

JEFF SMITH

ON SCRAMBLING

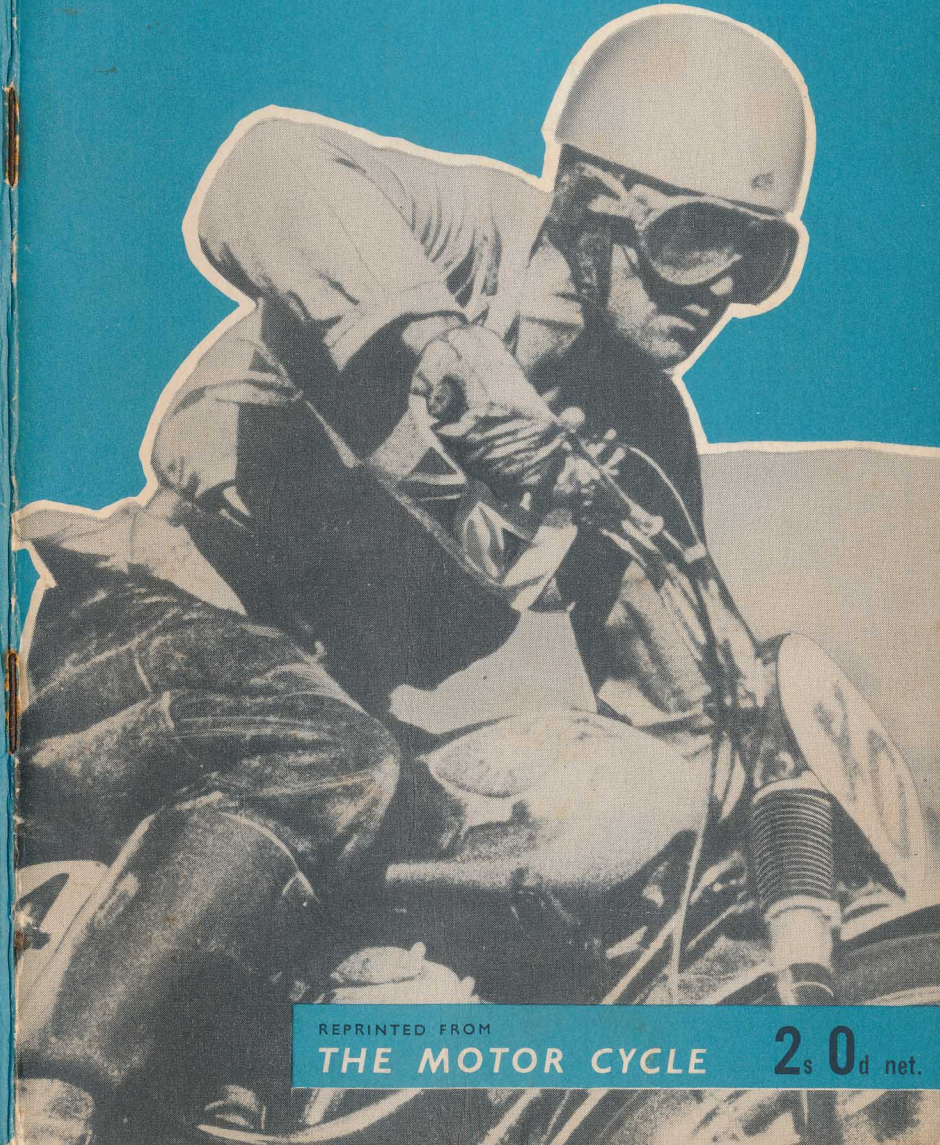
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Jeff Smith
on
SCRAMBLING



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Foreword

Racing on rough-stuff is motor cycling's most popular sport. It has now surpassed road racing as a crowd-drawer. At the big meetings when international stars are in the programme attendances of over 50,000 are common in Britain and on the Continent.

Every year the aces compete for the World's 500 c.c. Championship and the European 250 c.c. Championship with results based on events in most European countries. Highlight of each season is the Moto-cross des Nations for national teams.

Jeff Smith is always to the forefront in the championships and has frequently represented Britain in the Moto-cross des Nations. Jeff is probably Britain's most consistently successful scrambler. He is a top-line trials rider. And he knows all the wrinkles on machine preparation.

In this book Jeff brings scrambling to your armchair. What he has to say is useful to less expert scramblers, but his intention, primarily, is to give you, the keen follower of the sport, the inside knowledge of the game you cannot get from the sidelines.

*Dorset House,
Stamford Street,
London, S.E.1*

HARRY LOUIS,
Editor, *The Motor Cycle*

The Mustard on the Beef

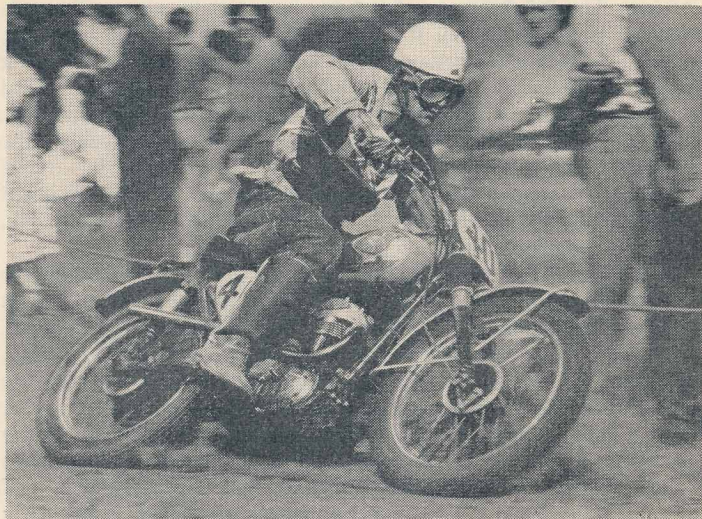
Scrambling isn't played in kid gloves. It is a sport in which "after me Claude" is the rule, in which knocks are as common as daisies in grass, in which tight situations are decidedly in the V.H.F. wave-band. The successful scrambler is the man who can balance what he is prepared to do against what all the others are prepared to let him do. He must possess the litheness of an Ibbotson, the muscles of a bull, the reflex action of something out of a jungle in darkest Africa. The Bill Nilssons of the day have the tigerish, will-to-win instincts possessed by all the T.T. greats you can bring to mind. Above all, they need mechanical feel in the *n*th degree—for wrecking a scrambles engine or gear box or bending the rims must be avoided at all costs if the chequered flag is not to fall for someone else. Scrambling is the joy of living, the spice of motor cycling, the mustard on the beef. Rough and tough it certainly is—and if "thrilling" is an overworked adjective in these hectic sixties it is apt nevertheless, for scrambling *is* thrilling—thrilling for you, Mr. Spectator, and even more so for me!

In a way, a scramble (call it moto-cross if you like—the difference lies only in the method of calculating the results) is a war of nerves from the starting line to the chequered flag. Tracks vary, of course, and where a race is relatively short—at an open-to-centre meeting, say, with half a dozen laps of a three-quarter-mile circuit—the important thing is to get to the front as quickly as possible. But when a race is longer, there is time to play a different game. In the grands prix, for example, I like to start fairly slowly, settling down for the first two or three laps, getting the feel of the course and of the machine. Even if I'm placed no better than tenth in the early stages, I am not unduly worried. Look at it like this: you need only be in front at one single instant—when you cross the finishing line!

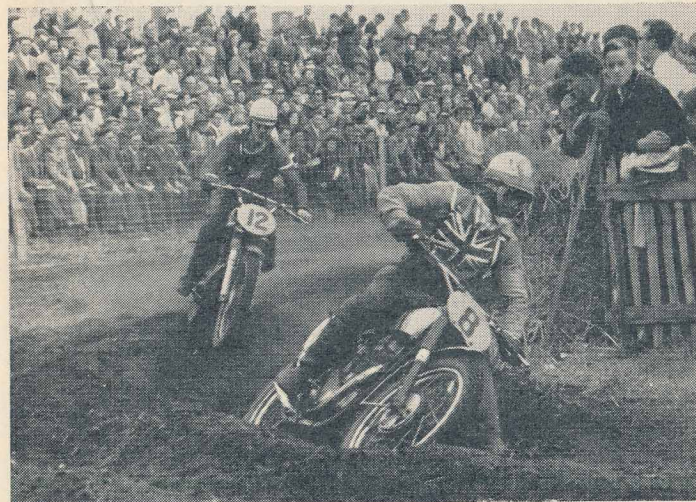
So my technique is to go progressively faster until I reach my

favourite berth—second, and close behind the leader. The fun really begins then, for I can study his every move. He will know that someone is on his tail and over-the-shoulder squints to show him what's what will become more frequent. Meanwhile he tries every trick in the book to get away, and in doing so displays to me every line he knows on the corners, on the straights, into the gullies. Good—for me! But during practice I may well have spotted a possible line or two he may have missed. While he is producing all his aces, mine are still intact and up my sleeve. I know where I can pass—but *he doesn't!* Those backward glances become more and more frequent. And that is the instant at which to strike—to pull out all the stops and tear in for the kill. Out in front and with a lead established, I can afford to ease the grip and relax fractionally, for where's the point in winning at a higher speed than is absolutely necessary?

A cat-and-mouse game like that is the greatest fun imaginable—for the cat! Generally it can be played only when you're on a five-hundred. With a two-fifty you yank the throttle wide, the starter arcs



In the 250 c.c. European Championship meeting at Beenham in 1959, Jeff Smith gives his C15 the works. He finished second behind the title winner, Rolf Tibblin of Sweden (Husqvarna)



Pass where and when you can—a scene typical of the hurly-burly of a continental grand prix, with Smith carrying the Union flag in front

the flag, and you hold it open to the finish. No finesse about that!

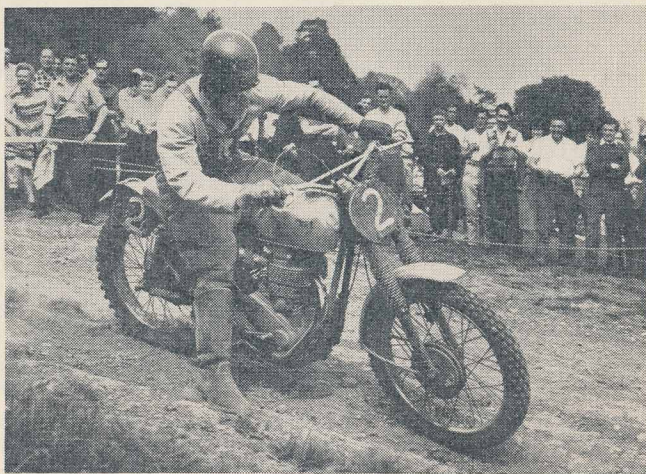
But back to the big stuff. Sometimes the boot is on the other foot and it may be my turn to be worried by someone breathing down my neck. Frankly, there is little one can do in that position—but I try to ride according to the speed of the man behind and to keep one ace—a little more urge—for a final hell-for-leather dash to the black and white flag.

If I've been caught by someone from a long way back (Sten Lundin, say, has made a bad start or spilled and is doing a tiger act to regain ground) then it's obvious that his machine is faster than mine. Good luck to him! I won't stand in his way. Any manoeuvre carried out close to other riders on a scrambles course carries an element of danger. Deliberate baulking of a faster man or equally deliberate barging of someone slower has no place in the true scrambler's tactical armoury. We don't wear kid gloves but neither do we wield the mailed fist.

The first shots in the scrambling war of nerves will almost certainly have been fired during practice. If you arrive early at a meeting you may notice that for the first two or three training laps



With a two-fifty, says Smith, you open the taps when the flag falls and you leave them wide. These two shots taken at virtually the same spot at a Jackpot Scramble, show the B.S.A. star riding the C15 model with absolute mastery, but having something of a struggle with a five-hundred!



I tour gently—until I'm absolutely sure which way the course goes. The lap memorized, I go like smoke? Not on your life! I use a bit more gun, true, but in 200-yard spurts, each on a different section as lap succeeds lap. There are reasons for that. For one thing, I don't want to show the opposition my chosen line so early. And yet, at the same time, I have to know just how quickly each slice of course can be ridden. More than that, I find it easier to learn a course a stretch at a time, until I can string the stretches together in



Smith prefers to start slowly and to speed towards the end. Here at a Redditch Experts' Grand National, on an entirely different line, he worries Dave Curtis who is just ahead

my mind's eye to build a complete picture of the lap; that, after all, is just what a T.T. rider does.

Some grands prix, of course, are likely to prove such a hurly-burly that a rocket-like getaway is essential. And in leaving the line smartly, the continental lads are without peers. My first trip across "the ditch" (Cromwell's name for the English Channel—mine is more terse) was a real education. Old hands had warned me of the sort of viciousness I might expect and as I took my place in the line-up, somewhere in Holland, I determined to watch points closely. I was interested to see just what would happen.

I saw soon enough! There was a stirring in the ranks like wind rippling through a cornfield—then suddenly, even before the flag swept down, the line exploded and I was being swept along by the blast. Halfway down the starting straight I was passed by a riderless



Baulking a faster man is no part of the ace scrambler's armoury of tactics, but a faster man will always seize every opportunity to overtake. Here, in the 1959 Moto-Cross des Nations, Paul Godey (B.S.A.), of France, hugs the straw bales while Raymond Sigvardsson (Matchless), of Sweden, attempts to run round him on the outside

machine which, after trying to savage me, veered left in an attack on a barn wall. The straight ended in a right-angle turn. Still shaken, I ambled along gently and arrived there to see the leaders in a solid heap and sliding under the rope barrier. That left a highly astonished Smith in the lead and he went his way rejoicing. He didn't win but he should have done so!

That Dutch affray was very much an exception, but starts abroad can be, and usually are, every-man-for-himself affairs. Since then, I too have learned how to make a rocket-boosted start when necessary. On the whole, I prefer the kick-start to the clutch-start system and so I settle myself on the line with the piston just over compression. If possible (since I suffer mildly from duck's disease) I select a spot alongside a hummock, so that I can get a firm grip with my left foot and thus take the weight of the model.

The rest is a matter of constant practice, until the right foot can be swung down in an arc as the flag drops; the first part of the movement sets the engine spinning, while the follow-through hooks

the gear pedal upwards into bottom cog. As the foot is swinging, the left hand is already pulling on the clutch lever. I never fiddle with the kick-starter while waiting for the off, nor do I rest my weight on the pedal until I am certain that the flag is about to drop.

I personally am not at my best with a clutch-start; I admit that readily. But I do try to have the engine spinning on half-throttle when the flag goes down. One feeds in the clutch—to drop the lever would be to send the front wheel into the air and rob the rear wheel of most of the available grip. As to the gear used, that will depend on the course. Usually it is bottom, but sometimes (where the starting grid, say, is on a downward slope) I prefer second.

Above all, the secret of a rapid getaway is in anticipating the starter—which is not at all the same thing as jumping the gun. Riders may be sent on their way by the snapping-back of an elastic tape, as at Hawkstone Park. Then, obviously, my eyes are focused not on the elastic immediately in front of my wheel, but on the end of the tape first to be released. The race is on as soon as the starter lets go. Watching that initial movement of the tape saves what may well be a vital fraction of a second. The tape may be controlled by a foot switch; in that case my aim is to watch the starter's foot. As soon as he starts to press that pedal I am on my way. Any time-lag, especially in a short dusty event, can make all the difference between success and failure.

In a race started by flag I take advantage of the early heats or events to study the flagman. Sometimes one can pick up clues from the way he clenches his fist round the flagstaff or lifts a foot from the ground as he starts his swing; usually some sort of effort will be apparent before he actually makes his move, and that for me is as good as a wink directed bang in my direction! As the starter says to himself, "I will drop the flag *now*," so far as I am concerned the race is on. I aim to be well under way with my starting swing as soon as that flag begins to twitch!

You Can't Steer in Mid-air

So the race is on, and what lies ahead? A ditch? Well, I *do* cross my ditches before I come to them. During my pre-practice walk round the course that ditch will have been studied very closely. No one likes to jump if a jump can be avoided. If the ditch is wide then I usually hang around for a spell to see what the opposition will make of it. Sometimes (though rarely) I may spot a possible line which the others have overlooked—but these “others” have probably hidden themselves in the hedge to watch me!

If I find that I can go fast enough without having to jump, then the wheels are kept on the deck. A jump from a high bank to a lower one is practical—indeed, relatively easy—but if the banks are of equal height, then you want all possible assistance on take-off: some form of ramp which will help to throw up the front wheel. But even when all the conditions are favourable my own tendency is to jump as little as possible and to keep the machine as low as possible.

The fastest man is not the chap who jumps highest. On the contrary, it is the man who gets his wheels back on the deck as soon as practicable, for a rear wheel in the air can hardly be driving! More than that. No matter what they say, a machine can't be steered in mid-air, and so all the “aiming” has to be done before take-off. The run into the ramp has to be carefully weighed up; it has to take you on the ramp dead square and the speed has to be just right.

Suppose it has been decided that the ditch is to be taken in third. In that case the approach is made on three-quarter throttle, the grip being eased just before the back wheel reaches the ramp; suddenly the engine is given the lot as the front wheel cocks up—a take-off boost, if you like—then the power is turned off immediately. We're airborne and now the plot has to be got back on deck.

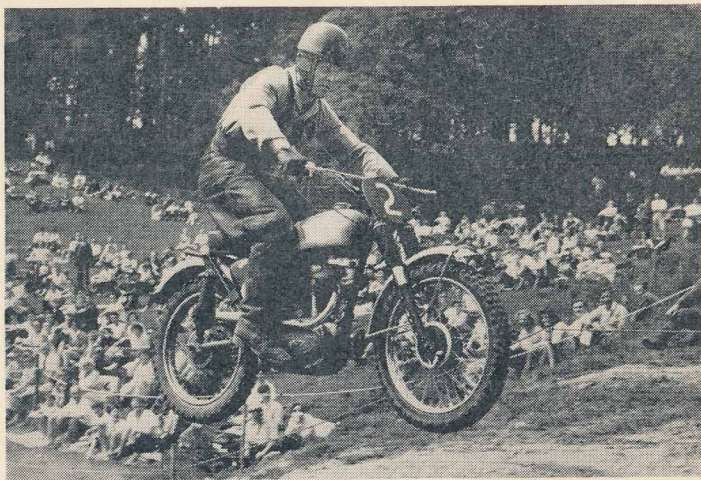
The aim is to touch down with the front wheel about eighteen inches higher than the rear. Once the rear wheel takes hold the taps

are opened again, and opened good and hard. Downhill jumps are taken in roughly the same plane as the hill. Learning to jump is akin to learning to play the violin: success can come only with constant practice. The real danger lies in letting the front wheel land first—that can spell real trouble!

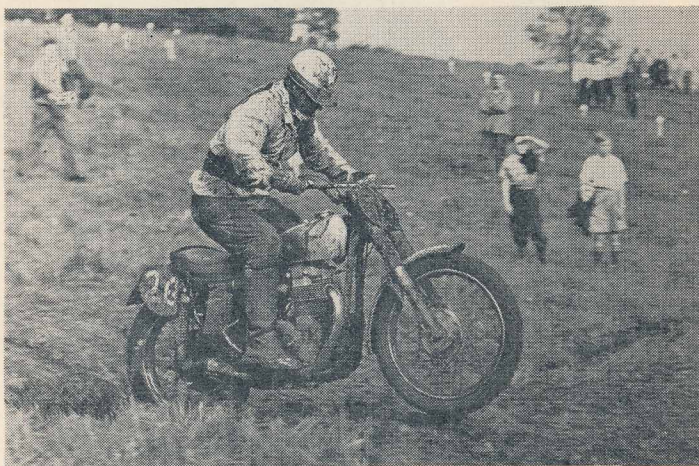
Whether dry or greasy, rocks on a scrambles course are always a danger, ever likely to buckle a wheel or burst an inner tube, and so they can never be taken really fast. For that reason I am rarely happy on circuits such as Thirsk and that used for the Cumberland Grand National. Hawkstone Park, too, has its quota of rocks (on the plateau at the top of that famous hill), but these are a different proposition, for they are in the form of flat slabs and can be taken at speed provided you're on the right line. Frequently, of course, it is possible to choose a path that keeps your wheels clear of the most



No one likes a combination of mud and adverse camber. Here John Clayton (A.J.S.) leads Ivor England (B.S.A.) on just such a surface in the 1957 Sunbeam Point-to-Point at Winchester



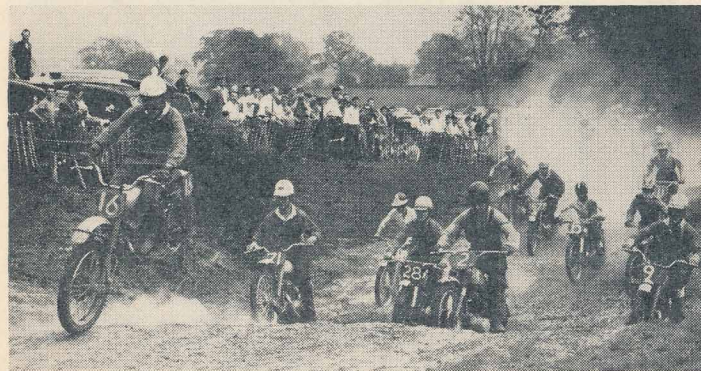
Smith demonstrates the jumping technique to perfection, touching down as soon as possible



Smith's method of crossing a ditch when the approach bank is the lower

vicious rockery. My own practice is to play even more safe, by raising the tyre pressures to about 12 lb/sq in front and rear.

One way in which a continental course may differ from those courses to which we are more accustomed in Britain is in the amount of sand likely to be encountered. In Belgium, and even more particularly in Holland, it can be really deep. On such going the 1958 World Champion René Baeten (of Belgium) was the acknowledged expert. Largely through watching him I learned the technique of



Massed starts give little opportunity for finesse—as Dave Bickers illustrates at the funnel-in from a Beeham start! Smith is No. 2

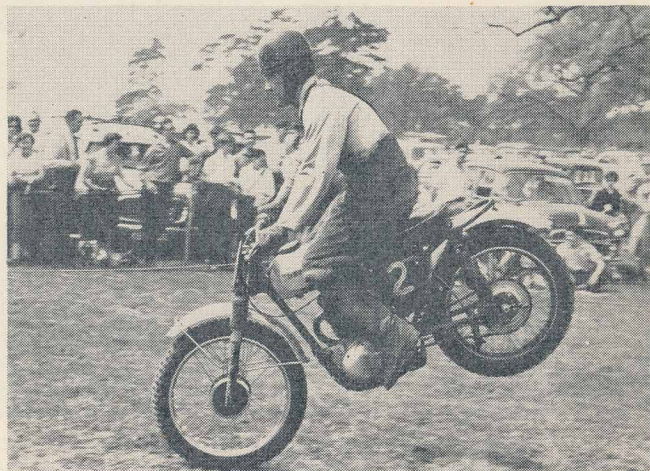
riding sand with the front wheel in the air as much as possible. That sounds horribly difficult but it's not so drastic as it seems, since the sand builds up, offering a ramp which kicks up the wheel. You need really high speed and a lot of power, so the engine has to be kept well and truly on the bugle. Let the front wheel wander for an instant and the sand will grip it like a vice. You've pretty well had your chips if that happens and over you go.

In shallower sand, say three or four inches deep, the wheels perform in much the same way as in wet mud, and the going has to be treated with just as much discretion. That means that all braking has to be done in a straight line (just as it should be on a wet road) with the gear box—the scrambler's best friend—being worked overtime to provide braking.

On mud or sand, the throttle must be used with discretion when an exit is being made from a corner. Otherwise you are likely to find



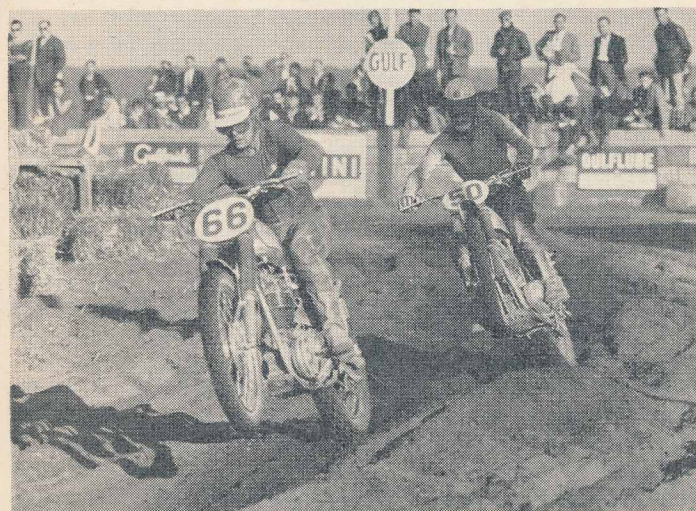
Rear-wheel or front-wheel touch down—if you're in the top bracket you can make either look ridiculously easy. Smith demonstrates the right and wrong technique for the camera at the Jackpot Scramble



yourself travelling back wheel first. But if there's one thing I've learned in scrambling, it is that one should never be discouraged by a fall. It's all in the game and if, afterwards, one can analyse the reasons for the fall and profit from the experience, then it can even be entered up on the credit side of the balance sheet.

Britain's pet scrambles hazard is rain. But though wet grass is slippery, it is much less dicey than patches of bare earth where the grass has been worn away. So I keep to the grass wherever possible. On the other hand, on a dry day I try to ride where there is bare earth, for dry grass (especially that yellowing, long-stemmed variety) can be as slippery as wet. About adverse cambers, I can say with a fair depth of feeling that I dislike them intensely. It is so easy to damage the foot nearer the camber by stabbing it into the ground—and besides, unless you are super-careful with the throttle, the rear wheel will pretty quickly catch up with the front.

The technique is to be fast but not over-fast. If the speed is too



On the deep sand of the type notably encountered in Belgium and Holland, says Jeff Smith, continental aces are tops. Urging away from a loosely surfaced turn in the Moto-Cross des Nations at Namur, Belgium, in 1959, are Sweden's Bill Nilsson (Crescent) who is leading, and Jan Clynk (B.S.A.) of the Netherlands

low, the tendency is for the model to slide down the camber—you have to struggle to hold your line. If, on the other hand, you have too much power turned on, the rear wheel will break away, with the result mentioned in the conclusion to the previous paragraph. In a trial you ride adverse cambers with the engine neither pulling nor on the over-run and you may even be able to choose a safe line at the foot of the camber. But in a trial you don't have to contend with a Curtis or a Rickman in a hurry, and apparently doing their best to climb right into your exhaust pipe

It all boils down to surface-consciousness. Where conditions are obviously tricky, then they must be treated with discretion or the consequences accepted. Back home I have a little game which I sometimes play with myself. On a grassy field I try to ride as far as possible with the front wheel locked—30 yards sometimes, if the grass is wet. It is all good practice—terrific fun, too!—and could be useful in a tight situation. And in scrambling tight situations do tend to arise from time to time!

Witch-hunting for Trouble

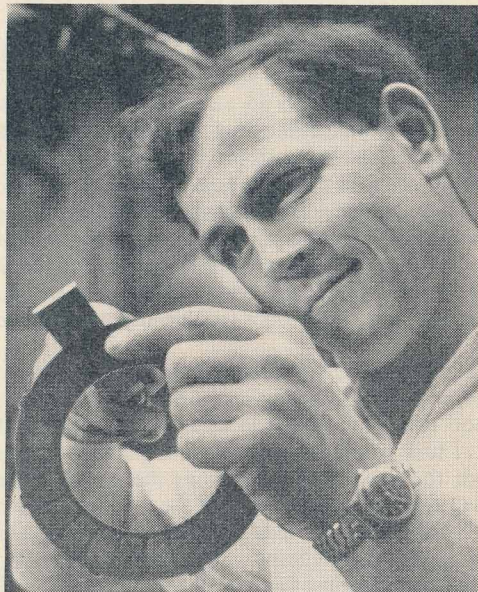
Peace of mind is a wonderful thing. If I can go to the starting line certain that the machinery will hold together, the battle's pretty well as good as won. For that reason I have developed a definite sequence of preparation and checking. First, there is a preliminary look-see. Obviously, if trouble cropped up in the previous meeting—a split oil tank, say, or gear-box failure—then the items to be changed or repaired will be attended to first. But let's suppose that all has gone well, that we're on a trouble-shooting mission of check and re-check.

First of all, with jacket off and sleeves up, I note the damping of the rear suspension by pushing down on the mudguard. Provided there is good resistance, and the units extend slowly, then I leave well alone. I turn to the steering end and start work by draining all the oil from the front fork legs, from the engine, then from the primary chaincase. The outer half of the primary chaincase is then whipped off and a check is made on the adjustment and condition of the primary and back chains. I generally reckon on doing four meetings without renewing the rear chain; thanks to the protection of the case, the primary chain will have about twice that life.

A lot depends on the going, of course, and if the terrain has been sandy—if I've been on the Continent or to Hampshire—earlier back-chain renewal might be essential in spite of the chain oilers having been working like a gusher. I discard chains when they still have plenty of life. That's a counsel of perfection, I know, but it pays off; the last time I didn't finish because of a broken chain was in 1956.

The chaincase dismantled, I strip the clutch. Scrambling is hard on clutches and there will almost certainly be burrs on the plate tongues. These are cleaned up with a file to allow the plates to slide freely in their slots; and after two or three operations like that, the

plates are scrapped and replaced. Then, too, the thrust rod must be removed and inspected. Usually wear forms depressions at each end, and they, too, result in drag; so the rod ends are ground or, if there isn't enough adjustment for that to be possible, then the stores have to be raided and a new rod fitted. Finally, the clutch is re-assembled, trued-up (using a pointer, formed from bent wire, attach-



The clutch takes a towing in every scramble and burrs must be removed from the plate tongues to ensure smooth operation

ed to a convenient bolt) before everything is buttoned down. Incidentally, I always use locking wire on the clutch nuts. Peace of mind again.

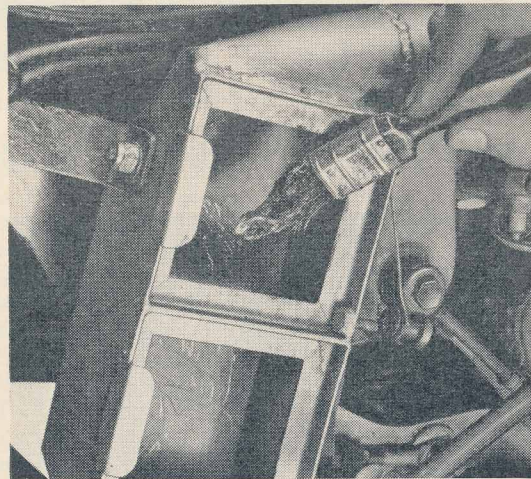
What then? The magneto. The end cover is unscrewed, the contact-breaker assembly detached and thoroughly cleaned; its housing gets the same treatment—sand and water can find their way into the most unlikely places. The contact-breaker points are checked for condition and gap while I'm in that direction.

Next the sparking plug; that's whistled out and read as confirmation of my judgment of the mixture setting for the previous week-

end's meeting. On a hot day the setting tends to be rich, so I may have had to fit a smaller jet; conversely, on a grey, damp day the tendency will be for the mixture to weaken. The choice of jet has to be made on the day of a particular scramble.

Off with the fuel tank—that's next in the sequence. I check to see whether the valve clearances are "as the man said," then turn to the carburettor. First, the air filter is dismantled and the element washed in petrol. Then the inside faces of the container are washed down and "painted" with fresh grease. Why grease? Because it collects sand that would otherwise find its way into the filter element; and that could result in a richening of the mixture.

A check on the Amal GP carburettor comes next on the list. The float chamber is then cleaned, the jets are blown through and the



The inside of the air-filter case is treated with grease to trap dust and sand which would clog the element

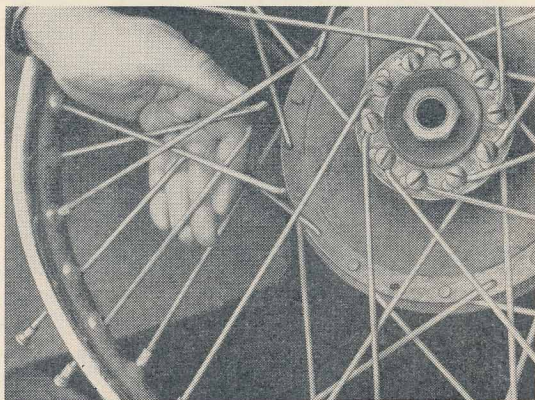
slide checked for wear. Then I reassemble, putting fresh locking wire through the nuts at the base of the jet block and float chamber, top-feed banjo, and float-chamber lid. I like to fit a length of bicycle inner tube to the top of the carburettor; it is wired at its lower end and taped tightly to the cables at the top end. The tape is then given a coat of cellulose to stop it from unwinding during a race.

A check is made to ensure that the cables are lying nicely in easy sweeps and that they haven't been trapped by the tank, then I smear a little grease on the faces of the tank buffers, so that the tank will slide back into place more easily. The fuel tap and filter are cleaned out with the compressed-air line, and the tank is replaced.

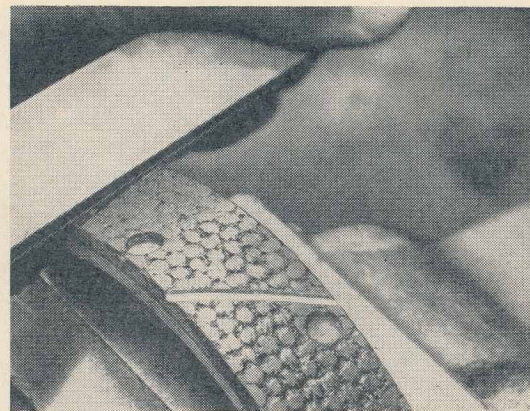
Time to check the wheels. The machine is hoisted up on a box so that they can spin freely. No buckles, no loose spokes; good. So the tyres are inspected for wear or cuts. Hard ground under a hot sun can tear a tyre to pieces in a single day, for the studs of a "knobbly" really take a thrashing. On the other hand, if the going has been wet or muddy there will be few signs of wear.

As a point of interest, on the B.S.A. front wheel two spokes are fitted into each slot in the hub flange. What I do is to insert through the slots a ring of $\frac{3}{16}$ in bolts and nuts, so that the spoke heads can't slip out of place—should one come loose the remainder would otherwise follow as the night the day. Yes, it does add weight, but I like to *finish!*

On with the witch-hunt. The rear wheel comes out of the fork and the sprocket teeth are inspected. Next, the brake shoes. Occasionally relining is called for, and when that's done I add a finishing



On the B.S.A. front wheel, two spoke heads are fitted into each wheel flange slot. A ring of bolts ensures that one broken spoke cannot cause others to come adrift. On this particular wheel, though the heads broke away, the wheel did not collapse and Smith was able to continue for another lap while his mechanic made ready for a swift wheel change at the pits



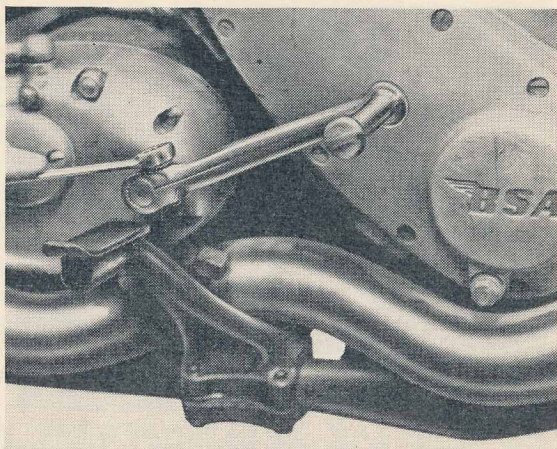
Diagonal cross-cuts on the brake linings help to keep the drum free from dust and assist bedding-down of the linings

touch by cutting two diagonal grooves across each lining face with a triangular file. It is something I have done from the start (I think my father first gave me the tip) and I find that the grooves tend to collect dust and so help to keep the brake drum clean; further, they help the linings to conform to the drum circumference. Before replacing the shoe plate I put a spot of grease on the cam spindle.

Should there be a suspicion that the front-fork assembly may be bent, I drop each leg in turn out of its yokes and mount the leg in a vice. The fork tube is then raised in its bushes, and rolled between the palms of my hands. Any departure from truth is evident right away. If all is well I check that the damping is O.K. and reassemble.

In the hurly-burly of a scramble the rear-suspension units take a merciless pounding. The constant telescoping produces heat which inevitably thins the oil in the legs. Put a hand on a damper when a rider comes back to the paddock and you will very quickly learn just how true that is! By half-distance in a long race the oil has become too thin for effective damping and you rely almost entirely on the springs.

For that reason it is often preferable to take the smoothest rather than the quickest path around a given course. It is also the reason why the damper characteristics must be varied according to the location. At Rollswood Farm, for example, where the going is



Personal preferences. Smith's footrests are an inch higher than standard, and a strip of steel is welded to the upper face to assist grip. The gear lever is given a high setting to allow plenty of foot room

mainly smooth (I except the sections through the woods), the oil can really "damp," and so units with a spring rating of 80 to 90 lb will do; but towards the end of the day at Hawkstone Park, a much rougher circuit, the springs alone are doing all the work and so I use springs with 100 or even 110 lb rating.

But back to the checking routine. The main work is over by now and all that remains is for fresh oil to be added where necessary. Yet that's not quite all, for before taking off my overalls I make it a matter of policy to have a brisk canter over a patch of rough ground. That is a tip I learned through bitter experience. . . .

Now for some personal preferences. Since I like to keep my feet up wherever possible, the footrests on my five-hundred are set 1in higher than standard. That gives me greater comfort—and, what's more, it means that the model can be cranked over without the rests digging into the ground. As for my two-fifty, I accept matters as they are; the little mount is very, very good fun but I can't find it in my heart to get really serious about it.

The standard foot pegs are round but they don't suit me that way. So to the top of each I have welded a section of flat steel strip, extending beyond the end of the peg and with the outer end slightly

turned up to give me a secure platform. Below the left footrest a small, strip-steel lug extends downward; that's to protect the brake pedal—to ensure that in the event of a spill it won't dig into the ground and bend.

The gear pedal I adjust so that it is positioned quite high. I can then move my foot around on the rest without accidentally hooking the gear out of mesh. The pedal is standard, unaltered, and so is the kick-starter. Many riders adapt the folding pedal so that it swivels inwards through 180 degrees. But not I; I ride with the spring clip in place so that the pedal folds through 90 degrees only. It isn't in the way—and I know of at least three cases where a modified pedal has swung outward, damaging the rider's leg.

If the machine has been thoroughly prepared at home, then there should be little or no occasion to have to work on it in the paddock. But accidents will happen and you have to be prepared for the worst. That means an adequate tool kit at all meetings, an ample supply of rag, a large tin, a brush and a can of petrol for cleaning. I carry that tin so that bits whipped off the model can be washed, then dropped into it for safe keeping—vital bits have a habit of disappearing without trace in long grass.

For spares I carry a pair of wheels, a gear box complete and an assortment of nuts, washers and bolts. Spare footrests, a gear lever, handlebar levers, clutch springs, clutch plates and a selection of engine sprockets are strung like beads on a loop of wire. The list is completed by a jar of carburettor jets and a few spare plugs; but I don't carry engine spares and—touch wood—so far have only once needed any in the field.

The final requirement is a hefty stand or box, for scrambles models don't wear prop stands. I use a bigish ammunition box, which also holds the spares and tools. It's not a very clever arrangement, since the spanner I want is inevitably in the box supporting the model! But I carry on doing it just the same.

So much for the mechanical side. Into the pick-up I also load a supply of water, soap and a towel, and refreshment for the inter-race breaks. Scrambling soaks perspiration out of you to such an extent that you feel like a squeezed lemon after a race. So I drink a lot—but only water, orange squash or (perhaps best of all) unsweetened lemon juice, a little of which will slake the driest throat. Washing facilities are there for obvious reasons, but a sponge on the back of my neck immediately after a race is almost as good as a shower.

Winning Before Practice Begins

Earlier I discussed machine preparation. But I firmly believe that the rider should be in just as good tune as his machine. In high summer, he will be fit enough because there is no better exercise than regular scrambling. But with the winter lay-off the muscles grow flabby. Stamina weakens. That's where trials riding can be a help. I ride in trials as often as I can, but I do more. I also put in the odd spot of cross-country running. At one time John Harris



Smith indulging in an out-of-scramble-season pursuit—riding in trials. He is wriggling through the rocks of Taffy's Terror in a St. David's Trial

and I would trot it out together. Nowadays I settle for a weekly winter solo run of about four miles, to the top of Barr Beacon and back, with my wife keeping a time chart. My average is 35 minutes. After the gallop I sit in the bath with perspiration running in rivers. Hard, gruelling going it may be—but after it I feel fit enough to start moving mountains!

Another winter pastime I have is to do 20 press-ups before breakfast. It all builds stamina (and there's no more elusive quality than that!). During my Army service I played a great deal of table tennis, and I am convinced that the game really does speed up reactions to such an extent that it merits a prominent place in any training schedule.

Then I attended Judo classes for about a year and the various ways of falling taught there have been of great benefit in helping me to avoid injury. Night after night I battled around on the floor until it became second nature for me to roll myself into a loose ball, no matter how suddenly a fall might occur.

On any scrambles course there comes a point of no return—a stage at which it is certain that a spill is inevitable. Nothing can be done to stop it. The first principle in a situation like that is to get away from the model, for the man who gets hurt is he who tangles with his machine. Once clear, it is an automatic reflex action to curl into a ball.

Consider this example. At a Beenham scramble I was riding uphill with my wheels in a slot when the man in front fell in my tracks. Though I attempted a phenomenal avoidance, my front wheel just clipped his machine—and the C15 stopped dead. I didn't; I shot over the handlebar, curled up while in mid-air, bowled along the ground, came to rest on my feet and scampered up the hill until momentum was exhausted.

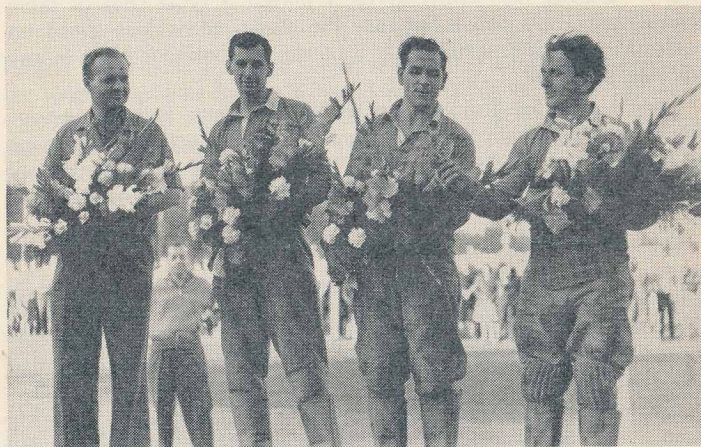
But only a fool falls off continuously without realizing why. Every spill carries a lesson, and the man who can analyse the reasons for the prang—and profit by the experience—is well on the way to becoming a better rider.

The art of staying upright without falling ties in with surface-consciousness. A scrambler has to travel fast over anything from mud and ruts to sand, grass, chalk and rocks, and the simplest and quickest method of becoming acquainted with every type of going is to ride in trials. Every novice should spend a season in trials before venturing into the scrambles world. Some say that, like oil

and water, the two sports won't mix; that an expert in one who plays at the other will end by spoiling both.

I don't agree; both Vic Brittain and Len Heath were in their day top-liners in each sport. Plenty of other names come to mind—Bill Nicholson, Fred Rist, Ron Langston and Johnny Draper are only four of them; you can extend the list for yourselves.

It is because of my appreciation of the importance of "surface" that I invariably take a pre-practice walk around any course. From



The successful British team in the 1959 Moto-Cross des Nations—Don Rickman, Jeff Smith and John Draper with team manager Ron Baines on the extreme left. Smith and his team-mates all wear strong leather trousers with plenty of room in them and stout leather boots

that I can tell whether racing is likely to be fast or slow. If there is smooth grass and mud, with comparative freedom from tree-roots and rocks, I may decide to lower the tyre pressures to about 8 lb/sq in; should the ground be hard, then I might switch to anything up to 15 lb/sq in.

Potential danger spots have to be investigated—ditches, rutted patches and fast straights ending in slow jumps. The beaten path may be clear enough, but when racing begins there will almost certainly be someone else on your selected line. So close attention is paid to the *sides* of the track. Many a front wheel has been led astray by molehills or by overgrown ruts. If the course lies through

cleared woodland, there could well be a tree-stump or two lurking in long grass at the sides; should you smite one of those, your scrambling might well be over for the day—or longer.

Now for corners. The best line might well seem to be the well-beaten one, and everyone will want to use that! But is it so obviously right? Not always. Spinning wheels will almost certainly have gouged a deepish rut or ruts, while at one side or the other the going may be much smoother and hence much swifter. When practice starts, I try out every possible line, for when the race is under way I may want them all—badly.

At the approach to a corner the accepted braking point will be indicated by a series of hard depressions scoured by locked rear wheels. As the meeting wears on those holes will dig out, and in consequence the brakes may have to be applied earlier and earlier if tank-slappers are to be avoided. To the right or left of the braking patch there might be virgin land, well worth investigation. A second saved here and there in that way can add up to a race-winning margin.

So already, with training not yet begun, I have gained an excellent idea of the course. The practice period will tell even more. But if an outing is to be successful, one more thing is needed. As I hinted earlier, I like to race to a plan, and that is where first-class pit signalling is important. The finest signaller I know is Johnny Harris, a man who can tell me the whole story of a race merely by waving his hands. Now that Johnny is a star in his own right, I miss him like nobody's business!

If you have watched a race from somewhere near the paddock entrance you will have noticed the "helper" who dashes to the edge of the track and holds up his fingers—to signify that his particular charge is lying second, or tenth, as the case may be. I don't want to know that! I already *know* my placing. I can *see* the leader! But I *would* like to know if there is a puddy-tat a-cweeping up from behind—and if so, how far away he is.

Before the meeting I will have discussed with my signaller the plot for the day. We are competing, say, in a 20-lap event. Very well; I will try to work up to second place by the 15th lap, and will not make my final, all-the-stops-out effort until then. So, if the plot's working, I will receive a series of thumbs-up signals, with the arms wide apart in fisherman's-story fashion. The closer the arms are together, the closer the challenge from astern. A sweep of the arm is the signal for, "O.K., let her go!" A concertina-playing



The perspiration-soaked handkerchief inside Smith's helmet, and the detachable peak

movement of the palms tells me that the chap behind is closing up. And so on.

The man on the sidelines can see so much more of the game than the rider can, so a shrewd signaller can save his man a deal of effort and worry. In the road-racing world it is customary to use a blackboard, but in scrambling, an inanimate object like that fails to catch the attention. Moving arms are much easier to spot. One other thing; in a long race it is all too easy to lose count of the number of laps. And so, with about six laps still to go, my signaller will start the count-down—five fingers held up, then four, then

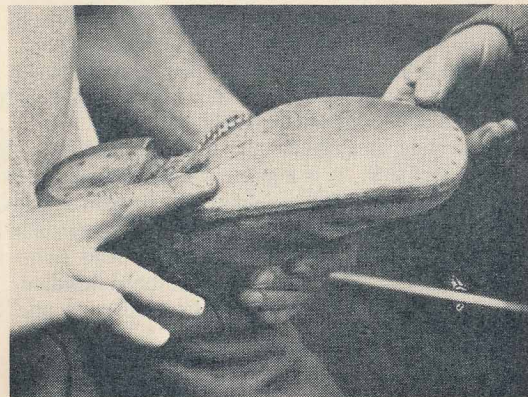


Goggles are treated with anti-mist compound

three, then two. Next time round the yellow flag will signal the last lap.

So much for actual racing. What about clothing? When I choose a helmet I select one a size bigger than might seem to be indicated. Scrambling is a hot game—and it is quite true that one's head swells in the heat. Who wants to race with his head in a vice! A new helmet is not immediately ready for wear, for the two sets of drawstrings must be adjusted and knotted to make everything comfortable and safe. The hat is correctly adjusted when the bottom edge is 1in above the eyes—or so my sergeant-major said!

An asset to any scrambler's wardrobe is a detachable peak, useful in a muddy event and on any occasion when the sun is bright. But I take care not to tighten its strap overmuch, for otherwise it could reduce the size of the helmet. I fix it, lightly, then complete the job with insulation tape. A handkerchief prevents the helmet strap



Smith displays the soles of his riding boots

from chafing my chin. I place another handkerchief on top of my head, inside the helmet, to soak up the perspiration. And that red rose of Lancashire on the front of my No. 1 helmet is not merely county pride; it helps my mechanic or pit signaller to pick me out from the crowd, so that his signals are given to me—and not to someone who might look like me.

My goggles are light and well ventilated, with a lens of some non-splintering plastic, and I use anti-mist cream on the inside of

the lens, for nothing is worse than goggles which steam up during a tight race.

A strong jacket of some closely-woven material is essential if gravel-rash is to be avoided in a fall. I have my jacket washed after each event, just in case I should fall next time out and sustain rash or cuts. Germs I hate. When first I started scrambling I scorned the use of a body belt—but I learned my lesson; I fell off, was run over by the man behind and for weeks carried a perfect imprint of a Dunlop tread right across my middle. My preference is for a leather belt, although it does take some time before it becomes as comfortable as a canvas one. Well-padded leather trousers are my idea of what every well-dressed scrambler should wear, though I agree they may not be everyone's choice.

Boots are important, since most of the knocks a scrambler takes are about the legs. His boots should therefore be of good leather and perfectly sound. The soles should be smooth—no studs or nails. I favour sea boots, since they are quickly detachable in case of trouble whereas lace-up boots take some time to remove. Leather gloves, with the linings pulled out so that I can really feel the controls, complete the wardrobe—except that if it is not indelicate to say so, I prefer Y-front-pattern briefs.

That is scrambling as I see it—the machine, the man, his assistants and his equipment. It is a game full of excitement from start to finish, and if my words have helped you to gain an insight into the rider's mind, to understand a little better just what is happening out on the course, then I am well satisfied. And (who knows?) perhaps just here and there a spark has been kindled, another recruit gained for the competitors' ranks. Perhaps one day, I'll see *you* on the starting line . . . !