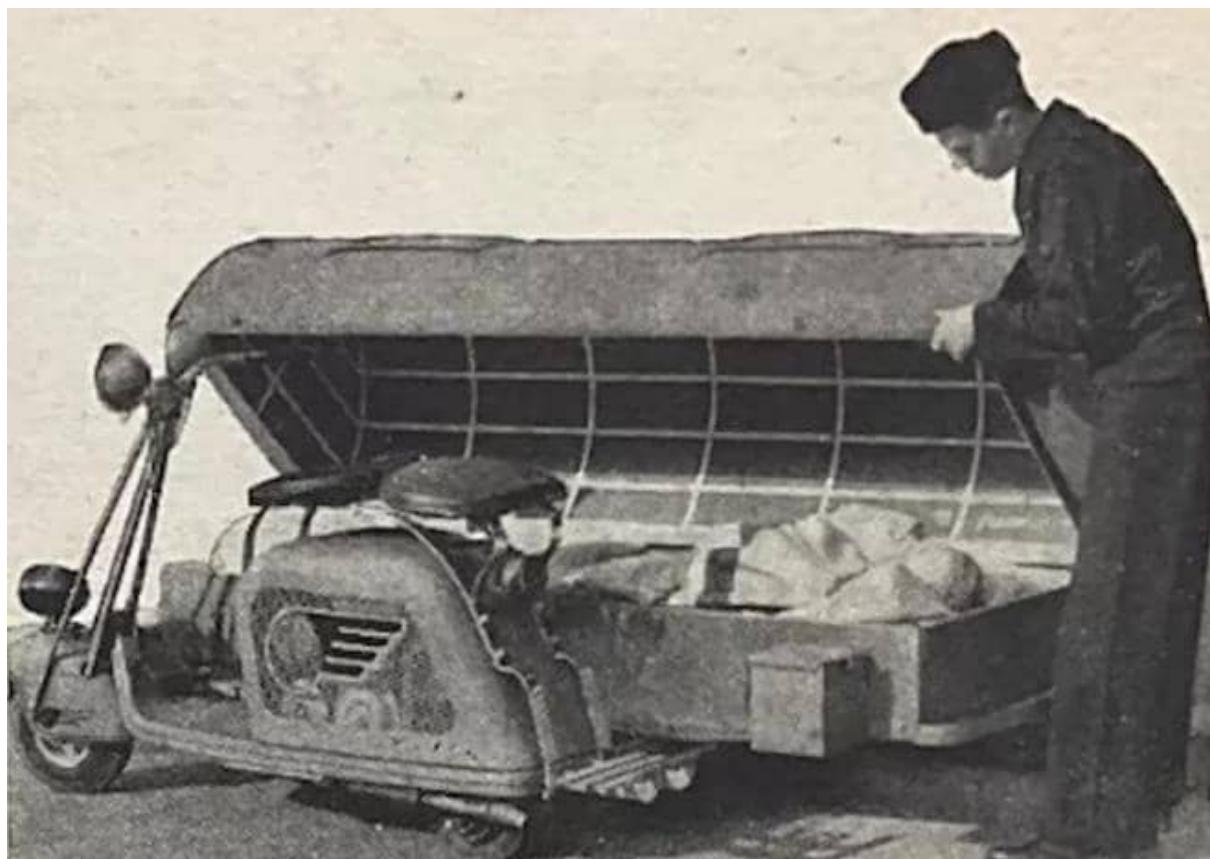
TWO YEARS AFTER the Luftwaffe flattened Triumph's Coventry factory production resumed at the new site in Meriden, Warks. Triumph's wartime production included generators for the RAF, using 500cc Triumph engines with alloy barrels.



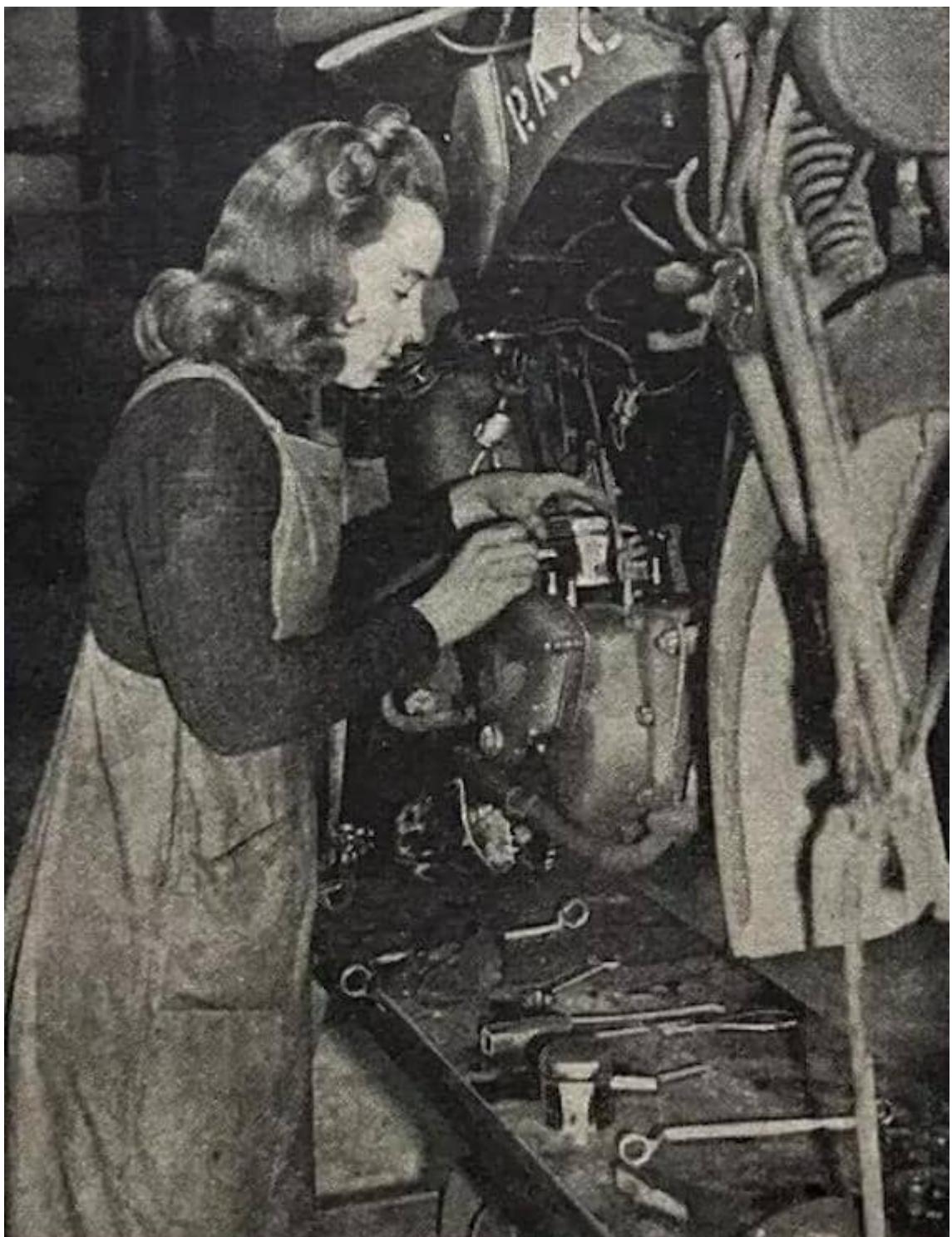
During the German occupation of Czechoslovakia an aeronautical engineer named Jan Anderlé designed this extraordinary 250cc 'two-wheeled car'; several prototypes were completed by the arms company Zbrojovka Brno.



“It is widely held that sidecar wheel drive is of comparatively recent origin and brought about by trials work. Here is a photograph of the Harley-Davidson to which FW Dixon fitted sidecar wheel drive for the 1922 200-mile sidecar race at Brooklands.” [You can read the original story in 1922; wordsearch ‘Dixon’—Ed.]



"Illustrated descriptions of the new American scooter-type runabouts have appeared in these columns. This 'Motor Glider', with its low-level sidecar-type ambulance, is in use at the Naval Training Station, in the United States."



“Some readers expressed surprise on reading the recent leading article, ‘Mechanics—New Style!’ in which it was stated that motor cyclists might soon find their repairs were carried out not by men, but women. A considerable number of women are now employed on repairing Army motor cycles. Here is Miss Daphne Avery, busy at her special war job.”



WW2 1942 The Royal Montreal Regt Petworth (well, part of it) in training near Petworth, Sussex.



A

Canadian DR in training 'over here'.



***You'll find more wartime pics in the World War 2 Gallery; here's a selection of 1942-vintage ads.***

# ARIEL



You—the machine and the joys you have had to forgo for the time being are things that remain, they will be there to resume when the sterner job is done.

We venture a forecast—the Ariel will be a better machine for the experience.

ARIEL MOTORS LIMITED · BIRMINGHAM · 29



The dainty days are done for the duration—likewise the dainty diets.

So as America goes to war, it also goes for more and more bread. Recent surveys show bread sales increasing steadily ever since war was declared.

The reason is that bread is one of our best sources of food-energy. No other food can be eaten with such regularity and still not tire your taste.

And today you can buy the new enriched white bread—with all its extra measure of Vitamin B<sub>1</sub>, niacin, and

iron—and be much more certain your diet is up to full war standards.

Just remember—whether you're a nurse or a housewife, an office worker or a

riveter—this is no time to go easy on such basic food as bread. See that your family has an extra loaf every day or two.

GOOD AUTHORITIES AGREE: when you work harder, you need more energy-foods such as bread. Bread is "standard equipment" in the lunch boxes of war-time American workers.



↑  
IF YOU ATE NOTHING ELSE, you'd get enough energy to do an hour's housework from 3 slices of bread; to sew for an hour from 1½ slices of bread; to chop wood for a half-hour from 4 slices of bread.

MOST GOOD BREAD IS MADE WITH FLEISCHMANN'S YEAST  
More commercially baked bread is made with Fleischmann's Yeast than with all other kinds combined, for reasons mostly in Fleischmann's Yeast. Fleischmann's Yeast is the yeast which makes possible the uniformity, consistency and dependability of bread made only of Fleischmann's Yeast, but vastly outstrips all others as well. More than 4000 different strains of yeast are selected from thousands gathered all over the world, and kept under continuous observation and study in Fleischmann's laboratories. This results in Fleischmann's Yeast being selected for American bakers, millers and confectioners year after year. For Fleischmann's Yeast is the yeast which makes possible the production of enriched bread with Vitamin B<sub>1</sub>.

# Bread is basic

# ON RECORD



owners  
and their  
experiences  
No. 5

.....and not only in the Motor Cycling press are pictures and paragraphs being devoted to B.S.A. in action. Glance at your daily paper and whenever you see a soldier, a sailor, a Free Frenchman, or one of the go-to-it workers on a motor cycle, take a second look. Nine times out of ten you'll find he's riding a B.S.A. .... B.S.A.'s in action today are a promise of even finer things to come tomorrow.

BSA CYCLES LTD., BIRMINGHAM, 11



1908



60 m.p.h.  
on  
a bicycle!

With the passing of private motoring and the more modest pace set by bicycles on the roads today, many a frustrated motorist will whistle in wonder on hearing that it is possible to cover more than 60 miles in one hour — on a bicycle. Yet such is the case. And it was first done in 1908 — by an Englishman, A. E. Wills — on an English machine — a B.S.A.

That world record 34 years ago marked just another milestone in B.S.A. history. Many a milestone has since been passed, and the B.S.A. organization with its reputation for fine products and processes — from cars to bicycles, motor cycles to guns and steel — is already planning to pass further milestones in the future.

B.S.A. GUNS LTD. • B.S.A. CYCLES LTD.  
WM. JESSOP & SONS LTD. AND J. J. SAVILLE  
& CO. LTD. • LANCHESTER MOTOR CO. LTD.  
THE DAIMLER CO. LTD.  
TRANSPORT VEHICLES (DAIMLER) LTD.  
B.S.A. TOOLS LTD. & BURTON GRIFFITHS  
& CO. LTD. • MONOCHROME LTD.

**BSA**

The Birmingham Small Arms Co. Ltd., England





In war time, more than ever, a satisfying smoke is a comfort and a pleasure. It means a lot to men in the Service and to men and women everywhere. Because of its *Right Combination* of the world's best cigarette tobaccos Chesterfield leads all others in giving smokers more pleasure. It is definitely *Milder*, far *Cooler-Smoking* and lots *Better-Tasting*. Whatever you are doing for Uncle Sam, Chesterfields will help to make your job more pleasant. They never fail to *SATISFY*.



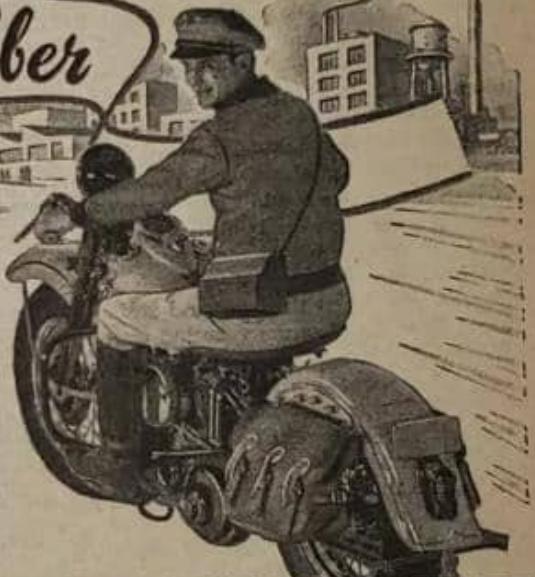
# It's Chesterfield



HARLEY-DAVIDSONS  
**SAVE**

**Gas, Oil and Rubber**

Today's shortages find the lucky owners of Harley-Davidson Motorcycles cooperating patriotically in the conservation of gas, oil and rubber. They get back and forth to work in a jiffy and at a small fraction of the cost of other motorized transportation. Harley-Davidsons are regular gas and oil misers, and with only two tires they save rubber. While there are no new Harley-Davidsons available now for civilian use, your dealer may have some good values in reconditioned models.



**HARLEY-  
DAVIDSON**



**SEND COUPON NOW!**

HARLEY-DAVIDSON MOTOR CO., Dept. M1, Milwaukee, Wis.

Send FREE copy of big 24-page "Enthusiast" magazine filled with thrilling motorcycle pictures and stories. Also other literature. Stamp is enclosed for mailing cost.

Name \_\_\_\_\_

Address \_\_\_\_\_

**ALL OUT FOR Victory WITH**

**HARLEY-DAVIDSON**

Motorcycle clubs all over the country are volunteering for civilian defense duty. Members proudly use their rugged, dependable Harley-Davidsons for messenger and errand service, escort and patrol duty, and render valuable aid to other volunteer branches. Harley-Davidsons' greater flexibility makes them the ideal vehicles for this type of service, and their unmatched economy conserves gas, oil and rubber for the nation's Victory Drive.

See your Harley-Davidson dealer — learn about the superior performance of these world champion motorcycles. Also look over his special values in reconditioned models.

**HARLEY-DAVIDSON  
MOTORCYCLES**

**MAIL COUPON NOW**

HARLEY-DAVIDSON MOTOR CO., Dept. P, Milwaukee, Wisconsin

Send FREE copy of big 24-page "Enthusiast" magazine filled with thrilling motorcycle pictures and stories. Also literature on the latest Harley-Davidsons. Stamp is enclosed for mailing cost.

Name \_\_\_\_\_

Address \_\_\_\_\_

FOR OUTDOOR **THRILLS!**



# Indian

SPRING FRAME  
MOTORCYCLES

Only Indian offers "Spring Frame" smooth-riding comfort and safety, plus new streamlined beauty. National Defense may mean a wait for one of these great Indians, but your Indian dealer will gladly help you get more service out of your present machine.

ASK YOUR DEALER FOR THIS  
NEW **FREE** BOOKLET

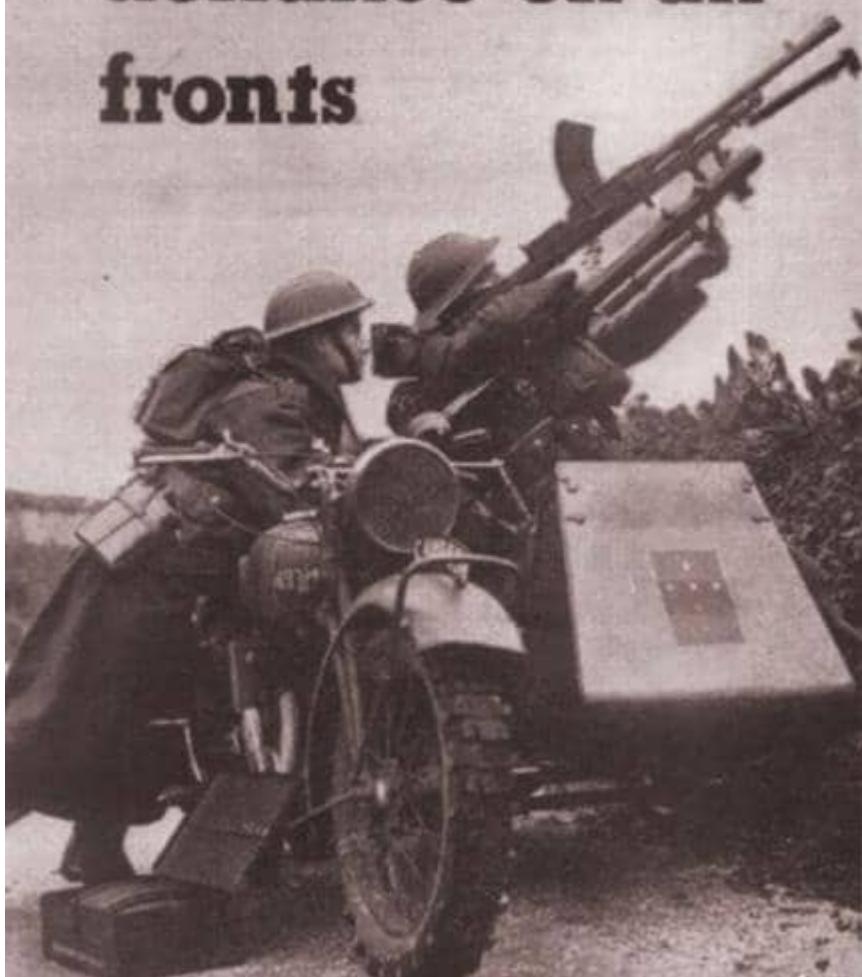
Jam-packed with ideas to help you get more out of *any* make of motorcycle. Ask your local Indian dealer for a free copy, and Indian literature.



INDIAN MOTOCYCLE CO., SPRINGFIELD, MASS.

# Norton

in defence and  
defiance on all  
fronts



**CASA SPORT**

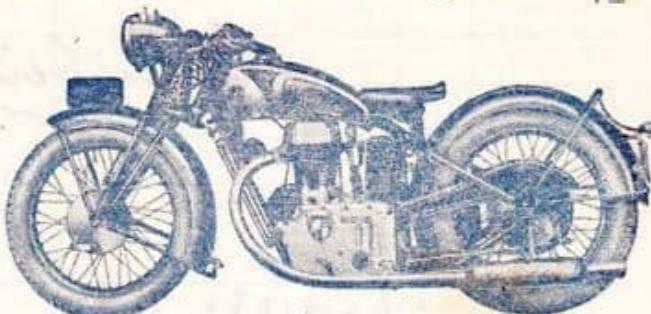
DE  
*Alberto Carvalho Araújo*

59-PRAÇA CONDE DE AGROLONGO-60  
TELEF. 76  
B R A G A

BICICLETAS E ACESSÓRIOS  
Oficina de reparações em Motos e Bicicletas  
BICICLETTAS DE ALUGUER  
SECÇÃO DE PINTURAS  
ARTIGOS DE FUTEBOL

Motos **FFN**

Soldaduras a autogénio  
em todos os metais



COMPA E VENDA DE LÃS EM RAMA  
ARMAZENS: 20, Rua Mártires da República, 24  
**PREÇOS SEM COMPETÊNCIA**

**TRIUMPH**  
*TRANSMISSION*

*See*

Some of the power developed by your engine is unavoidably lost in transmission, but regular adjustment will minimise this loss, and reduce wear and tear.

CLUTCH PLATES—These have cork inserts and spring nuts should be adjusted if slip occurs. Tighten with key provided until stud is flush with end of thread. Avoid over-tightening, which will cause clutch drag.

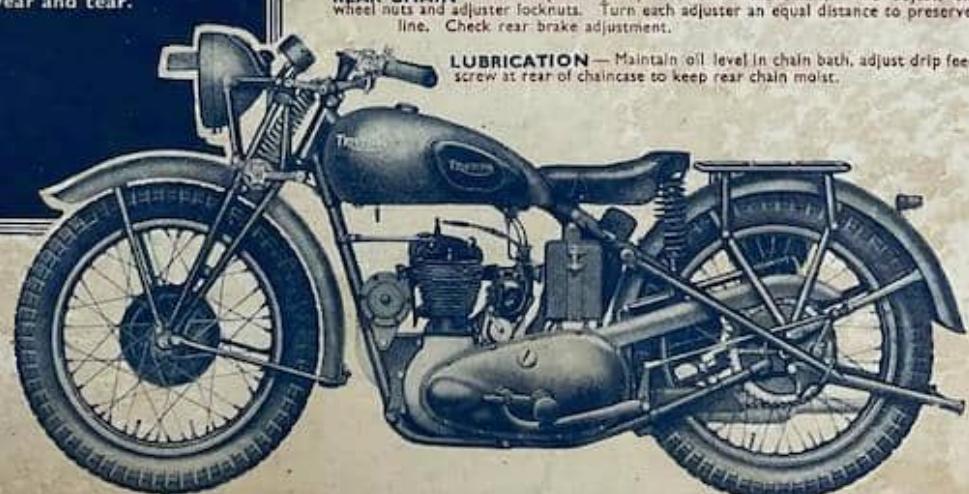
CLUTCH CABLE—Grease occasionally for smooth action. Lever should have slight free movement.

CLUTCH ROD—Remove gearbox filler cap. Operating Rod adjuster then accessible. Allow slight movement between rod and clutch arm.

FRONT CHAIN—Requires  $\frac{1}{8}$ " up and down movement on centre of run. Check frequently by removing filler cap. Rectify tension by adjusting gearbox position. Rear chain must then be checked.

REAR CHAIN—Also requires  $\frac{1}{8}$ " up and down movement. To adjust, slack off wheel nuts and adjuster locknuts. Turn each adjuster an equal distance to preserve wheel line. Check rear brake adjustment.

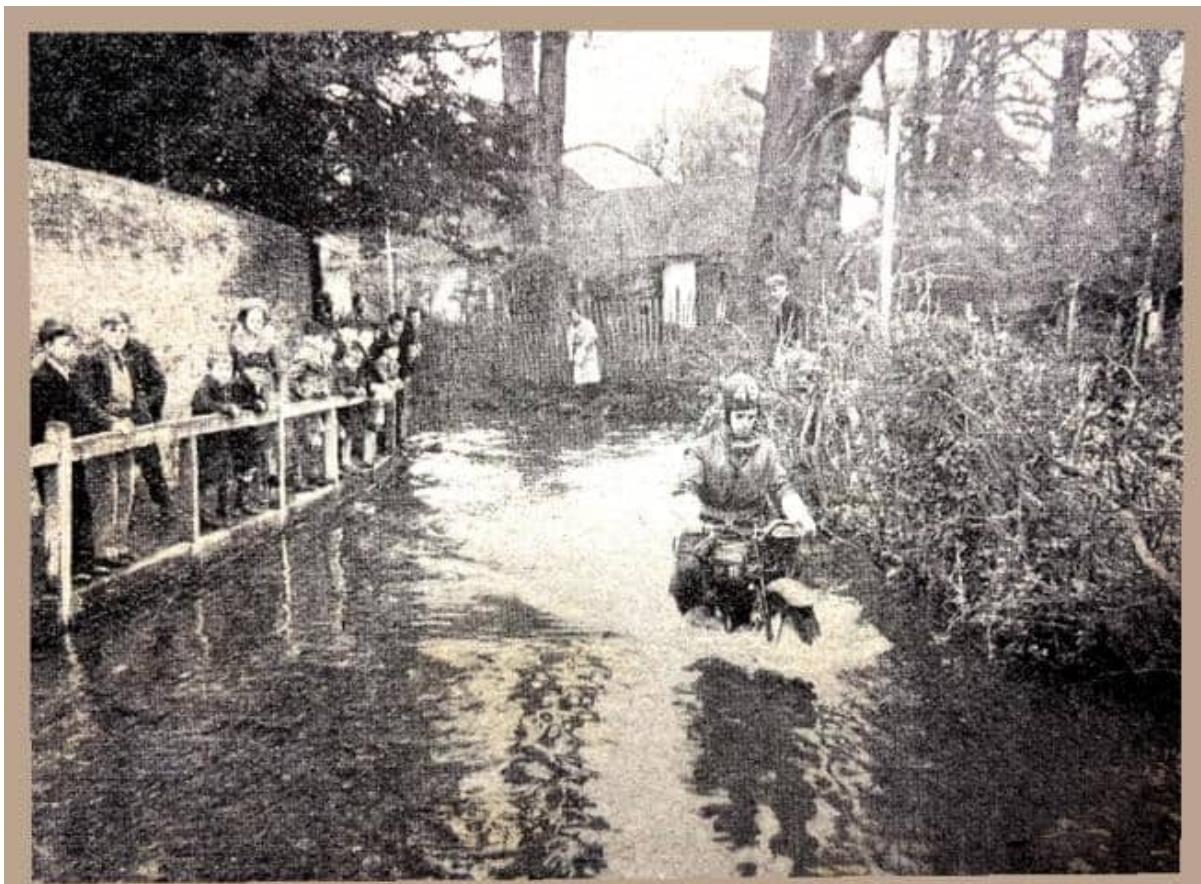
LUBRICATION—Maintain oil level in chain bath, adjust drip feed valve screw at rear of chaincase to keep rear chain moist.



TRIUMPH ENGINEERING COMPANY LIMITED ENGLAND

1943

"ON SUNDAY RIDERS from various companies of a divisional RASC in the South-East competed in a trial, the object of which was 'to afford riders an opportunity of putting into practice lessons of cross-country riding learnt in previous instruction, and, as a result, to improve the standard of cross-country riding.' Most of the competitors were drivers, with a sprinkling of officers. Most of them knew little or nothing of cross-country riding until comparatively recently; their only instruction had been virtually in their spare time—a few short evenings devoted to various types of hazard, with the usual procedure—lecture, demonstration, plus personal attempts, with mistakes pointed out and corrected. Primarily a team event, the Medway Challenge Cup Novices' Trial, as it was officially termed, had much of the delightful atmosphere of an inter-club competition, with friendly rivalry between the various units. The Medway Challenge Cup was put up by Major GLM Smith-Masters, who was responsible for the organisation and general direction of the event, ably assisted by Capt JR Gilder and Capt HP Clayton. The competitors, 66 in all, were started at intervals; every one of them was similarly mounted-on standard 350cc side-valve WD Royal Enfields. Some of the machines were said to be about three years old, which, with the kind of life led by the average WD machine, spells a rather ripe old age! The 11 observed sections were on a commendably brief course, mainly short and very well chosen. Among notes on the route sheet was the following: 'On observed sections think what you are going to do before you try them and remember what you have been taught.'"



“Most of the way through the water of ‘Palfrey’s Puddle’ was clear enough for the bottom to be seen. Here Cpl VR Williams, making a perfect crossing, has just eased slightly to his left to avoid a small boulder in midstream.”



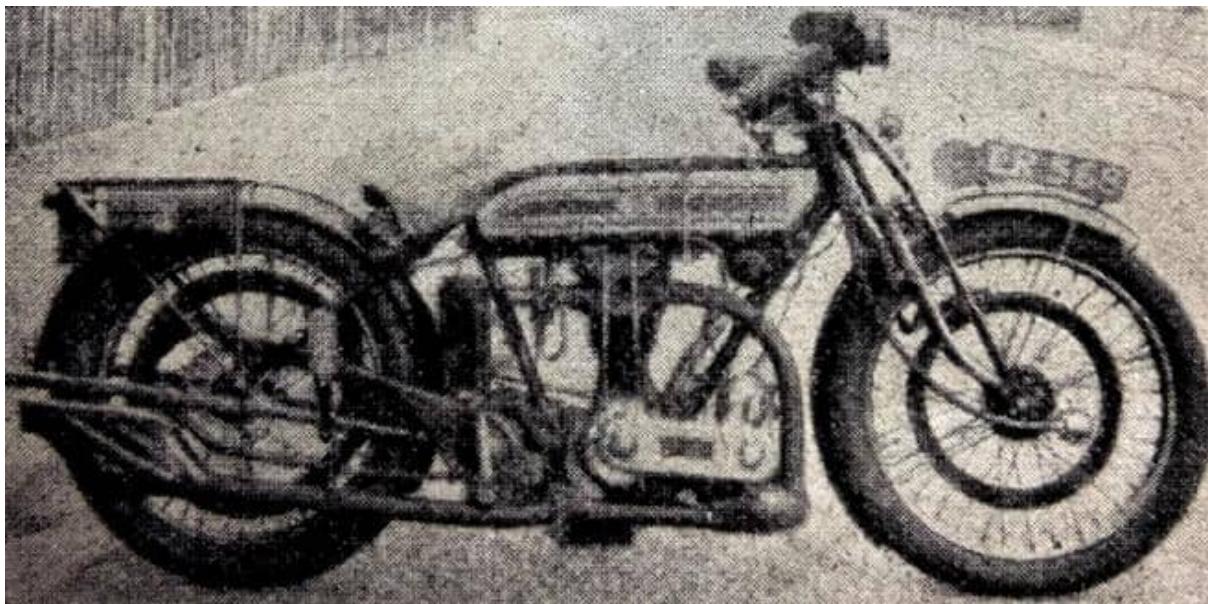
"Dvr W Raphael making his masterly descent of the deep, loose sand section, 'Deeble's Drop'. Both clutch lever and exhaust valve lifter control can be seen (the left hand is touching neither), while a small spurt of sand thrown up by the rear tyre is evidence of the careful throttle control which is permitting the engine to give just enough power to drive the machine down."

"CRITICISM OF THE BRITISH Army's motor cycles following the Middle East and Tunisian campaigns is probably inevitable. Not only have there been semi-official comments that Axis machines are better than ours, but also eulogies of German and Italian motor cycles from motor cycle enthusiasts in our Forces, officers and other ranks, who have been fortunate enough to lay hands on captured machines and use them as their personal 'hacks'. We do not say, and do not consider, that the present WD motor cycles are the best possible for military use. On the other hand, sober analysis does not suggest that the Axis has excelled itself. In all discussions of relative worth it is necessary to think in terms of 'fitness for the purpose', and the purpose in this case is purely military. The question, surely, is whether British despatch riders would be better served by Axis machines than their own, whether traffic control motor cyclists are better equipped in the enemy's ranks than our own, whether German or Italian motor cycles are better than ours for convoy work, and so on. It is not a matter of being intrigued at being provided with a spring frame, or relishing the trouble-free nature of shaft drive. The whole question is 'fitness for its purpose', and in the case of Britain it has been a matter of considering the battle-fronts of the world. The Axis has issued its motor cyclists with

machines of types which comparatively few German or Italian civilians could afford before the war. Certain of those motor cycles are extremely good and possess features which every motor cyclist must bemoan. But nothing we have seen to date leads us to believe that those responsible for Axis military motor cycles are in any way super-men. To quote one point regarding the solo machines, there is their weight. Features there are which are worthy of close consideration by our authorities at home (and we trust the responsible authorities will examine, test and analyse), but it would be a pity if this country blinded itself to the only thing which matters, namely, that the motor cycles shall be the best possible for the work for which they will be employed. The motor cycles with which the British Forces are equipped are very ordinary machines of inexpensive type; basically, they are, in the majority of cases, not specially modern, civilian-type models. As readers will recall, it was not until the time of Dunkirk that the General Staff were aroused to the fact that motor cycles possessed any great value other than for carrying despatches. Then there was the cry for more motor cycles and still more motor cycles ; the War Office even issued an appeal to the general public to sell their machines to the Government. It is a matter of history that in the early part of the war the majority of motor cycle firms, with no Government orders for motor cycles, had to turn over to other work, and, when the call for motor cycles came, there were not the necessary production facilities. In the interim it has been difficult, if not impossible, to change to new types of machine; to do so would upset production, and any decrease in output was unthinkable. Lately, however, there have been changes in all manner of directions, and the question arises as to whether the present may not be an opportune time to review the whole matter of the military uses of motor cycles and, at long last, produce machines which are the 'best possible'."

"BETWEEN 1922 and 1928 you were kind enough to publish a number of articles and letters of mine, the later of which mostly dealt with sundry modifications to the design of a 1923 Triumph Ricardo rebuilt with a two-valve head, and the results thus obtained. I should like to put it on record that this veteran, after some years of retirement prior to the war, was still going strong until laid up in December last, and that her petrol consumption has averaged 106mpg and oil consumption about 2,500mpg, a pillion passenger often being carried. On one long double journey in company with a friend riding a modern Tiger 90, his petrol consumption was about 85mpg while mine was up to its average. Due probably to the Tiger's 100lb greater weight, my acceleration up to 50mph was as good as his; my advanced years discouraged me from exceeding 55mph, which could be reached with lots more throttle available. The one and only mishap during this war period (apart from some tendency of the elderly saddle to come adrift) was the breakage of an outer valve spring—of my own design!—but this caused no delay on the road, for 45mph can be held on the inner spring only.

**Kenneth H Leech, AMICE, BSc (Engineering), Chippenham."**



"Mr KH Leech's 1923 Ricardo Triumph, which was 'going strong' until laid up last December. Petrol consumption averaged 106mpg."

"IT IS NOW ALMOST as dangerous to ask any knot of young men whether a piston stops as to mention the Pope in Londonderry. The latest dictum is that 'stop' means a 'period of time', and not a 'point in time'. Will those who hold this extremely revolutionary view of the King's English please proceed to define a period? Apparently they mean that an hour is a 'period', but that one-fifth of a second is not a 'period'. What authority do they adduce for this dogma? Actually, both sides are surely quibbling? Motion may be arrested for such an infinitesimal period of time that for all sensory or measurable purposes the arrest may be ignored. I would like to complicate the dispute by asking what happens at both ends of the stroke to a piston with a badly worn gudgeon pin bearing, plus a ditto on the big-end of the rod? Does it perform a miniature tap dance?"

"I SHOULD LIKE to enter this piston-stopping argument. I look at it this way: Revolve the flywheels at, say, 66rpm and the piston will definitely be seen to come to rest at TDC. Now double the rpm and the stationary period will be halved; double it again and the stationary period is once again halved. You can go on doing this up to thousands of rpm, but that stationary period will always be there, no matter how many decimal places you halve it to. So the piston does stop.

**RWRW, Warwick.**

"AFTER READING the article from an officer who says that the piston does not stop, I have decided to give you my experience and settle the question once and for all. It was very nice the way he worked out that the piston travels in an arc, but this is not so in practice, although it sounds good in theory. We have here several cutaway engines for demonstration, and if they are turned over slowly you can actually see the piston stop both at the top and bottom of the stroke; in fact, we held the piston still at TDC, and it was possible to move the crank a few degrees in either direction without moving the

piston. If anyone still doubts this I can only advise them to try to find a place where they have an engine with half the cylinder cut away and see it for themselves. Good luck to the Blue 'Un, and keep it going.

**CVX194.**

"THE LETTER FROM Mr F Parker is rather amusing in that he considers it an 'elementary' problem as to whether the piston stops at TDC and BDC. I would like to ask him a question. Assuming it is admitted that the piston only stops for an instant, an infinitely short space of time, what is his definition of 'stopping'? Surely it is that the piston shall occupy the same position for more than an instant. How, then, can we say that it stops 'only for an instant'?

**HD Pinnington, Home Forces.**"



"Course the piston stops, chump."

“OUR CLUB IS CARRYING on although our membership is dwindling (owing to members joining up), and we will continue to meet just as long as there is one member left.’—  
Pennsylvania motor cycle club’s report.”

AMC SOLD THE SUNBEAM marque to BSA which also acquired Ariel from Jack Sangster, who wanted to concentrate on building up Triumph Engineering (where Edward Turner had become managing director). Ariel stayed on at its Selly Oak base.

“COLD, WET RIDES were under discussion. The man who spends his life carrying out mileage tests of WD motor cycles mentioned the pleasure he obtained from long, hard runs in the winter: how he might arrive at his destination cold and not entirely dry, yet he had thoroughly enjoyed the day. Every enthusiast knows the sense of achievement to be gained from battling successfully with the elements. At one time this arose from the completion of any journey—those early days of which Ixion writes so amusingly. With the growth of machine reliability, much of the romance of riding a motor cycle disappeared according to some, though it is noticeable that the same old hands are seldom backward in suggesting shortcomings in the modern machine. Now that (on peaceful runs) only Nature can provide the odds, it is not surprising that the virile sportsman rebels at the thought of built-in legshields and windscreens. He feels that in losing the wind on his face and the lashing of rain he is relinquishing an essential part of his pleasure. Much the same was said of gear boxes and clutches; and so spoke enthusiastic car drivers when saloon bodies were mooted. The latter were not forced to purchase closed cars when they were introduced, but the vast majority changed to such cars before very long. Motor cyclists will not have to buy machines with better weather protection after the war, but there are many who are compelled to use their motor cycles irrespective of the conditions (which is not always so with those in the enthusiast class), and who, if provided with efficient, built-in shielding after the war, will find it a boon. Even if such shields eventually become standard, presumably there will be something left for the enthusiast, for what provides a sense of achievement to equal that of making a good showing in a difficult sporting trial or scramble? ‘Yes,’ some may say, ‘but that would be impossible on a machine with shields.’ The answer, of course, is that it depends upon the nature of the shielding. The oft-mentioned 398cc ABC was no less suitable for sporting trials because of its legshields and under-shield. Assuredly, greater protection from the weather will be introduced and sooner or later become the rule.”

“HOW MANY MOTOR cycles there are on the roads of Great Britain after the war depends not so much upon the types of motor cycle offered to the public as upon whether the Government encourages the use of motor cycles. Such is the view of manufacturers. They say that if there were no driving tests, licences and insurance required for autocycles and other small motorcycles—if the treatment of motor cycling was similar to that accorded on the Continent pre-war—there would very soon be over a

million motor cyclists in Britain, a home market which would greatly assist them in selling motor cycles overseas. There is no doubt that had Germany, for example, not removed restrictions from 200cc motor cycles she would never have built up her great motor cycle movement...Henceforth Britain must be prepared: there is no hobby sport which provides such valuable training for peace or war as motor cycling."

## **Ixion Talks About Grilled Ham and Eggs!**

**The Author with Fiendish Delight (in These Days of Rations) Conjures Up Memories of Outstanding Meals in this Country that Positively Make the Mouth Water**

"IF SURPRISE AND EXCITEMENT accompany a meal abroad, the high notes of an unfamiliar table at home are usually either solid satisfaction, or—occasionally—disappointment, when a bad meal is dished at an inn where unimaginative owners are content to line their pockets from the bar and chuck poor food at their clients. Surprise may not be absent, as when a Cotswold inn serves a huge Spanish onion, piping hot, with a grilled kidney mysteriously sheathed in the onion's heart. But surprise is rare. I wonder what English meal stands out most clearly in my readers' memories? Mine was a simple meal, served in a simple roadside inn. Three of us had driven far north in a Riley tricar to test its paces on Sutton Bank. We had travelled all night, and the night had been cold. We stopped at Osmotherley in Yorkshire for breakfast. Our hostess served a huge dish of grilled ham and eggs. Four eggs per head! Great succulent slabs of ham, an inch thick at the centre, as tender as blancmange. Or again, when a Zenith Gradua and a Rudge Multi had both elected to give us day-long trouble. We had tasted nothing since lunch, and we ran into Bridport starving at nine. The innkeeper regretted that dinner was long since over. He would ask the cook to do her best. Anon he returned to say his son had just come in from a fishing trip, and he served the largest grilled sole I have ever met. It was as large as a tray, and was followed by a pie of Morello cherries. No complaints, thank you! Or when similar roadside troubles delayed us, and a Berkshire inn served a dish of freshly caught grayling. Is the grayling our finest fish, or was it just hunger-sauce that rendered them so delicious? Not every surprise is all it threatens to be. Four of us once blew in to the Cartwright Arms at



“Baby apricots are all stone...We spanged them all over the carpet with our ineffectual spoons.”

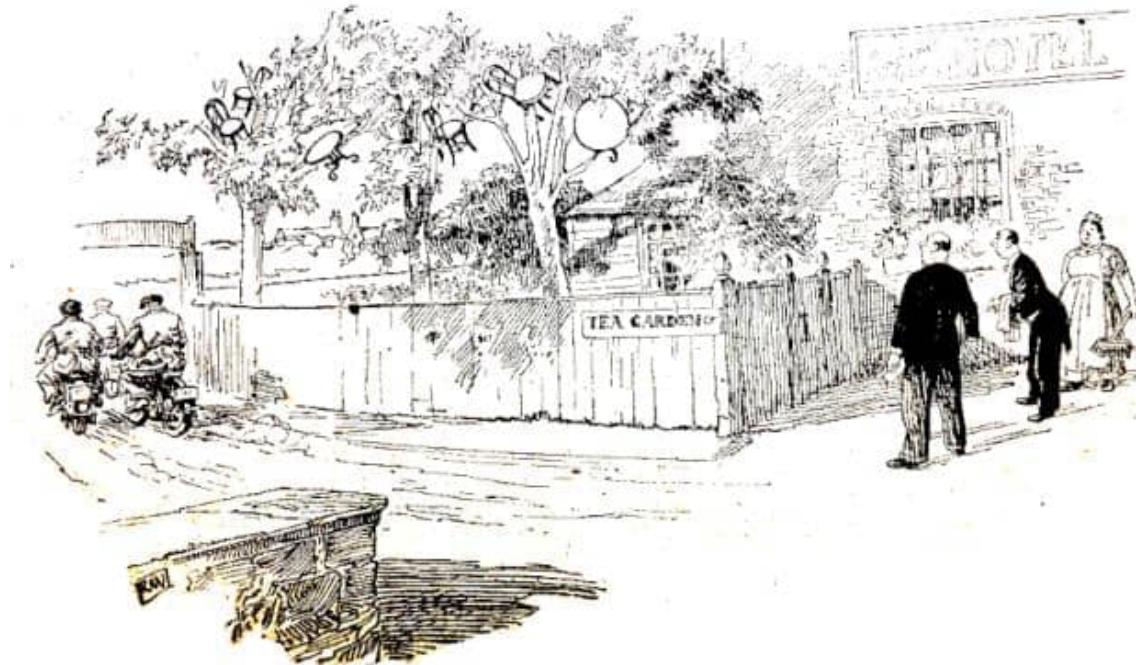
Aynho for lunch. The landlord informed us that it was our lucky day—they'd just been thinning out the apricots, which are a feature of that lovely village. But the apricot tart was a shock. Baby apricots are all stone and no pulp. It is hard work to chip the pulp off them with a spoon, unless his cook had tripped up. We spanged them all over the carpet with our ineffectual spoons. But surprise works both ways. Once in an ACU Six Days at Taunton I found every pub full, and was put to sleep out at a local railway worker's. I sulked about it, as I had booked my room weeks in advance. But at 5am next morning Mrs Railwayman brought me up a quart mug of steaming tea, and a mighty jug of boiling water to shave in, preliminaries which nobody enjoyed at the official hotel. There is usually a lot of crowding at the hotels on a Scottish Six Days. The menus display a certain monotony—you can almost bet on cold salmon with cucumber, cold roast lamb, and apple tart. But the Scottish salmon and lamb take the sting out of monotony. Often the tables are already spread for the hungry horde which bursts in at midday; and I have seen an Edinburgh official arrive early, and imitate the Mad Hatter's tea party in Alice in Wonderland, by moving round the laden board and emptying six plates of cold salmon before the boys got in. This same worthy once shared a two-bedded room with me, and when we rose at 5am he silently offered me his flask. I had no stomach for whisky at that hour. He only knew one reason for refusing whisky at 5am, viz, that one had drunk too freely overnight. But he knew a cure for that, and offered me flask No 2. On my enquiry, he explained that it contained Kümmel, which North of Tweed ranks as an antidote for overmuch whisky. When I refused the Kümmel, he struck me off his visiting list. At another Scottish hotel, trouble en route caused me to arrive



“...developed acute lumbago. Next morning I was lifted into the saddle.”

after all beds were let. I slept on a sofa under an open window in the lounge, and developed acute lumbago. Next morning I was lifted into the saddle and completed the trial to earn a gold medal. As those were the days of single gears and LPA ('light pedal assistance') any reader who has ever had a bad go of lumbago can imagine my agonies during the day. I know quite a lot of motor cyclists who cherish warm memories of a Lyons mixed grill, which for years ranked as a sort of standard midday meal at the Olympia Shows. But to my thinking the best mixed grills in the world used to be served in the Danum Grill at Doncaster. I have already indicated that the quality of a chance meal in this country, even in peacetime, is something of a gamble. But even gambles come off now and then. During the last war I rode down into Devon in midwinter, and put up at the Bedford Arms at Tavistock. The head waiter was dubious. Rationing was in force, the hotel full and the hour late. He came back presently—did I fancy a devilled bone? Now a devil bone is a rarity in the present century. For some mysterious reason it went out of fashion with Beau Nash. One occasionally meets it in a private house, where the wife knows her job; but at hotels and restaurants it is as defunct as the dodo. Well, I agreed, and presently the 'bone' arrived. They'd had a Norfolk turkey at dinner the day before, Christmas being just over. It must have been a 30lb. bird, and had evidently died in its prime. It was the very best eating in the meat line that I have ever struck; and I live in hopes that some day some hotelier will offer me another to match it. Beat it, he could not. Ever since that late supper my definition of 'waste' has been 'a turkey leg undevilled'! Very few women know how to organise a picnic meal. Most of them pick sandwiches as the main dish, though they ought to know that the bread of sandwiches dries stale in an hour or two. I except one lady of my acquaintance, and accept her picnic invitations at sight. She comes from Kegworth—ever been there? In Kegworth there is a pork butcher who makes pork pies worthy of at least equal esteem with those

hailing from Melton Mowbray. I think they're the best in the world. Now a fat slice of pork pie is perfect for a picnic. It doesn't stale, it doesn't drop crumbs, and it is first-rate eating. Fun and games are associated with many famous hotels in motor cycling minds. There is usually some kind of a rough house at least on the last night of a Six Days.



“The landlord overcharged and treated us very casually...the entire outfit had been transported during the night and was festooning the trees in the garden...”

Indeed, there are quite a few British hotels at which motor cyclists en masse became either temporarily or permanently unwelcome. One landlord overcharged us and treated us very casually. He woke one morning to find that during the night all the chairs and tables had vanished from the tea garden which was the pride of his life. Some time elapsed before his staff realised that the entire outfit had been transported during the night and was festooning the trees in his garden, where they were securely wired. Another landlord excommunicated us because some bright spirits, deeply imbued with the spirit of speed, organised a sweep for the fastest time from the basement to the attic in his lift. In rather a different category stand the before-breakfast bridge parties which once occurred at certain Liverpool hotels. Some of us found it necessary to return to London as soon as possible after a TT. This entailed catching the night boat out of Douglas on the Friday—usually that ‘peerless ocean greyhound, ss *Fenella*’, the old *Fenella* which took about eight hours for a trip which the *Ben-my-Chree* could do in under three. Reaching Liverpool towards 3am or so, we would start a bridge game in our hotel until it was time to wash and breakfast ready for the express to Euston. Many world-famous men have won and lost money at these early bridge games, and the hotel staff naturally thought we were all quite mad. Well, well, some day the British hotel and

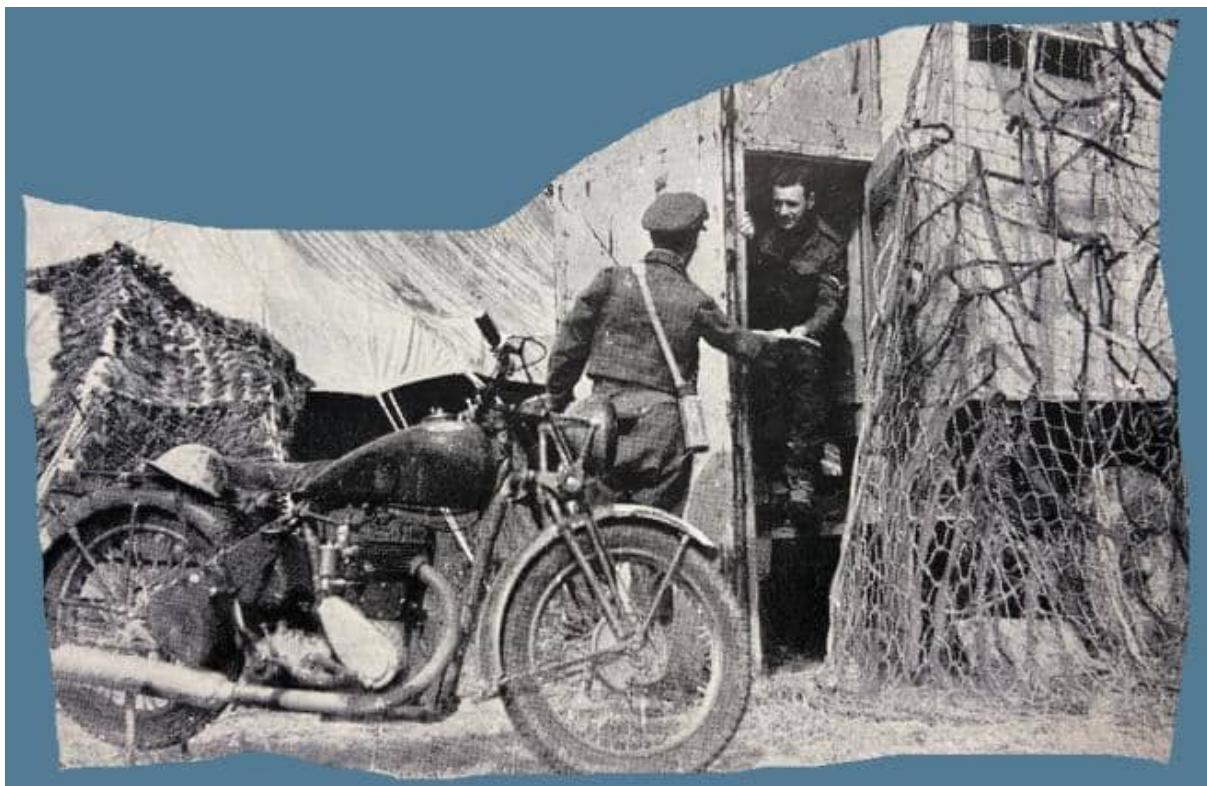
the British cook will return to their own, and I hope handle their job even better than they did before That Man came into power and laid a pleasant world in ruins.”

“THE SECOND LEADING article last Thursday mentioned the new motor cycle clubs that the despatch riders of Home Guard and Civil Defence units are determined to constitute when the day dawns. Last week-end the Editor had an invitation: the DRs of his local Home Guards, he was told, had decided to form their club now, the Commanding Officer had accepted the presidency; would he become vice-president? A name has been chosen for the club, a banking account opened for the weekly sixpences the Don Rs have been paying, and the aim is to get in touch with all the lads who had been despatch riders in the battalion and passed on to the Regulars, and to get everything taped for the future. The name is ‘Syx Don R MCC’, meaning the 6th Surrey Battalion Despatch Riders’ Club. Is this the first of the new clubs to be actually formed?”

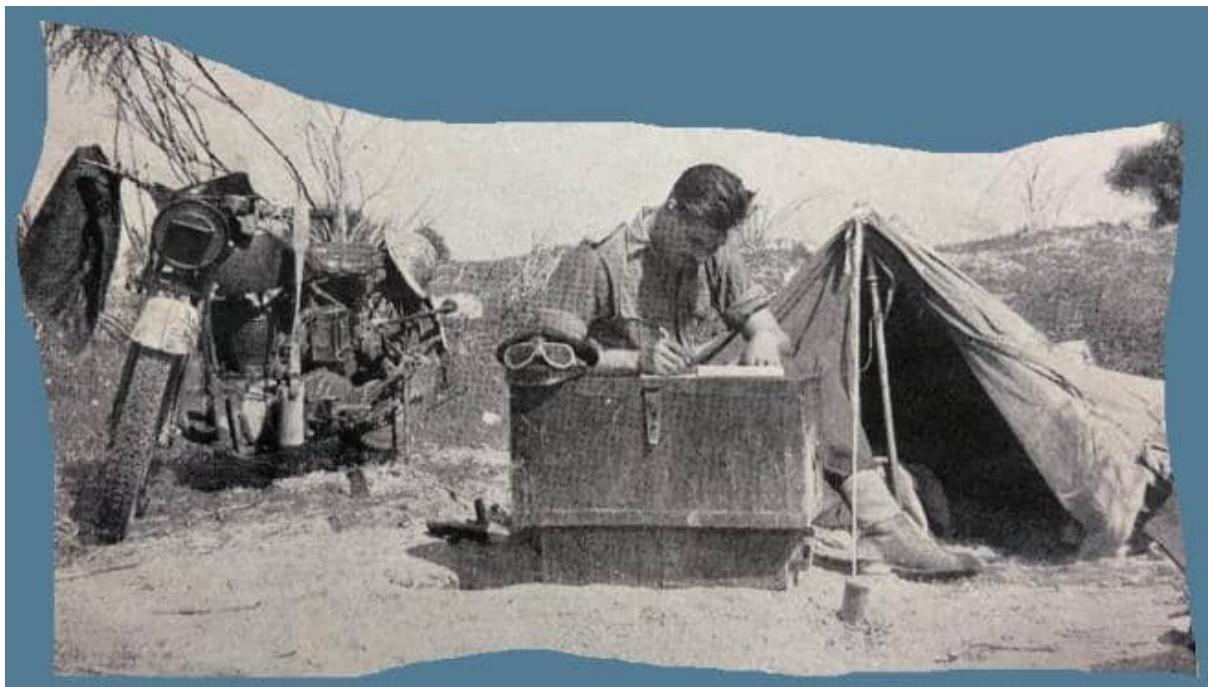


“THERE ARE FOLK in this 40-year-old photograph who are known to thousands of present-day motor cyclists. For instance, who is there interested in the sport who has not seen or heard of the famous International time-keeper, AV Ebblewhite, who died earlier in the war? Dear old Ebbie is on the extreme left. Largely hidden by him is apparently Joe van Hooydonk, who for many years was president of the Motor Cycling Club. The rider alongside is JF Crundall, another stalwart in the MCC, who used to act as a chief official on the Land’s End, Exeter and other trials. His opponent, whom he beat in this 3-mile match race at the old Canning Town track, is HA Collier (Matchless), joint managing director of Associated Motor Cycles. The latter’s brother, CR Collier (Matchless), won the first TT (and the 1910 event), while he won the 1909 TT. Mr Collier’s pusher-off and his companion in the white waistcoat are his uncles, the late WE and C Ilsley—another name very well known at Associated Motor Cycles.”

"WITH THE RAF despatch riders in the Western Desert: RAF motor cyclists, unknown to the world at large, provide the vital point-to-point link: desert conditions, speed of advance, hazards of war—often these preclude any other method of communication. The DR, as usual when his job is toughest, comes into his own. The glimpses here are of an RAF motor cyclist who, before the war, was a London shipping clerk."



"Journey's end for the desert Don R: the message is handed in at a well-camouflaged airfield in the desert."



"Back in camp again after a day in the saddle, the DR writes a letter home. The box which forms his writing table contains his kit. Always close at hand—always ready—is his machine."



"A

CLOSE-UP of the 'Wellbike', which has been used by British Airborne troops. It has a telescopic saddle mounting, folding handlebars, pannier petrol tanks with pressure feed by hand pump, a single rear-wheel brake and a clutch but no compression-release valve. Bicycle-type front forks are fitted. The steering calls for a certain amount of care."

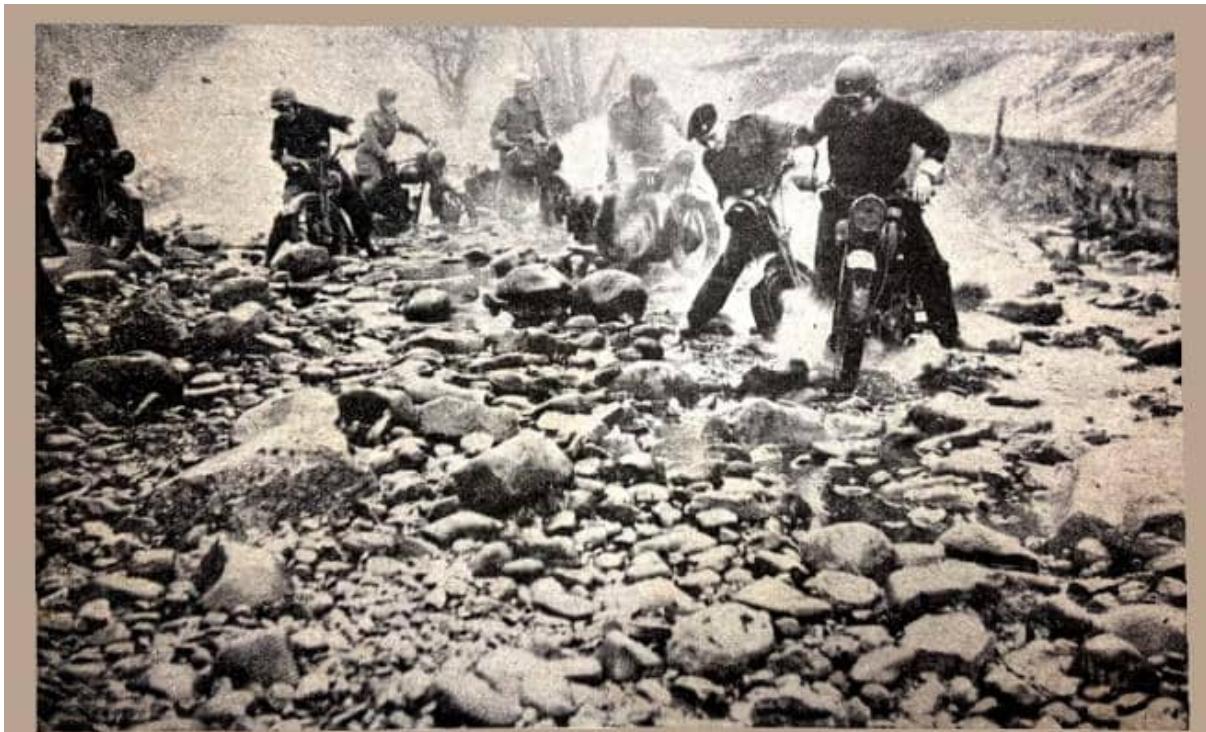


"CONTAINER JOBS.—A British official picture of one of the Excelsior 'Wellbikes' being removed from its parachute container. These scooter-like machines which have been issued to parachute brigades weigh under 80lb and, like autocycles, whose 98cc Villiers engine unit they possess, have a single gear."



"NORTHERN NIGERIA IN WARTIME. The rider is a signalman of the West African Corps of Signals. The natives have proved themselves first-class despatch riders, their stamina and knowledge of bush craft being of tremendous value when carrying

despatches on long journeys through country where wireless and cable messages cannot be sent."



"SHADES OF THE SCOTT TRIAL! The Royal Armoured Corps leave nothing to chance: their motor cyclists are expected to do a tough job in the very thick of any fighting—and they train for it. Here some of them are seen during the final stages of training."

# United States Patent Office.

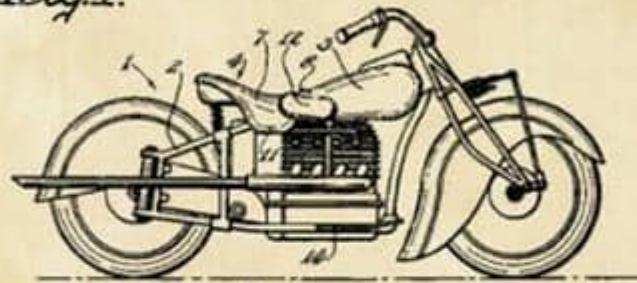
STEPHEN DU PONT, WILBRAHAM, MASSACHUSETTS.

Design No. 2,330,341

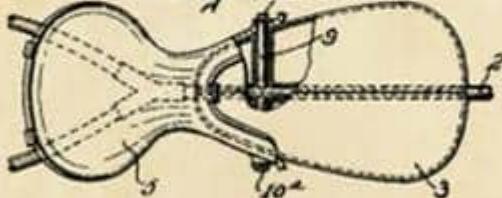
dated September 28, 1943

## DESIGN FOR A MOTORCYCLE SADDLE.

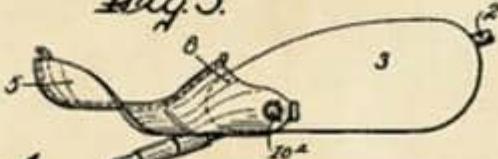
*Fig. 1.*



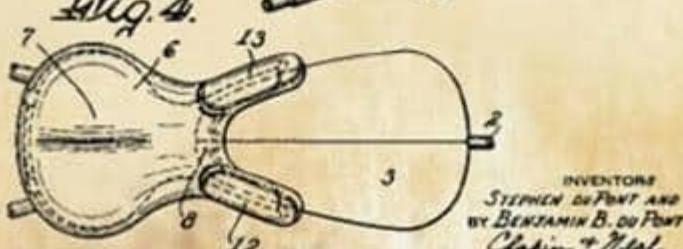
*Fig. 2, 10*



*Fig. 3.*



*Fig. 4.*



INVENTORS  
STEPHEN DU PONT AND  
BY BENJAMIN B. DU PONT  
Clayton & Neal  
ATTORNEYS

# United States Patent Office.

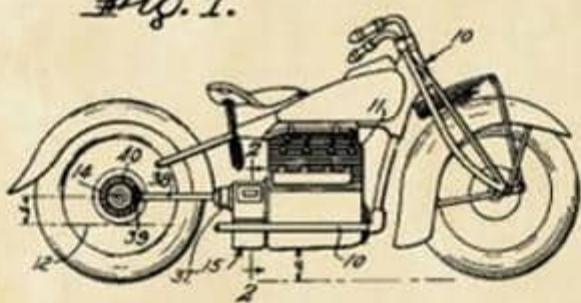
GEORGE B. WEAVER, SPRINGFIELD, MASSACHUSETTS.

Design No. 2,316,477

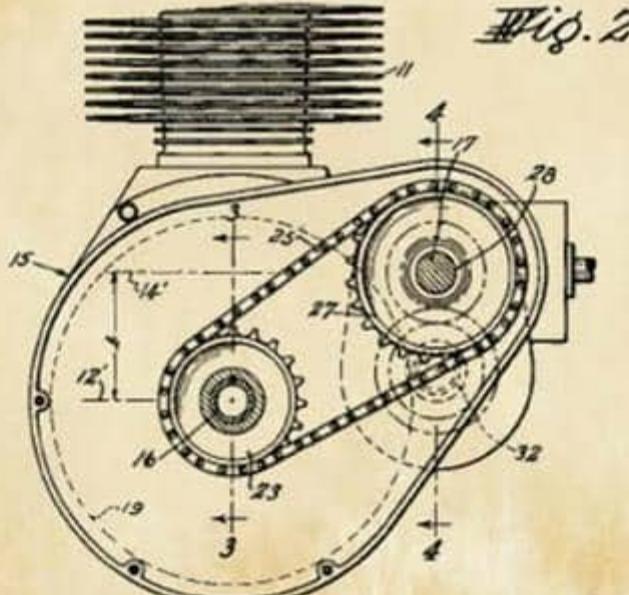
dated April 13, 1943

## DESIGN FOR A SHAFT DRIVE FOR MOTORCYCLES.

*Fig. 1.*



*Fig. 2.*



INVENTOR  
GEORGE B. WEAVER  
BY *Clegg & Neal*  
ATTORNEYS



HAVING COME UP with a successful ohv 500 single for the Swedish army (there's a pic in 1941) Monark came up with a 1,000cc V-twin, primarily for sidecar work, and incorporating sidecar-wheel drive. Only two prototypes were produced because Volvo's 4×4 Suggan was seen as a more effective option, just as the Jeep took over from SWD Big Four Norton combos.



MOTO GUZZI DEVELOPED the 600 U trike from the 1938 ER500. It was designed to haul AA and anti-tank guns, in this case a 37mm Breda.



"And

which did you say was the brake, Sergeant?"

***Here are some contemporary adverts.***

**The BELSTAFF**  
**MOTOR CYCLE**  
**COATS**  
 are hard to  
 get now, but  
 there'll be  
 plenty when the  
 war is over

**BELSTAFF MFG. Co., Ltd.,**  
 Longton, Stoke-on-Trent

## 250 BARGAINS

12 and 18 Monthly Terms Available

SEND STAMP FOR LIST

			Dept
432 10	1329 B.S.A. 250 c.c. s.h.v. 4 sp. 4 sp. 1000	£11 0	
457 10	1329 TRIUMPH, 350 c.c. s.h.v. 7H. 1000	£14 10	
230 10	1329 B.S.A. 350 c.c. s.h.v. 4 sp. 4 sp. 1000	£15 10	
230 10	1329 P. & M. 400 c.c. de luxe, 3 sp. 3 sp.	£15 10	
432 10	1327 BUDGER, Special, 400 c.c. s.h.v. 4 sp.	£13 10	
626 10	1340 ARIEL, 500 c.c. s.v. 4 sp. 112, 2. 1000	£16 0	
539 10	1338 TRIUMPH, 500 c.c. s.v. 4 sp. 1000	£12 10	
432 10	1327 B.S.A. 500 c.c. s.h.v. 4 sp. 1000	£11 0	
539 10	1329 B.S.A. 500 c.c. s.h.v. 4 sp. 1000	£11 0	
539 10	1329 PANZER, Model "B" 500 c.c. s.h.v.	£16 10	
274 10	1329 VELOCETTE, 350 c.c. s.h.v. Kestrel	£19 0	
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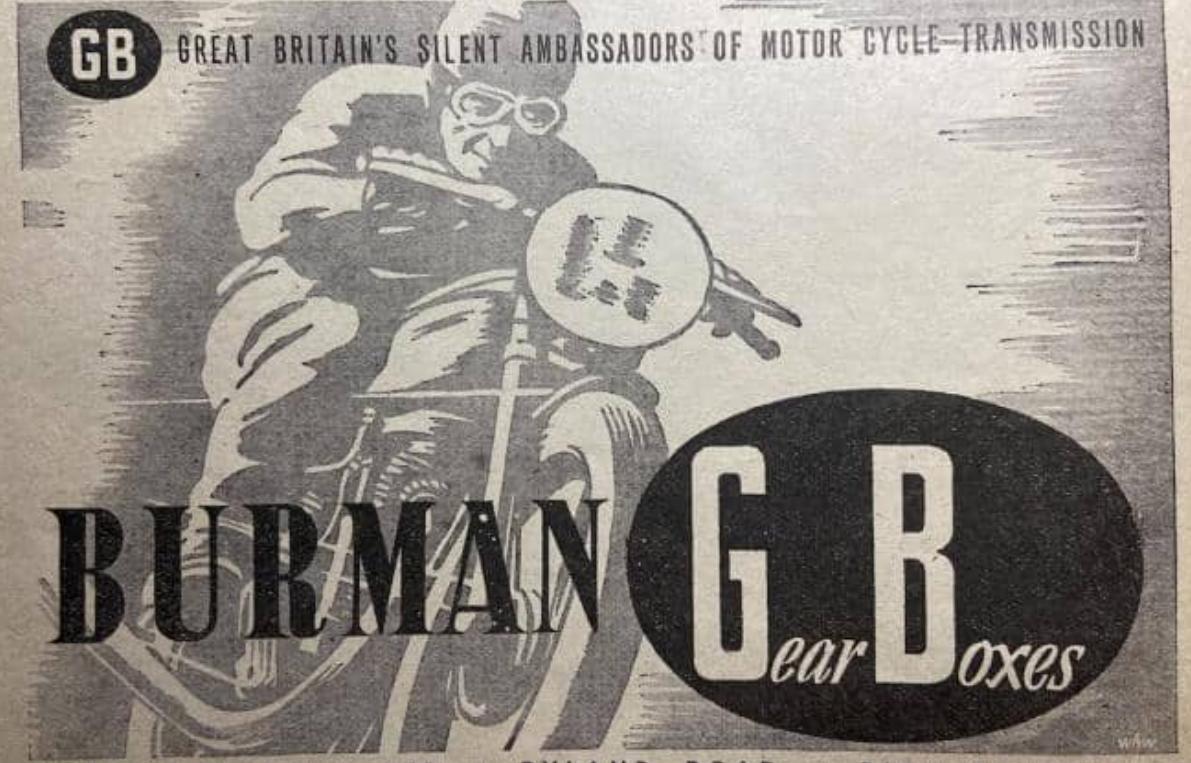
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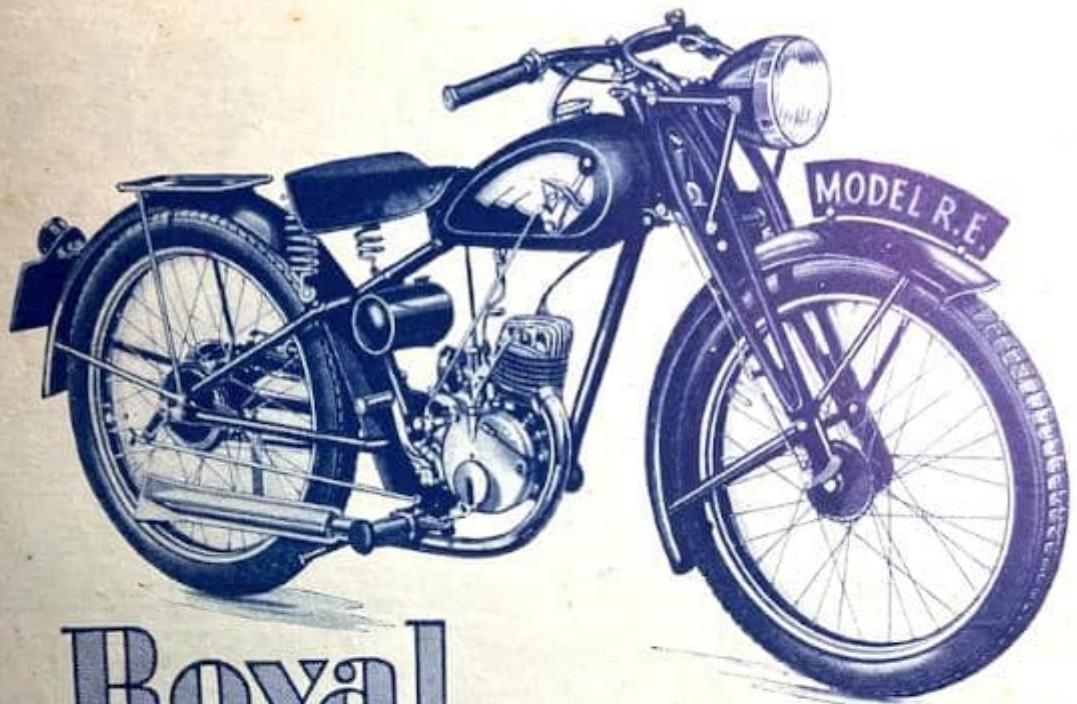
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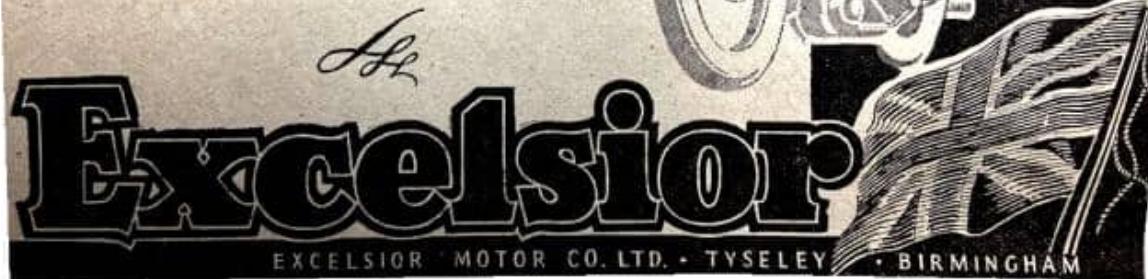


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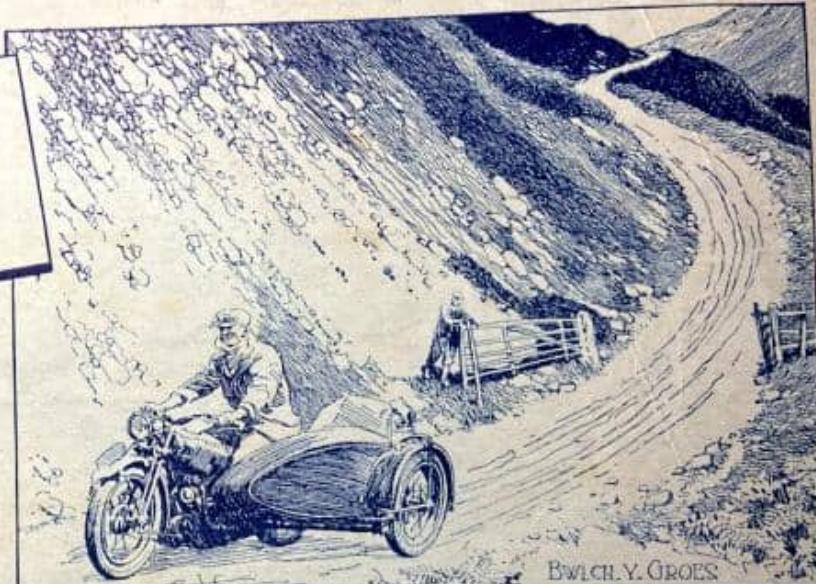
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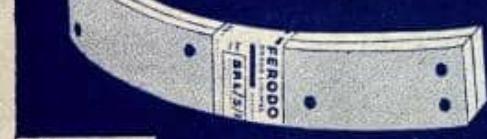
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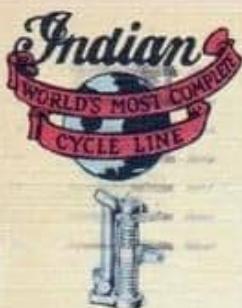


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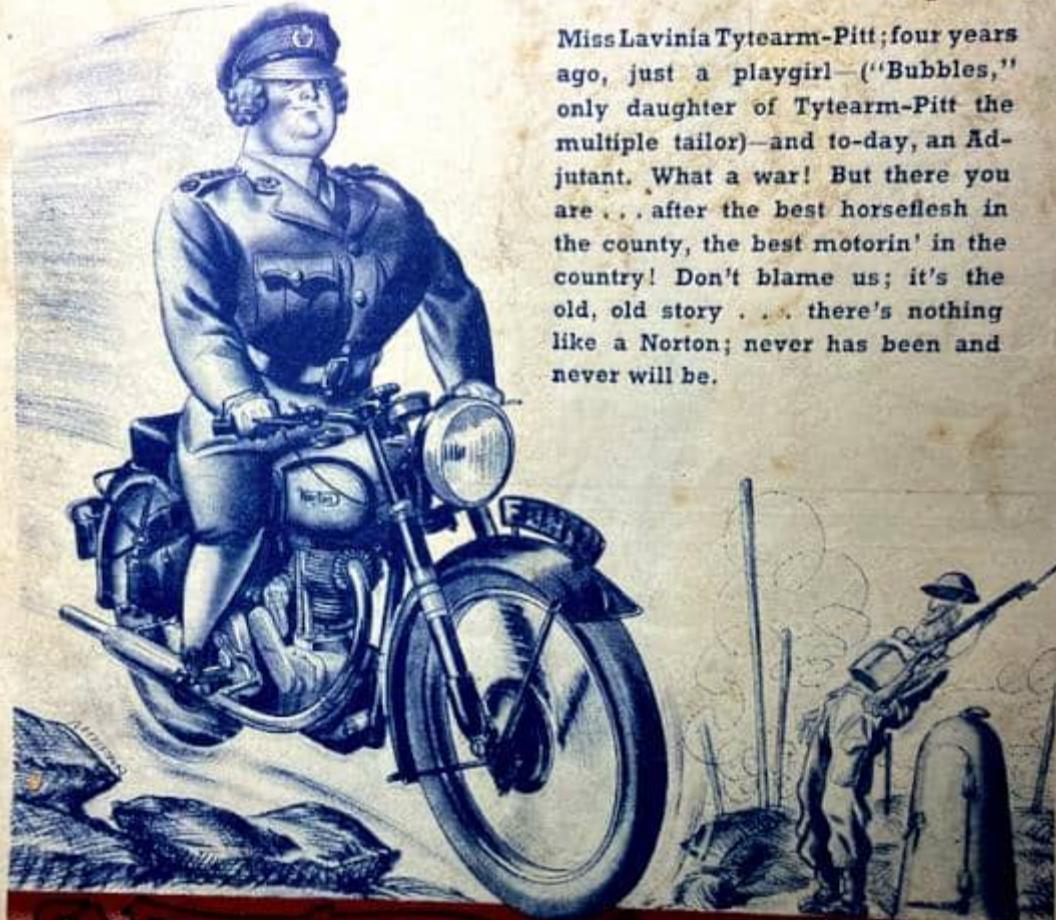


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1944

"AFTER YEARS OF drab khaki it seems strange indeed to see a line of brand-new motor cycles finished in chromium and colour—more than strange, highly encouraging. Today there are various colourful new mounts. They are the prototypes of the models which their sponsors hope to set about producing just as soon as the war ends and controls permit. In some cases the machines may be (and are) merely mock-ups—that is, their beauty is little more than skin deep, for instead of being complete motor cycles they have been schemed and fashioned solely for the factory executives to decide whether they approve the proposed external appearance. Some of the schemes we have seen strike us as colourful, to say the least. Possibly it is that, after all the khaki and now rather bedraggled civilian models, such machines, bright and spotless, come as something of a shock. Maybe we would feel similarly if it were possible to put back the clock and step into the last Earls Court Show, that of November, 1938. We raise the matter now because design, appearance—everything—is still open to discussion. It is usual for a pendulum to swing: do motor cyclists want to go from khaki to the other extreme? We fully agree that it will be joy to have civilian-type finishes again, and that pride of possession is praiseworthy and should be satisfied, but we sincerely hope that the pendulum will not swing to such an extent that the finishes will be—to use motor cyclists' customary term—'Promenade Percy'. Let there be smart, attractive finishes. Not least, let them be really durable. 'British is best' must be no catch-phrase after this war, but the simple truth resulting from inbuilt excellence, not mere flashiness."—Ixion

"I WAS VERY INTERESTED in Torrens' remarks about riding through gales because during the war I have had the opportunity of riding various Service machines over some of the most northerly of the British Isles, where the wind blows like a thousand devils and shelter is rare. Most of this riding has been done away from the excellent main roads and has been confined to rough hill tracks and peat roads. Under these conditions the technique in a really strong wind appears to be to, go as slowly as possible, and to keep fighting the front wheel over to the windward side of the track, so allowing plenty of room for recovery after the gusts. It is fatal to open up, for one very soon finds oneself exploring the neighbouring countryside. A stern gale is quite exhilarating, but plenty of time has to be allowed for braking. On the other hand, a head wind can be quite a struggle, and many a time I have had to go down into bottom gear to force the machine downhill or round an exposed bend. Probably the most trying manoeuvres are (a) riding on slime with a fierce and gusty cross wind, and (b) negotiating a sharp hairpin of loose stuff with a gale following one into the bend—getting round and back into the wind is a considerable feat of balance. One afternoon a couple of Winters ago the local met office recorded 95mph steady, with gusts of over 100. During the short time that this lasted I took out a Service 350 to climb a winding track up a nearby hill—just to see what it felt like. The gale was blowing into the face of the hill, and at one place the track curved round through an 18in cutting. It was here that the wind took me sideways into

the bank and I stalled the engine. No room to turn; and every time I stood on one leg to attempt a restart, over we went. It was difficult to hold the machine, up even with both feet braced against the foot of the bank. What should I do? It took 20 minutes of furious wrestling to get on the move again. For several months I had the use of a 1929 Flying Squirrel, and it was a revelation on this rough going. The sliding front forks gave a fine long easy movement, and the way the back wheel stuck down to the road was almost uncanny. What a marked contrast to the back wheel hammer of the Service machines!

**BG Wilkinson**, Knaresborough.”

“WE HAVE READ with great interest ‘Don R DGW’s’ letter dealing with the foot-change versus hand-change controversy and can say from experience that we are wholeheartedly in agreement with him. Conditions out here are far from ideal, with congested roads which, when free from traffic, have an abominable surface to contend with, due to the passage of many tracked vehicles, making use of the gearbox a very frequent procedure. Hand-changes just would not do when both hands are needed for control of the machine. Conditions also change very rapidly. When it is hot and dry, clouds of dust are thrown up by the myriads of transport, and when it rains the roads are a sea of liquid mud. Needless to say, these conditions are playing havoc with our machines, resulting in buckled wheels and fractured tyres. This could be eliminated by the fitting of a spring heel. Incidentally, most of us favour using motorcycles instead of jeeps for DRLS, as the use of the latter generally entails long delays in traffic columns, whereas the motorcycle can easily get by. We are fortunate enough to get Motor Cycling regularly each week, to the great enjoyment of all.

**Sigmn GA Peters**

**Sigmn D Guidery.”**



“SERGEANT VINEY demonstrates that a ‘Warhorse’ in standard form is quite capable of a little steeplechasing with an expert in the saddle—or should we say in the stirrups?” The illustration accompanied an article by Sgt BHM Viney and Cpl C Markham on “How to Turn a Standard WD Model Into a Potential Trials Winner.”

“NITOR HAS DESCRIBED a colonel who has made himself a marvellous pair of waterproof gloves. It is common knowledge in the services, especially out East, that in the early years of the war enormous wastage was experienced with every type of

store...which deteriorated if it got damp...Two methods of protection were improvised by the chemists. One was a sort of waterproof cellulose fabric, the other an easily removable dope. The colonel's experiment in glove-making with the former indicates great possibilities for post-war motor cycling.—Ixion.

"FROM A SHORT biography of William Murdoch, the man who invented gas lighting and so paved the way to efficient street lighting [he also built a working model steam trike in 1784—Ed], we cull the following gem. When interviewed for a job by Boulton, Murdoch accidentally dropped his top hat. It made a clatter on the floor. 'Very odd,' said Boulton, and Murdoch had to explain that it was made of whitewood and had been turned out on a lathe!"



"Men of the British Airborne Forces who landed on the Continent on D-Day with two of the Royal Enfield lightweights, true go-anywhere motor cycles, and a folding bicycle. The 'Flying Fleas'—light, easy to lift over obstacles, quiet, capable of 40mph and of averaging comfortably over 30mph and 100mpg—are now used for many purposes and are proving extremely reliable." (Right) "Could you lift your motor cycle over this? A British paratrooper, thanks to the light weight of his 'Flying Flea', makes his way over 'impossible' country. The 'Flea' in this case is a 125cc Royal Enfield."



This Flea's been restored to the condition in which it would have been dropped.

"THE MIDDLESBROUGH MCC discussion on motor cycling for Everyman missed a point of importance. They were informed by their speaker—with perfect truth—that the average 1939 artisan family disposed of no great surplus. An expenditure of £14 per annum on the instalment system was all it could normally manage for a piano, bicycle, or other not-wholly-indispensable article. Such figures place even a new autocycle outside the grasp of such a household. The inevitable deduction was that unless Britain attains a mighty leap in prosperity, no motor cycle can ever belong to Mr Everyman. Yet the fact remains that before this war thousands of artisans owned motor cycles and some of them were not foremen or highly skilled craftsmen working at special pay rates. This puzzle is easily explained by two facts. First, many—probably most—of such machines were bought second-hand—and for £14 you could get an extremely usable bus of that class (I have known innumerable working men who paid no more than single-figure poundage.) Secondly, a good many more were purchased neither out of savings nor from income, but with windfalls. Such a windfall may be a legacy, a price in a newspaper competition (crosswords, bullets, or what not), a bet, a good guess in a football pool, and so forth. It has always been obvious that an artisan working at low rates cannot afford to motor cycle, however regular his employment, except under the two special conditions outlined in this paragraph. For a steady and assured market in new machines the industry must seek higher up the wage scale."—Ixion

GERMANY CEASED PRODUCTION of 750cc shaft-drive military BMWs and Zündapps to concentrate on 125 and 350cc DKWs.

THE UK PRODUCED more than 100 million gallons of benzole from coal.

THE USA REGISTERED 157,496 motorcycles. California led the way with 22,309; Nevada came last with 170.

UK ROAD ACCIDENT casualties soared, due mainly to the blackout, peaking at 4.1 deaths per 1,000.

PIAGGIO ENGINEERS RENZO SPOLTI and Vittorio Casini designed a motor cycle with bodywork fully enclosing the 98cc two-stroke engine and transmission and forming a tall splash guard at the front—along the lines of the Everyman concept developed by The Motor Cycle. The design included handlebar-mounted controls including a twistgrip-controlled gear change, forced air cooling and small (8in)-diameter wheels and a tall central to be straddled by the rider. Officially known as the MP5 (Moto Piaggio no 5), the prototype was nicknamed ‘Paperino’ (‘Donald Duck’).



The Green ‘Un published “A selection of pictures from Normandy and Italy that tell vivid stories and reveal something of the motor cyclist’s important rôle. (L-R): In Italy are scenes of devastation. South African troops are clearing the road through Chiusi. Mud and water in Normandy. Knowledge gained from training on the lines of trials had to be applied even in the negotiation of roads. The caption to this official picture showing British motor cyclists and, on the right, wearing a French helmet, a civil defence worker, reads: ‘First to enter the town (of Caen) where they met up with Canadians who came in from the west.’” This DR was ploughing through flooded fields some 8km to the east of Caen.

“AMERICAN ADVICES REPORT the debut of a novel form of petrol gauge. It threatens to be a shade bulky for two-wheelers, but as it is to be marketed in combination with a standard speedometer, it may adorn the postwar Harleys and Indians. Electrically coupled to the speedometer, it is really a flowmeter, and registers the consumption continuously, as well as the amount of juice remaining in the tank. I dare not prophesy that it will be standardised on many motor cycles, but it will certainly enable owners to check their consumption pretty accurately. It claims to be correct to a limit of one drop per minute.”—Ixion

***Here are some snippets fro the USA, courtesy of Motorcyclist magazine...***

“SOMEWHERE IN THE PACIFIC—’Here’s the loot for my subscription. How about digging up some old pictures, etc and putting them in the magazine? I’m getting corny with those letters to the fellows from babes the majority of us only heard of. Besides you’re not indebted to Harley or Indian so why not get some good articles on British bikes. If anyone were to ask me, which they won’t, American companies will face stiff competition from the foreign makes after the war. . . . (censored.) After the smooth handling and acceleration of the British models, Triumph, especially, I’m sold. That Tiger 100 is a real sport machine. So help me, if you print this, I’ll wring your neck. My best pals used to be Indian and Harley riders and if they found out I turned traitor—well, just don’t print this with my names—(**Name withheld by request.**)”

“WATERLOO, IOWA—I am enclosing my renewal, and wish to extend my compliments on the splendid way you and the staff have carried on the magazine...This year numbers my 26th since I first threw a leg over a sputter-bike, but the acquaintances made with real old timers like JJ O’Connor through the pages of the Motorcyclist make me feel like I am still a youngster at the sport...Keep up the good work.’

**Paul Brokaw, H-D Dealer.**

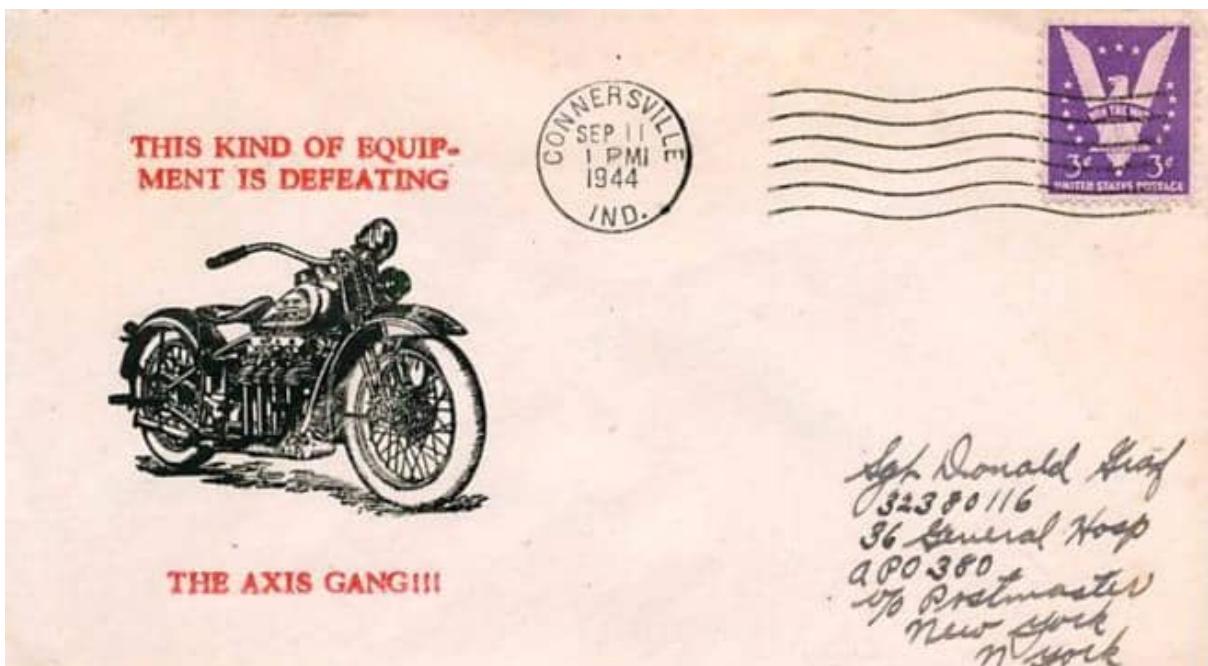
In January 1943 Paul Brokaw as Secretary of the Black Hawk MC, Waterloo Iowa, sent in a story on the death of the five Sullivan brothers, all members of the Black Hawks, who were lost in the sinking of the USS Cruiser Juneau in waters off the Solomons. All members of the Black Hawks, including Paul Brokaw, subsequently entered some phase of military service. After a serious illness and a critical operation at Mayos, Paul is back on the job as Harley dealer in Waterloo. He writes, ‘I just pulled through my operation by the skin of my teeth. Hell is so full of Japs and Huns I guess there wasn’t any room for a minor sinner like myself.’

“BAY CITY MOTORCYCLE CLUB. San Francisco—There was fun aplenty on our club run to Stevens Creek. While enjoying ourselves at the inn there, a party of 15 members of the San Jose Dons happened along. They saw our bikes parked and stopped and joined us and added greatly to the merriment of the party. Sorry that rain prevented us accepting their warm invitation to visit them. Lots of old timer and ex-members whom we had not seen for a long time came out for the annual crab feed and cub pictures. Our members in the services, of whom we have addresses, all received holiday greeting cards, signed by our membership, to show that we have not forgotten our absent brothers. In these days of mechanic shortage we are lucky to be getting such fine service on our motors from ‘Dud’ Perkins shop...Lots of nice letters come in from our members in the service and we read them at the meetings and acknowledge them, telling the absent pals what the gang is doing.

**Mary Binkley, Secretary.”**



"OFF TO THE BLOOD BANK—Motorcycle Unit Of The San Francisco Civilian Defense. Most of these motorcyclists are members of the San Francisco Motorcycle Club and the Unit is headed by Al Fergoda, Secretary of the SFMC. This picture shows the group ready to start on its second trip to the Irwin Memorial Blood Bank Donor Center."





"This

spectacular spill occurred at one of the later Buckeye MC hillclimbs. Picture shows Paul Zalac of Highland Park, Michigan, in a rare pose. Paul was unhurt but a little shaken."

"TORRENS' SUPERB ARTICLE on coil ignition deserves the closest attention from all readers who still nourish prejudices against the coil. Its tail contained a small sting worthy of extraction. He has converted more than one sulky starting motor cycle into a tickle-starter by substituting a racing type of magneto for the ordinary touring or roadster standard instrument. The additional cost will, of course, always remain fatal to the fitting of racing mags on standard machines sold under keen price competition. But the existence of this luxury is not as well known as it might be. Certain types of rider may be glad to know of its existence and to specify it on their post-war machines if—for irrelevant reasons—they refuse coil ignition. It is, so far as my experience goes, better than the 'booster' mags which a few of us used after the last war for similar reasons."—Ixion

## WHAT I RODE IN 1944 . . .

# A Commentary—the Result of Riding Some 50 Different Motor Cycles, Certain of Them Novel and Others, Models We All Know

By "TORRENS"

"IF NUMBERS OF DIFFERENT motor cycles ridden were a true criterion, 1944 would be one of my best years. It was far from uninteresting, for there was a useful number of experimental models to be tried. I love being brought in when a model is in the chrysalis stage—when designers have translated their ideas into reality and seek critical analysis. Design is then entirely fluid. So often by the time one is asked to try a new model and comment the most that can be altered is a minor detail, for the Show is in the offing and it has been essential to press ahead with arrangements for the machine's production. Even when one is invited along in August, ready for the Show in November, one may find, to quote an actual instance, that an item like the rear stand cannot be altered—its improvement must wait until towards the end of the next year. Why one is called in is simply that the motor cycle journalist rides most machines—has a wide knowledge of the behaviour of contemporary designs and should, because of this, be able to analyse and suggest. Of course, he would not be invited to try these machines if as a result the whole motor cycle world would be reading about them the following week. However, there are some things which I can say in consequence of my 1944 experiences; they let no cats out of bags, but may interest. For instance, it is no secret that manufacturers have been expending much drawing office paper and a considerable number of miles on the problems of navigation. I was highly amused at the interest displayed in my Teledraulic-equipped Ariel at one factory and how a very knowledgeable member of the staff, just before I left, proceeded to compare the steering of their mount with that of mine. I was glad that the old hand in question had had a flip on the latter—there was some of his factory's handiwork on the machine, anyway, so it was only right that he should check the result—but I could not help feeling that what he and his colleagues were interested in was how the model handled! They learnt something, and it saved me having to explain that, while the straight-ahead steering with their new layout was super, the steering in traffic and at low speeds in general was—shall we say?—wavy. Another direction in which quite a lot of experimental works needed to get results, which instead of being rather better than those of the past are really outstanding, is automatic ignition advance. If I say that it is surprising how bad auto advance can be you may say, 'Yes, and we don't want it, anyway,' and I should hate you to condemn it out of hand, for I know

from my experiences with it in 1944 that it can be really good and that, for all my love of riding as opposed to mere driving, it is something I want to have myself. It has got to be 'right', though, and I have yet to ride a motor cycle fitted with an auto advance which I regard as dead right. Since it seems certain that much will be heard and seen of such devices I trust there is going to be some very whole-hearted collaboration between the electrical folk and motor cycle manufacturers—on the road and not just on the test bench. Rear springing is a subject on which designers have widely differing opinions. A motor cycle is far from easy as a proposition. I have learnt nothing fresh over the year that has passed, except, perhaps, that there are more ways of approaching the problem than I should have imagined. Some people seem to me to have tended to lose sight of the basic requirements. My whole experience is that if you are going to have real comfort and leech-like road-holding you must have a system which reacts to really small road irregularities. If the wheel has to receive a hefty bang before the springs deflect there will never be a proper degree of comfort, nor that superbly safe steering and braking that are possible. In addition, of course, the system must be such that it accommodates equally happily the mighty shock resulting from a deep pot-hole. 'Yes, one designer will say,' and really absorbs the rebound.' Personally, I have little use for the type of suspension which leaves the tyre to look after the minor irregularities and only comes into operation when the wheel receives a mighty clout. In the past some have suggested that this is all that can be expected with a vehicle such as a motor cycle. Methinks that if they have not changed their minds already they will do so when they have an opportunity of trying some of the systems that have been developed. (*Developed* is the word.) Somehow the suspension must be made to move for the undulations and not merely the bumps. Then, and only then, incidentally, does a sprung driving wheel get real grip: all and, I imagine, more than the grip obtainable on a slithery trials section (or ice-coated road) with a rigid-framed job. Spring frames with the characteristics I have quoted have given me a greater feeling of, safety under vile conditions than I have had with any other machines. Two experiences make me add that the system must be designed so that a run over dirty roads cannot step up the amount of solid friction—turn the suppleness of the frame around the 'dead centre' position into suspension that calls for hammer blows...For me to say, 'What has happened to our fuel consumption over recent years?' may seem stupid,



"Len Heath gazes looks seriously at Torrens' Ariel. Torrens looks serious! The 'Dualseat' has proved very useful during the war."

for I should know, but this is a question which every manufacturer might well put to his design staff. In a 'Workshop' article a short time ago I mentioned a 420-mile day on a 500cc motor cycle which involved the use of only five gallons. The greater part of that distance was covered at an average speed of well over 45mph. Under similar conditions how many modern machines would do the day's journey on less than seven gallons? A fact that escapes many is that at one time it was the rule for 500cc solos to do over 100mpg. And those were days when compression ratios were low and engines, allegedly, inefficient. Few of us needed huge tanks then. Of those machines one can talk about, I suppose the most interesting was Mr. Connell's special Scott, the 'Victor'. I regard the article on the two-stroke that would not four-stroke as one of the most important I have had the opportunity of dangling before motor cyclists. To get all two-

strokes two-stroking right from tick-over—a 600rpm tickover—is not going to be easy. A lot of research is required, and only in part on the sparks side. The spark and the very wide range of advance-and-retard, preferably ingeniously controlled automatically, are important, but it is, I believe, hardly possible to over-emphasise the importance of the silencing system design. The silencing system can make all the odds over two-stroking. It has got to be designed for the engine. A side-line which interested me a lot was that the 'Victor' refused to smoke. This was surprising and pleasing. You may remember that following the article I heard from an enthusiast with unique experience of tiny two-strokes used in model aircraft and boats and that he said in reference to engines of 4-9cc running on a petrol mixture of 3 petrol 1 oil (!)—'With four volts passing through the coil there is quite a blue haze, but with six volts these little engines produce vastly increased power *and* the blue smoke is almost eliminated.' I know that there are some who can hardly credit the results. The facts, however, speak for themselves. Apart from my own Four, the Victor and hush-hush models, I rode over the past year WD Ariels, Nortons, BSAs, Matchlesses, Ariels and Royal Enfields, a Vincent-HRD Rapide, 125cc James, 125cc Royal Enfield—yes, and an autocycle or two. The majority of the non-specials were WD jobs. I will not go into detail, but make merely a comment or two. The first is what a weight the general-purpose WD models are. They have got to be sturdy, one knows, and there is sundry equipment necessary, but all-up weights of around 400lb are excessive and I, for one, hope that after the war the pendulum is going to swing. Weight is often said not to matter when one is on the move, but weight strangles performance and does not help the brakes, the hill-climbing or the cornering. For an Army man under bad conditions weight can be 'killing'. Why the Army's 125s can be used successfully under conditions impossible to other motor cycles—sometimes to all wheeled vehicles—is because they are so light. Even they could be and should be appreciably lighter. And in my experience the reason one hears reports such as 'they were our only vehicles that were mobile throughout the Normandy campaign' is that, being so light, they do not get battered to pieces. I have done much riding of these 'Flying Fleas' over the year—thousands of miles. The pleasure they have given both on the road and in the rough, has been immense. There have been no breakages and, other than plugs cutting out owing to the lead bromide of MT80 fuel and lamp contacts and cables, I have had no trouble. I am forgetting one thing: a rivet in the saddle of the James sheared, which was not surprising in view of all the almost fantastic rough-stuff. Where the Fleas have been improved by their adoption for Service use is in their riding positions. The raising of the saddles has made a lot of difference to the comfort. Incidentally, I still swear by the rubber-band suspension of the Royal Enfield front forks; it is the goods. The 998cc Vincent-HRD Rapide was mentioned in a 'Workshop' article—mentioned in regard to its experimental, free-from-slipping clutch. Of all machines I have ridden over the past year only the Rapide had handlebars which I regard as 100%—narrow and with the ends set at exactly the right angle. Nearly everyone who has tried Vincent bars swears by them; why cannot all other makers provide bars which call forth

similar eulogies? There is a lot in getting the bars just right, from both the bodily comfort angle and that of perfect control. Already a hint or two has been dropped by the makers about there being a still cobbier and lighter Rapide after the war. A 1,000 that is a 500 in weight and wheelbase—a Rapide like this—what a thrill for after the war! My experience with side-valves has been limited to the WD jobs—the 16H Norton and the M20 BSA—and to a mile or so on a 1,140cc Royal Enfield sidecar outfit. Is the side-valve dead, or shall we find in this country someone who, like, say, Jonghi, decides that the most has yet to be made of the side-valve? I have a very soft place in my heart for this type of engine. It has something the others haven't got, and it usually is the most certain of starters. Technical folk declare that they can provide ohv jobs with all the desirable attributes of the side-valve—several others besides—and none of the vices, but they do not seem to translate such schemes into practice. However, there is the prospect of new side-valves in the form of twins, so maybe if there is not too much latter-day over-head-valve technique we shall be seeing the side-valve to the fore again. What else is there to relate? Only this, I think: that in common with all of you I am yearning to try some real civvy-street jobs—hoping that 1945 will be a never-wozzer in the matter of interesting machines ridden, and that 1946 beats even 1945 into a frazzle. Hope springs eternal..."

***As usual, here's a batch of contemporary ads.***



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Jack Service knows a thing or two about motor cycles, for his war duties have brought him lots of experience on a B.S.A. military machine. That's why he won't be put off with the next best thing when he takes up motor cycling again as a civilian.

We at B.S.A. know what he expects from us, and when the time comes the ideal motor cycle will be ready for him. That's a promise that holds good for every motor cyclist in the country—and for their pillion riders!

*\* Jack Service is the symbol of the young, motorized British Army. He is that man in uniform who did not want this war but who'll win it.*

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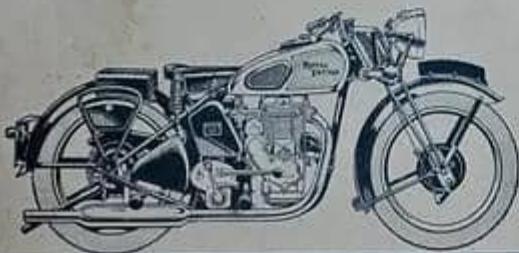
"MADE LIKE A GUN"



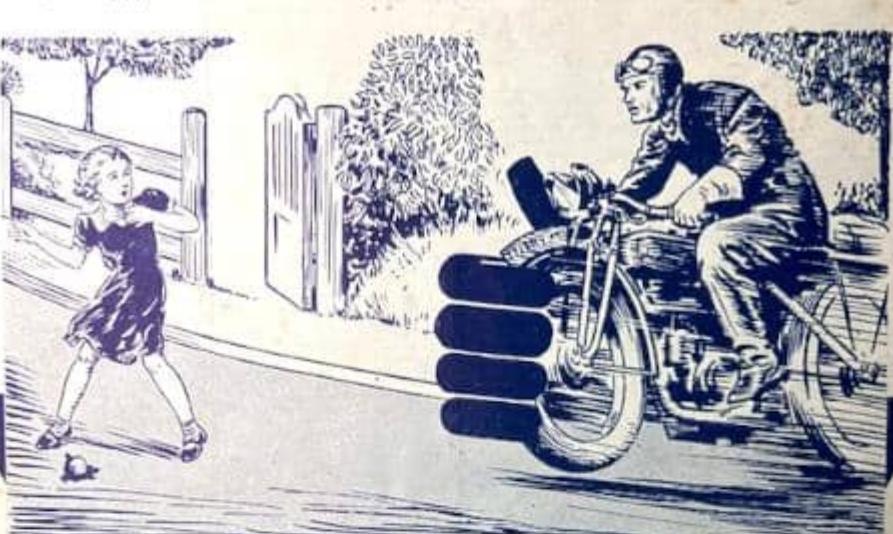
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Right now, all new Indian Motorcycles go straight to war, and what a fighting record they're turning in! But new, improved, postwar Indians are already being blueprinted. *They're the motorcycles to wait for!*

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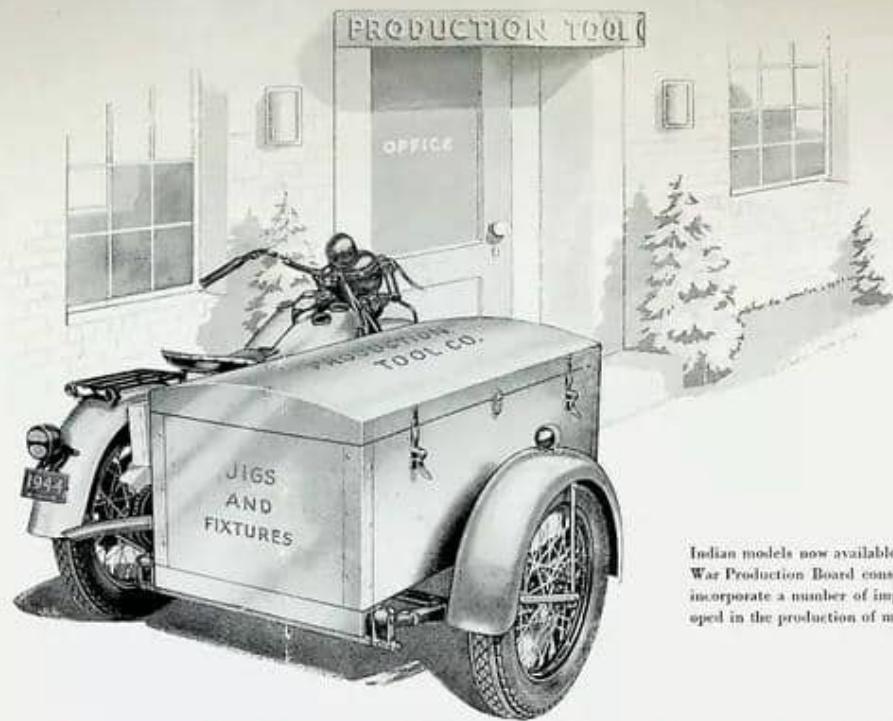
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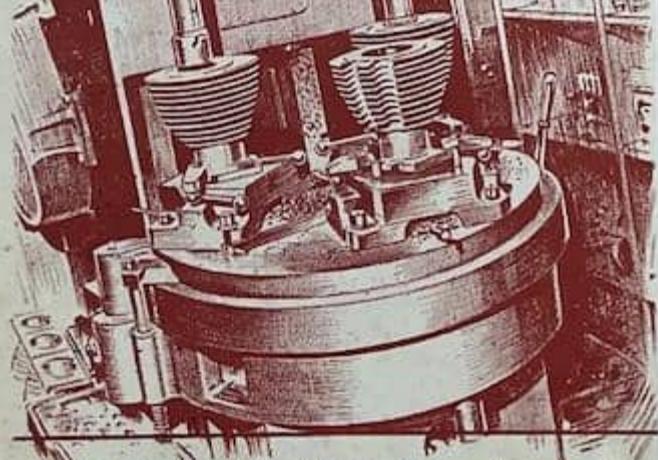
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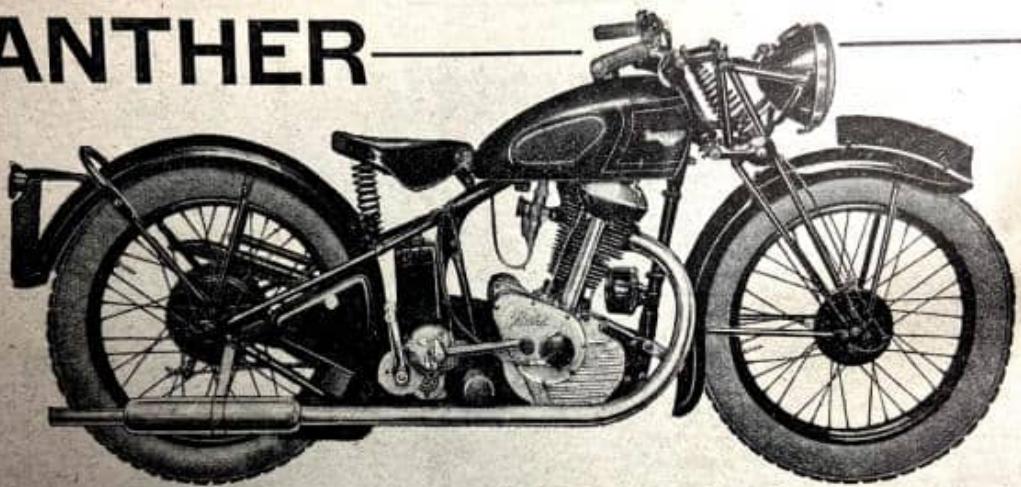
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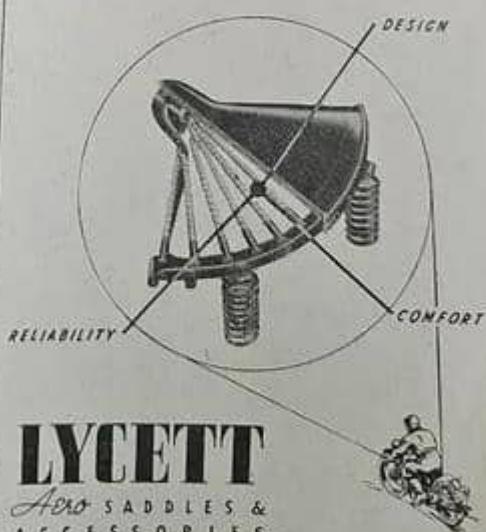
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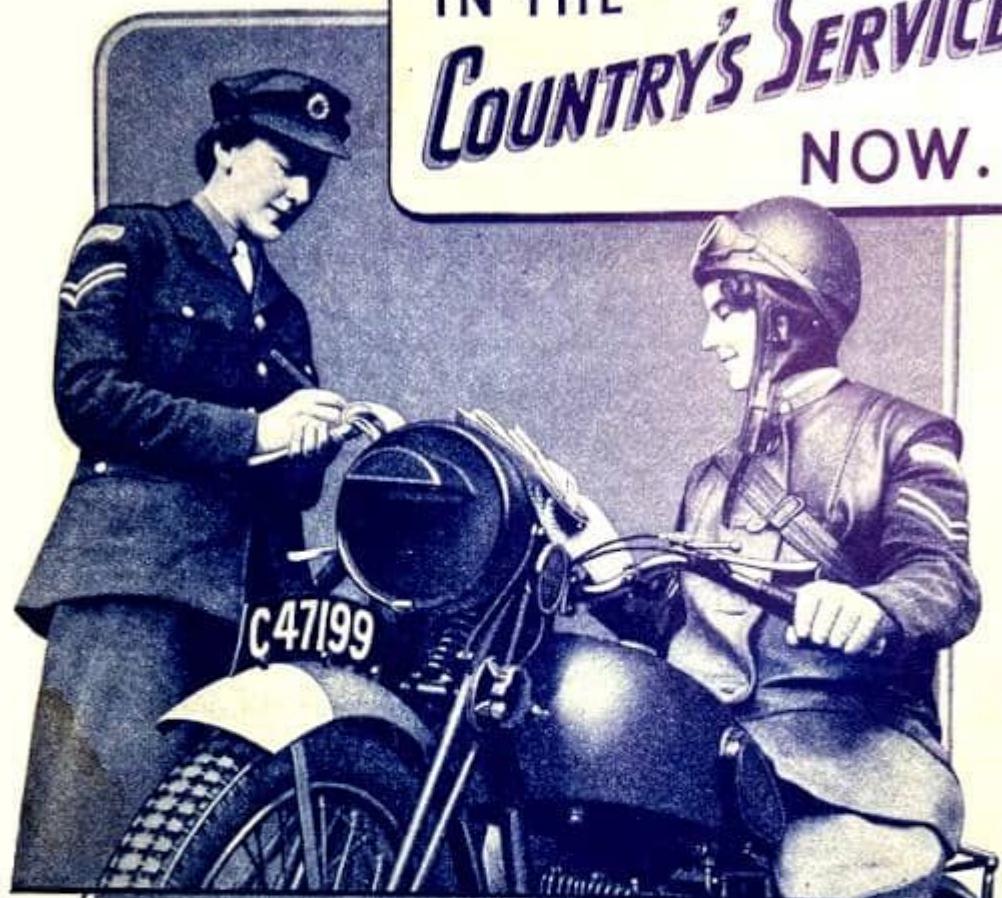
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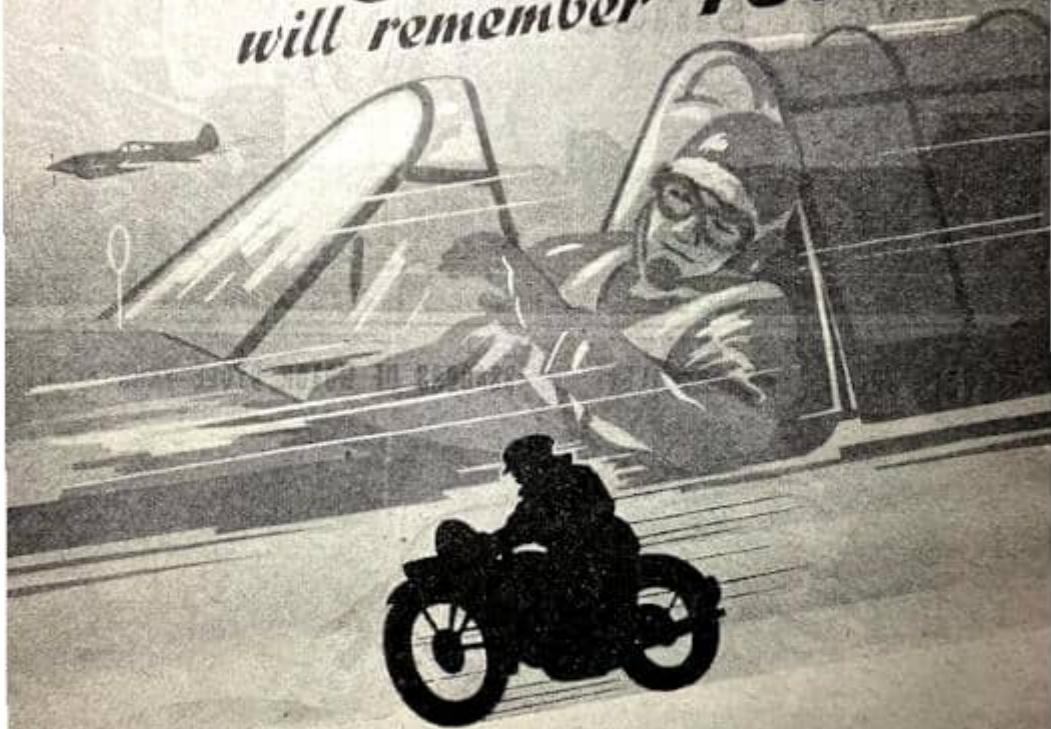


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MOTOR CYCLES

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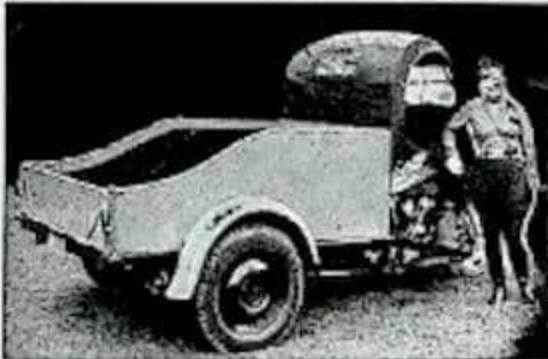
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