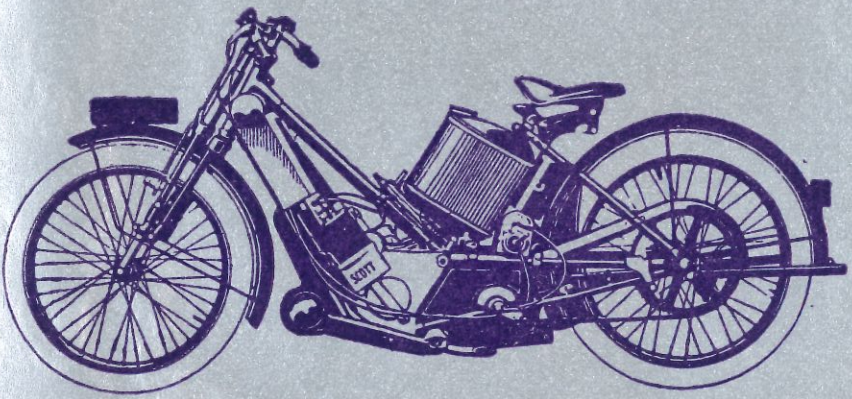
YOWL



Vol. 5. No. 2. OCTOBER, 1966.

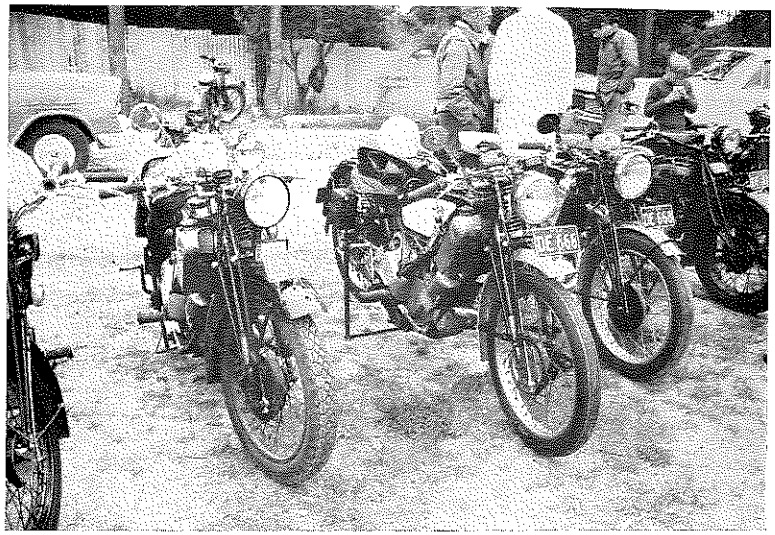
EDITORIAL

Late again I'm afraid—usual apologies. Lack of contributions is the reason this time and I waited in vain for several "promised" pieces which failed to materialise, finally going to press towards the end of September. Thus this issue is a little on the thin side. I hope to set the balance right with a "bumper" December issue but it's in your hands.

Changing the subject, the B.M.F. "Grand Show Draw" has been launched to swell their funds. Several members have been issued with tickets so please support this good cause.

GEOFF.

At least two members have taken Glyn Chambers seriously where "chair" racing with a Scott is concerned and a joint project has been initiated by Dennis Howard and our ex-P.R.O. John Hawkin. As our racing members will know, it can be a costly business and hoping to be at Cadwell next year for the V.M.C.C. races they're up against a time limit also. Let's hope they get some co-operation in their search for a suitable "chariot."



The recent National Rally ? Not at all but a snap taken at a recent gathering of the Victoria Motor-cycle Collectors' Club which boasts some 70 members and nearly 300 machines. The Secretary, David Dumble, sent the picture which shows machines owned by John Olsen, Ernie Alsop and Bob Thompson, S.O.C. members also. I'm hoping to include a contribution from these "antipodean" members in the next issue.

"FLYWHEEL FAILINGS"

by '*Lofty*' *Avis*

Of all the component parts of the Scott machine, probably the flywheel is the most neglected as far as technical information and overhaul instructions are concerned. After all, it's only a chunk of iron used to hold the cranks together and somewhere to hitch a sprocket ; except for providing a bit of inertia it plays no part in the functioning of the engine. Why worry about it when there are fascinating things like pistons and gudgeons, rollers and cranks, compression ratios and port timings to play with ?

The truth of the matter is that the flywheel and allied components are at the centre of the engine both in position and function. The writer recently "had a go" at a Scott motor for a disillusioned novice, who had acquired what appeared to be a quite nice machine for the princely sum of £12 10*s*. 0*d*. At that price he couldn't go wrong but in spite of a good carb. and mag. the engine ran like a nightmare ; with the rad. filled with boiling water it needed a good tow to start it and even after several minutes warming up was still reluctant to keep going. It would spit viciously and frequently ; power was next to nil but the vibration was terrifying. Even the novice, charged as he was with the elation that comes with just collecting the long anticipated object of desire, had not the nerve to complete the 10-mile journey to Southend. It was a sorry figure that dropped the boiling brute on the kerb and thoroughly skaken, physically, and spiritually, staggered up the few paces to the writer's front door with hardly the strength to lift the aluminium knocker (aluminium for low unsprung weight).

In spite of worn bores, scored pistons, slack small ends, excessive ring gaps, scuffed big ends and odd sized sparking plugs the engine emerged, like Cinderella, magically transformed at practically no expense. There was just no money left in the poor lad's kitty and the writer could not afford to finance an overhaul which could run into £25 or so. In spite of all the serious short-comings she was an easy starter, smooth at all speeds and with a fair turn of acceleration, albeit with a few rattles and a funny habit of dropping onto one pot just after starting. However, a few rev-ups soon shook off the plug, the water that had seeped through a leak in the cylinder head. Not a thoroughly satisfactory job, admittedly, but the intention was, not so much to restore his machine, but to restore his faith.

The main interest in this machine lies in the fact that it demonstrated uniqely how dependent the Scott motor is upon its Flywheel components to ensure satisfactory performance. Tracing the stages in this bottom half botch-up will illustrate the faults that can occur, their effects, cures, and possible prevention.

The first job was to test the crankcase for leaks as the vicious spitting and vibration suggested main bearing trouble, probably loose cranks. After an initial mechanical check over which did not reveal very much, the tank, carb., engine top plates and transfer-covers were removed and a small lead-light placed so as to illuminate the interior of the engine casting. The pistons were both positioned half-way up the stroke and a jam-jar of oily paraffin run into the L.H. crankcase, via. the lower transfer aperture. A few seconds later an oily streak appeared on the flywheel, indicating an indifferent seal at the packing gland to cup or cup to crankcase surfaces (could be a crack in the casting). The paraffin was drained via. the plug at the bottom of the crankcase and the R.H. crankcase tested in the same way. Now all was revealed, it being hardly possible to pour fast enough to equal the tremendous flood streaming out of the engine casting into the drip tray, previously placed beneath the machine in case of such an event. An immediate stripdown was the only course of action and what a story this revealed.

The most horrifying part was the condition of the R.H. main-bearing. The cup was purple and fearfully scored, particularly on the sealing face which was covered with radial cracks. The gland itself was conical instead of flat and

its spring had the appearance and the substance of a well-chewed boot-lace. The main-bearing bush on the crank was dead soft and so rolled and thickened that it had forced the locking ring, already as soft as solder, right off its threads. Miraculously the rollers seemed to be quite good although down to a "deep straw." The left hand assembly was reasonable except that the gland was badly scuffed. It was here that the probable clue to it all was found ; the gland was stamped "R" ! A close inspection of the remnants of its opposite number revealed a murky "L."

This one simple mistake of assembly must, over the many years, have been the basic cause of a large number of would-be enthusiasts being deconverted from Scotts back to four-strokes. The effect of this mistake is to cause the oil pump to suffer an air-lock from time to time since the oil holes in the glands will register with the oil ports in the cups on crank-case compression instead of suction. The resulting, unpredictable behaviour of the oil system is enough to deter the keenest type, especially when the fitting of a new pump brings no more than partial relief from the problem. The situation is not eased by the fact that the pump, as fitted, is subject to variations in adjustment when all else is correct. Advised of this last fact by "experts" the novice concludes that Scotts are just not for him and sells the machine before it costs him even more money. One often sees adverts for Scotts offered with complete engine over-haul, good tyres, etc. etc., for a very reasonable sum ; the seller often not realizing that the basic cause of the previous ruination of his engine had been removed when it was overhauled by Tom Ward, Geoff Milnes or who-ever.

In any case of doubt the following check should be applied to the engine. Attach a connection to one of the oil inlet elbows, terminated in a piece of plastic tube that may be held in the mouth. Place that piston at the bottom of the stroke and rotate the flywheel slowly forward whilst attempting to blow into the tube. At about half way up the stroke the resistance should fall away as oil clears and it should be possible to hold the engine at this point and blow fairly freely into the pipe. Continue rotation and within a few degrees there should be a second hole registering. Just before top dead centre a further hole is to be found. If a wrong-handed gland is fitted the sequence of holes will be reversed and registering on the down stroke of the piston. A check should be also made on the other half of the engine, even if the first half is O.K. ; two lefts or two rights is not unknown. Of course, old machines sometimes had different hole configurations, some only having one hole. Don't be misled by finding one hole, followed by two during the upstroke of the piston ; this probably means that both glands *and cranks* are in the wrong side.

We will gloss over the entirely unethical process of extracting the mutilated crank-case cup and its replacement by one from a ruined Flyer. Sufficient it is, to say that we took a big chance and it came off. A set of soldered-on tabs of copper foil served to feed the oil to the crank and appeared to function O.K. Strictly speaking, cup replacement is a works job. The main-bearing bush was a happier task ; replacement parts coming from the writers collection of fractured cranks that he accumulated during the period "B.C.P." (before compression-plate).

A spare packing-gland was discovered in the junk box but the driving tongue was worn slantwise. A touch on a grinder straightened this up, and the L.H. gland was given similar treatment. The result of the wear and grinding was a certain amount of back-lash in the drive of these components ; not important really but a bit of headscratching about tidying up this point, without cost, gave birth to an idea which formed the basis of a modification that has been applied to several engines with great success.

The combined effects of heavy gland friction and generated heat had caused more than the usual amount of wear into the flywheel keyway by the gland tongues. It amounted to about 3/16 of an inch on the ravaged R.H. side. The combined effects of driving pressure, the sawing effect of the tongues as the

mainshaft bounces axially over the end-float and the absence of any lubrication at these points, will sometimes produce an eighth of an inch wear here on engines that have run for long periods, without bottom overhaul. Clearly, the tongues always sit in the slots they have cut and these are only just deep enough to prevent each gland being lifted as the flywheel drifts over towards it. The wear must be made good before an engine is re-assembled for there can be no guarantee that gland-lifting will not occur after things have been disturbed, even if it were not occurring before. Dealers will, of course, do a flywheel overhaul, some perhaps an exchange ; but the process of making good is not an impossible task if the services of a first-class welder and a turner are available.

First of all, clean up the flywheel, especially the slot cut by the gland and inspect for the other troubles that are mentioned later. Next, make up a conical guard from thin sheet brass or aluminium to fit into the tapered portion of one side of the Flywheel. This keeps welding splash off the vital surfaces. Leave a gap opposite the key-way near the mouth of the taper. Using a small diameter rod and an electric arc set, a good man can fill in the groove without too much damage and leaving the minimum of surplus metal. All the flywheel welding can be done at one go ; then starts the cleaning up. After removing welding flux, the keyway can be filed out using the original good areas as a guide. Use a good key as a test gauge and achieve a tap-in fit. Weld metal must now be removed from the counterbore which receives the packing-gland boss. The surfaces are non-critical here, but for appearances sake, a lathe job gives the best results. Not having access to a large machine at that time the writer used an endmill to chew off the spill-over and odd blobs of weld with every satisfaction.

Welding sometimes leads to flow of metal from the keyway onto the edge of the taper. The sharp edge of the keyway in a crank taper can be used as a tool for removing a small amount of metal, but in any case a suitable file must be used to finally take off the last thou or so. The crank can be used as a test gauge, since as long as it can wipe out the file marks, the metal is still proud. Patience is the key to it all.

The final process is one of grinding each crank into its own socket in the flywheel. Very little metal can be safely removed in this way since a lumpy patch in the flywheel could wear away a crank that was previously accurate. The process merely removes the irregularities in the surface caused by cold welding of the metal parts when in previous tight contact. By looking for a uniform grey surface after a little lapping, one can check that the mating of the tapers is satisfactory. A few scratches or machining marks are unimportant. Use a small quantity of fine grinding paste and work with light pressure over a few degrees each side of the correct position for assembly, lifting frequently. Wash off with paraffin before inspecting. A high spot can be taken down a thou or so by using an old crank and applying grinding compound at that point only. Grease the rest of the taper surfaces.

After a good mating has been attained comes the testing. Wash off the surfaces throughly and dry, fit a crank in position without a key and give a firm butt home with the palm. A good job will hold the weight of the flywheel until knocked or twisted. This is seldom so after lapping-in since the removal of metal by the crank leaves a minute step at the end of its reach. The easiest way out of this is to slightly increase the chamfer of the tip of the crank taper, using a grinder. Perhaps this perfection of fit is not absolutely essential but it's very reassuring. One thing that cannot be allowed is any "rock" of the crank when lightly fitted into the flywheel.

When reassembling the crankshaft the shims may need to be changed since the cranks will have both moved inward a fraction. Half a thou off cranks and flywheel each side is two thou in all. This becomes about 6 thou inward movement because of the surfaces being on a taper. If the end float was correct before, a thin shim may have to be removed. The usual complement is one thick, one thin per side. Aim for the minimum of 10-12 thou. end-float when the cranks are lightly knocked home. Always test with the distance piece in position

at the top-rear engine mounting point. By keeping the end float small the sawing effect of the gland tongues is minimised. The end-float can be measured by using feelers to gauge the gap between the sprocket and the crankcase cup after levering the flywheel over as far as it will go with a screw-driver. The flywheel should then be levered toward the other side and the measurement repeated, the difference in gaugings being the end-float. Avoid gauging onto a rivet head which could be an unreliable surface to work to.

Another common fault exhibited by the flywheel in question was that it possessed 'fully floating' sprockets. Some attempt had obviously been made previously to cure the trouble because a brass shim had been inserted to take up wear. The trouble often starts by running the primary chain too tight, but the writer has had the trouble occur without this cause on new and reconditioned flywheels. The only certain cure is to get a welder to apply three spots of electric weld (4 on a 4 rivet flywheel) to join the sprocket to the flywheel boss. This does not draw the temper of the sprocket and ensures that the microscopic movement that starts the trouble simply cannot occur. The weld is not a substitute for the rivets, just a locking agent. If the sprocket has only a slight rotary movement, the weld treatment alone will do a good job. Should side play be present then the sprocket (or sprockets) must be removed and the flywheel bosses built up with electric weld. The services of a good turner now become necessary to recut the seatings. These need to be turned to provide a firm fit for the sprockets and should be true to the flywheel axis. The flywheel of course, has no actual centre so the trick is to insert the crank with its key. With the flywheel gripped in a large 4 jaw chuck, it is positioned whilst gauging onto the mainbearing track. The process must be repeated for flywheels carrying mag-drive sprocket. The writer does not know the tolerance allowed by the Works but recalls a sprocket he once acquired cheaply which was fitted to a flywheel re-conditioned as above to within .002 inches. When the whole machine was re-assembled it was found that the primary chain ran tight and slack. Assuming a worn chain was the cause, a new one was ordered and the machine put on the road. The whole thing felt nasty ; there was a high frequency vibration at about 40, and below 30 the drive would snatch. At tick-over, the chain performed quite a fandango and the engine would not run smoothly. On fitting the new chain things were almost as bad but the slack and tight spots could now be aligned with points on the engine rotation. The whole job had to come down again and on checking, the sprocket was found to be 10 thou. off centre. A new one was got from the works and found to be 3 thou. off so the flywheel was set up again and the best of the six possible positions chosen from the sprocket. On assembly, the motor was as smooth as silk and two-stroking was remarkably good.

Scott sprockets are particularly long lived and maybe the original ones appear re-usable. Generally, this is not so because the centres are worn and the rivet holes elongated. The rivets therefore cannot hold them properly. This last point can probably be overlooked if the weld process is applied but the centres will have to be skimmed-out and the flywheel bosses machined to fit individually to them. If the sprockets are at all shaky, best buy new, since if fitted securely they will last out the machine

One important aspect of a flywheel is its balance. On a Scott, the flywheel is purely an energy-storing device and incorporates no bob-weights as in most other engine designs. Being machined all over a fairly well balanced component is obtained automatically and in view of the rather fierce rocking couple present, a little "joggle" will go unnoticed. However, a word of warning based on an experience ; beware of rusted flywheels, particularly if the rusting is more severe in one spot. The writer recently salvaged an old 1928 flywheel which was rusted at the bottom where the crankcase had been in a flood. The attraction was in its weight which was some 2 pounds heavier than standard. It was required for a special engine to haul a heavy side-car. Because of doubts about the balance, a set of rails were made up so that with cranks assembled the whole crank-

shaft could be rolled on the main-bearing tracks and thus tested complete. The results was a surprise indeed. Altog ether, fourteen holes of 3/8ins. diameter and averaging 7/16 ins. deep were required on the outer rim on the unrusted section before a balance was obtained. There is little doubt that this little lot would have been noticeable at 4,000 r.p.m. One peculiar point of interest was that the taper angle was very slightly greater and a lot of work was required using a broken crank, to get the late type cranks to fit properly. The original short-stroke components were O.K. and it would be interesting to know, via the Correspondence Columns in "Yowl" (to be launched under the Captaincy of Mr. Geoff Lee) whether others have also had this experience.

We revert now to the subject of modifying the crankshaft key. It all came about in an effort to avoid the backlash arising from wear of the gland tongues, the idea being to insert some kind of a shim on the trailing edges to take up the clearance. Since the drive does not normally reverse it is probably not worth while on this score but on worrying around the problem it was realised that if a heavy shim were applied to the key-way on the surface which drives the gland tongues any wear arising would be on the glands and the shim, both replaceable components. Experience had shown that 2 to 3 thou. per 1,000 miles is an expected rate of wear of the flywheel material providing the end-float is kept small. It was decided to go for .025 ins. shim and replace this every overhaul. The material employed was in fact the strip steel used around the packing cases. It comes in various thicknesses, is hardish but can still be cut and filed Time has proved it to be fairly satisfactory, most of the wear occuring on the shim, which of course costs nothing.

The size of the shim is about 1/8 of an inch wide and runs the full width of the key-way in the flywheel, its ends covering the repaired surface where the gland tongues had previously been doing their worst. The presence of the shim prevents the key being inserted so a step must be milled along its appropriate edge to clear the shim. A problem arises in assembly and safe retention of the shim and this has been solved by soft-soldering the shim in place on the key and cleaning up the combination to make a good fit in the keyway. Cut the step to the exact depth, or slightly less than the shim requires, tin both items and sweat together, pressing shim well down as the solder hardens. If the shim is prepared slightly too wide and too long it can be filed to size afterwards, making a neat job and avoiding the need to position it accurately lengthwise. Anyone wishing to incorporate this modification where the gland tongues are not sufficiently worn away will have to grind them back. Do this on the other edges where the wear does not take place thus preserving the hardness on the driving edges where it is most needed. Make sure that the gland tongues slide easily into the key-way when laid in position on the flywheel and that the key is inserted with shim protecting the repaired spots in the key-way. It is reassuring to reflect that the modified area of the key is not a thrust face for the transmission of torque from cranks to flywheel and this may be one reason why it is possible to get away with soft soldering. To date, well over 50,000 miles of Scotting have been covered using engines incorporating this modification without any trouble on this score. The writer's own machine has done about 25,000 of these and is just starting on its third shim.

The final fact on flywheels is not, strictly, speaking any fault of the engine at all but rather of an overall machine design in which there is no provision for looking after that highly-stressed component, the primary chain. Racing machines can use one chain per race if necessary and since they do not have to enter a 'Concours' afterward, they can splash on plenty of oil. On touring machines, general cleanliness and economies on both oil and chains are both of great importance. A good deal of thought went into this one and since the ideal way of using the same oil over and over again was denied (because it required the total enclosure of each chain) it was decided that, if the same oil could be used to lubricate each chain in turn both oil consumption and messiness would be re-

duced. A good deal of oil-fouling in a Scott is caused by leakage past the packing glands on the mains. What if this oil could be used ? There would be at least no extra cost, or mess ! To accomplish this feat of thrift the "Dr. Scholls" lubricator was devised (so called because a piece of the famous Doctor's Orthopaedic felt was used for the prototype). It consists of a thin ring of absorbent material on the side of the primary sprocket and revolving with it, (one each side if a mag. chain is used). When the engine is assembled it just fills the space between sprocket and crankcase cup, the escaping oil being trapped by it. The outer edge is about the same diameter as the roots of the sprocket teeth and in service, the edges of the chain side plates squeeze into it. Oil is thus fed in where the plates overlap thus reaching the pins (or rivets)—the vital points. Lubrication inside and outside of the rollers is also provided.

How this oil is persuaded to pass to the rear chain must be covered in a future article devoted solely to the subject, our interest now must be confined to getting the flywheel rigged. The prototype has now been discarded after 5,000 miles but has worked well. A new primary chain was fitted at about the time of its installation and has done this mileage with one adjustment only and that consisting of one turn on the gear-box draw-bolt applied whilst the covers were off to allow for a touch-up on the clutch settings. This must be something of a record for a Scott ; but to be quite fair, the oil feed was unavoidably somewhat generous. Leakage from the mains has been a problem since new cranks were fitted although there seems no reason for this. Using the "Loftylube" lubrication system the feed to the mains is stepped up to the equivalent of "1 in 1" at the pump ; the leakage going up rather more than proportionally. A modification to the glands has now been incorporated and although no results are known yet, the lubricator ring has been re-designed to give greater efficiency in placement of the oil, anticipating that the leakage will be reduced.

The original was a ring, 1/16 ins. thick, cut from a block of the felt* It comes 1/4 ins. thick and has a plastic backing which is retained. The inside diameter of the ring is the same as that of the sprocket and the outside diameter that of the valleys between the teeth. The flywheel rivets were drilled and tapped 8BA and 3/8 ins. deep at their centres. The holes were countersunk a bit deeper than heads of the 8BA x1/4 ins. screws that are used. The ring was laid plastic side to the sprocket and a scriber used to prick through to find the holes. The countersunk screws were inserted and screwed firmly home, burying themselves in the felt. None have come loose, but the small size was chosen so that in case of mishap, they would easily disintergrate and could escape without dislodging the cup.

The new ring, as yet unproven (mileage to-date—25), was made from a flexible, black piece of horse-hide from an old wallet. A disc, the diameter of the sprocket, was laid in place and the fixing holes pricked through and the screws inserted. The leather was cut through against the valleys of the sprocket teeth using a small ball-pen hammer. The marked leather was now removed and the centre hole cut out. Next, the cuts already made by the valleys in the sprocket were joined up by cutting out "V" shaped pieces between them. The "V"s were about 1/4 ins. deep and went toward the centre, (not outward so as to follow the tooth contour). The pieces now projecting will come opposite the rivets, thus throwing oil out radially where it will do most good. These projections were made about 1/4 ins. wide at the tops and were given 3 or 4 radial slits, each about 3/16 ins. deep ; the idea being to form a brush which would hold oil and only yield it up when squeezed by the chain sideplates. A load of theory perhaps ; but once the idea catches on, everyone will have his own ideas and designs will be legion. The writer is convinced of one thing however ; if a machine has any leakage out of the mains at all, a few turns of string wound into the gap will lubricate the chain quite effectively, but with no such absorbent medium the oil will never get *inside* the chain and this is the point where lubrication is vital.

*The prototype ring which ran this mileage was actually made from a 5 ins. x 4 ins. x $\frac{1}{4}$ ins. slab of "Regaid" adhesive felt obtained from "Boots."

PETER TAYLOR and "THE BELFREY."

THE SCOTTING SCENE

by *Stan Thomas*

Much has been written in previous "Yowls" (and rightly so) about the great Scott men in days of yore. Here, by way of a change, we hope to bring over the next few issues, a small series of articles about the great Scott personalities riding today. The first issue, written in conjunction with our new venture —the Scott Sprint Class at Church Lawford, details the men and machines of the Club's Sprinters. We have included the technical details of the machines in the hope that you might be spurred on into building a sprinter yourself. If you do, (or use them to make your bike go better on the road), then you will be forever indebted to the lads who provided them, for the facts and figures shown are the end product of hours and hours of painstaking and costly work.

THE SPRINTMEN

Taking the four Clubmen who entered the Scott Sprint, in alphabetical order (see—no favourites !) we have Jim Best.

Jim, who lives in that big town by the Thames, has been at it for years, and hopes soon to break into road racing Scotts. He has a machine partially built, and this, he tells me, is destined to circulate at Crystal Palace very soon. Success is assured, we feel, by the vast wealth of information gained by his sprinting activities. Sprinting has taken Jim and his 1927 machine to every big event in the country, and over the years his formula for fast machines reads something like this :—

Basically a 1927 mount, the engine is a short stroke unit, fitted with long stroke rods. The modifications used to boost output are to increase crankcase compression, and improve cylinder filling.

The crankcase is "padded" internally, and the crankcase doors are let in to within a few "thou" of the big-end nuts.

An unusual mod Jim has made is to remove the centre of the transfer ports, and then to highly polish same. The port cover is then held on with an external clamp.

The flywheel is lightened by 1½ lbs. and balanced, as the primary balance of the standard part can be very poor (ask Lofty !)

Obviously the most important consideration is the carburation. This is accomplished by a twin floated 1 5/32 ins. bore monster that gobbles up fuel at the rate of 10 m.p.g. When showing surprise at this figure, Jim will shrug, and casually grin. "I like 'em to run rich." I suppose this is only understandable with a 940 main jet.

Running on his own blend of fuel, and incorporating "petroil" type lubrication, the fuel used is made up of Castrol R 40 grade, and Methonol (fuel/oil ratio 32.1) plus 2% acetone, 2% water. Using standard gear ratios and a 23 tooth out rigger, Jim can accomplish the standing quarter in around 14 secs., but as this is the luck of the game, on her "off days" times can be a little longer.

By way of a change, John Hartshorne's machine is a standard Sprint Special of 1930 Vintage, and although used in sprints, hill climbs, and road races, it is also used as transport to same. Of special mention is the fact that John has had 20 Scotts in as many years, and though he never hangs about he has not as yet managed to break a crank.

At the Blackpool meeting, the day before Church Lawford, (don't some Scott chaps travel) John's machine was electronically timed at 89 m.p.h.

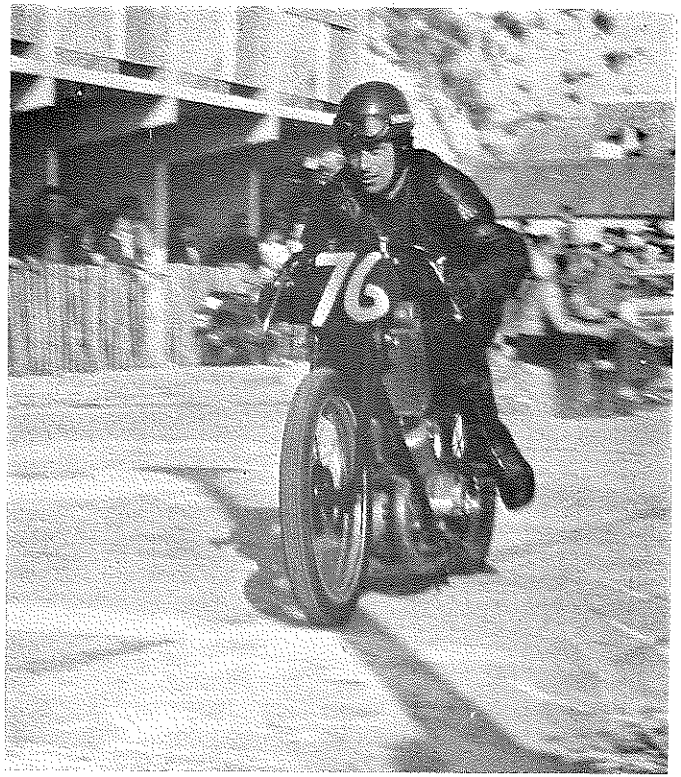
Although stated earlier that Mr. Hartshorne's machine was standard, there are a few mods. to the gearing worth mentioning. Using a 21 tooth outrigger sprocket, the drive is transmitted through a close ratio box fitted with a 2nd gear from a wide ratio set. This gives gearing suitable for the power band, and a wheel-spinning take-off.

John's take-off tactics are to wind 5000 + r.p.m. on the counter, and let go of the left hand lever (thinking of buying some shares in Reynold Chain Co) ?

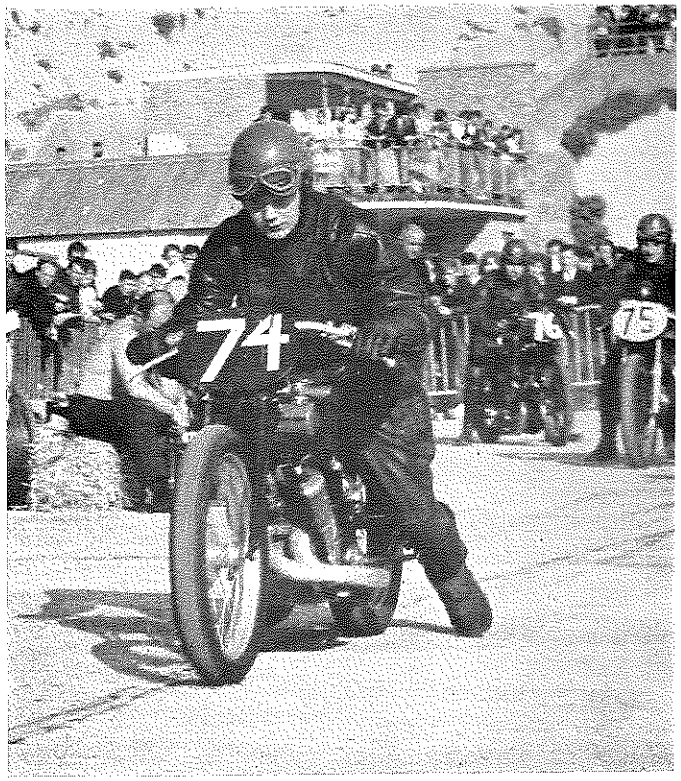
Last note from John on lubrication. He has fitted a Best and Lloyd pump, but finds it advantageous to run with a slight petroil mixture too.

Derek Shire hails fromLondon, and living fairly close to Jim Best, I am sure they have their heads together, for the technicalities of Derek's mount read almost the same as Jim's. Possibly of more interest history-wise, Mr. Shires' bike is an ex-Catchpole, ex-Breeze 590 c.c. machine, from way back in the 1929-30s. Also of greater claim is the thirst of Derek's bike. Fitted with a 1/5/16 ins. carb., running on Methonol, tuned to the hilt, it devours this beverage, (which costs 12/- per gallon) at the rate of 4 m.p.g.

Last, but by no means least, in our short survey of sprinters, comes well-known Pete Taylor. Pete's machine can be seen at the majority of meetings, including those on the Island at T.T. week.



"EGG-BOILER" SHIRE.



JIM BEST

Now, to set about building a sprint racer, Taylor style, is first, dismantle your machine, stare at the frame for about 10 minutes, then attack it with a hacksaw while it's not looking, thereby removing all surplus lugs and brackets etc. Pete's great ability to pay attention to detail, is typified by his one-off front wheel, the hub of which is composed of two 5 ins. brake units, welded back to back.

The alloy rear brake plate was discarded in favour of a steel one, as the original would not take the braking torque. Webb forks are fitted, as the originals were modified unintentionally on the Brands Hatch gravel. Peter would like a pair of 2/speeder forks to replace the Webbs. (Any offers ?)

The engine is padded internally but porting is standard. An unusual feature of Pete Taylor's engine, lies in his choice of spark plugs. He uses DFE

75 long reach. We assume that by projecting the plugs into the flame front the chance of oiling-up is minimised. Pete may have something there, for he certainly gets satisfactory results with his lubrication, which incidentally is drip feed Castrol 'R'.

Exhaustion is performed by straight through twin pipes, which terminate just before the rear engine bolt. (Just think of the glorious din !) Carburation is by standard Scott carb (with twin floats) burning 100 octane fuel.

After dropping the model at Cadwell twice in the same day, Pete decided to increase the ground clearance. This was accomplished by fitting extension plates between the rear wheel spindle, and the spindle lugs on the frame.

Performance is very good, over 5,000 r.p.m. is obtainable in top, the corresponding road speed being about 95 m.p.h.

Best sprint time has been 15.8 secs., although this could be improved with a wide-ratio box, to increase initial take-off speed. The close-ratio box is needed for racing. In its present form of tuning Pete usually finishes in the first six.

So there you have it. All that remains is to combine all four bikes into one and Mr. Brown may soon be handing over to you a few pots.

MONTE CARLO

I was buzzing down the Bois de Bolougne
With a brand-new Scott and chair,
You should see the gendarmes stare
At my chair-wheel in the air !
Oh boy ! I had to look alive,
Till I got the hang of a left-hand drive,
The time I took a Scott to Monte-Carlo.

They sneaked the "essence" into the rad,
And the "eau" went in the tank.
The "bougies" oiled and the whole plot boiled,
Till I went and broke a crank.
Oh ! sampling with the froggy boys,
Motor-cycling's wonderful joys,

The time I took the Scott to Monte-Carlo.
I got me a jollie fille in the chair
for a jaunt along the coast.
Though I don't want to boast,
I know what I like the most.
No doubt for standing passion's test,
The Monocoquette construction's best,

It's wonderful with a Scott in Monte-Carlo.
She bore me sons twice two times two,
And they've all got Scotts you see.
What a thunderous sound there'll be,
When they all buzz round for tea.
But not as big as the bill that's owed
At Whittall and Wilfred and Dewsbury Road,
I shouldn't have . . . at Monte-Carlo.

A RAGBAG OF SCOTT MEMORIES

by *Dennis Howard*

Some years ago when working as a member of the editorial staff of a motor-cycle journal and not a newspaper I hasten to add, I recall that cultured sensualist of matters motor-cycle, namely Canon B. H. Davis, recounting some of his earliest experiences, during one of his very rare visits to our London offices. It appears that Davis senior had asked his son, as most fathers do, the question "What do you want to be ? " The reply, we were told, was quickly forthcoming, "A missionary or an engine-driver." As most older motor-cyclists will know, Canon Davis's life was to be shaped a little differently from those boyhood hopes.

I can well remember my own father becoming tragically agitated and banging his malt spoon upon the nearest ceiling at my refusal to state what I wanted to do or be but in my now later life I really think I should have replied "I hope to become an incurable motor-cycle romantic." Alas it is now too late to make the statement to the parent but I am sure that a great smile of satisfaction comes over the gentleman's face and he may rest contented in the knowledge that his son is continually being hurled about through the emotional experiences supplied by "proper" motor-cycles and "proper" motorcycling.

Any similarity between my friend John "Crasher" White and yours truly at this juncture, is purely coincidental. He and I were schooled by very severe and highly eccentric parents and in consequence malt spoons were banged on the walls of both residences. In addition both mothers were suffragettes. Crasher never fell for 2/strokes and such was his very individual temperament that I don't think a Scott crank assembly would have lasted more than a few racing yards. You will recall no doubt that the worthy gentleman raced works Nortons and also K.T.T. Velocettes sponsored by Ron (Brooklands) Harris of Maidenhead.

For one season John White raced a br. . br. . 250 c.c. Excelsior Manxman in the Lightweight T.T. and the Irish races. I received a letter recently from him and it appears that his schoolmastery in the Eton of East Africa is going well. However, a return to these shores should take place in a few years time.

Although faithful to the Scott machine above all others during my motor-cycling career, I must confess to having owned and ridden several other interesting makes of motor-cycle. My happiest and indeed most amusing memories are associated, however, with that beautiful, exasperating, capricious and lovable 2/stroke. Seated amidships on an open-frame Scott, glancing down at those pleasingly shaped cylinders, an open road ahead, what a delight !

The first Scott I ever did own was a 1927 2/speed Super, acquired by the exchange of a J.A.P. engined special of very doubtful parentage. The experience of adopting a different riding technique, compared with a more orthodox machine, was pleasing ; Ah ! That 2/speed gear, so sweet. Mine slipped abominably in low, outer quick-thread drum-band tightened or not ; thus I rode as long as low gear was required with my right foot on the pedal, toes pointing at right angles to the direction of intended travel and certain pressure brought to bear during the process. At a later date Mr. Tom Ward, now of Derby, mentioned in one of his excellent letters to me, that after examination of my 2/speed gear certain traces of "blue" were to be seen on the drums. I bowed and will continue to do so, to this gentleman's superior judgement and vast experience of Scotts.

At this juncture I shall mention a few words to arouse sheer joy in the mind of my readers. Coming down from Barton Seagrave on a late Autumn Sunday evening in the thirties, weather condition—a light drizzle, heading for London —Scott droning well—carburation perfect, missed the airship sheds at Cardington—dashed nuisance but must motor on as lamps will have to be lit soon and my Scott boasts no such unnecesary weight. The condition of no lighting leads me on to an experience in which the cycle lamp that usually sat on my handlebars

decided to jump off during a night run. Needless to say the Super's rear wheel ran straight over the essential item, which was flattened as well as any professionally made pancake. I decided then and there that a major decision must be made, so I took from my riding coat a Schmidt three-cell torch, turned it to the "on" position and placed it in my mouth, registering it as securely as possible between my teeth. The ride proceeded without incident for a few jaw-aching miles until I arrived at Essendon in Hertfordshire, whereupon a policeman came forward to suggest that the lighting system I had adopted was not entirely suitable for night riding. I must confess here to having but merely acquiesced by a series of nods only, before racing off into the night once more, somewhat illegally I feel.

All my contemporaries have now ceased to motor-cycle, other than one or two on very special outings only. I call to mind, however, those happy earlier times when we lived for the day and "The Balance of Payments" or if an African Leader was elected "Best Dressed Man of the Year," were far remote from our revels and, quite frankly, we didn't much care. I remember a good friend of mine who lived not far from St. Albans, who rode a pleasing 596 c.c. Flyer of around 1930 vintage and such was the dash of his riding that one felt honoured to remain in his Castrol "R" scent. On one occasion three of us, namely Jim on the Flyer, another friend on a fast 2/speeder and yours truly on a 498 c.c. Flyer were preparing to leave the Rookery Cafe on the old Hatfield road after having taken light refreshment and warming our hands on the Tortoise coke stove that in those days used to stand at the far end of the cafe. In order to prevent readers "dropping off" at this stage I should mention that the subject of conversation that wintry morning had been the Sprint Special Scott standing outside with its 'Island' fuel tank and Brampton bottom-link forks. The owner was a Brookland's man and this machine had completed some laps on the outer circuit, as well as in the "Mountain races." I feel I may now safely return to the original story and we are now about to depart from that benevolent shack (as it then was). Jim screamed off down the hill at an alarming pace to be followed by the 2/speeder and then your scribe on his Flyer. "We shall never catch Jim" I thought to myself but lo, as we rounded a bend in the road there stood the bigger Flyer on it's stand with the right-hand crank chamber smashed through, and some oil on the road ; yes that crank had gone. Jim takes the Scott badge from the lapel of his riding coat and throws it to the ground in complete disgust and proceeds to mutter many mean mutterings. "From this day forward I am finished with b***** Scotts." The happy ending to this little episode is that within two weeks Jim was yowling again with a new right-hand crank and brand-new crank case fitted. Glorious days !

Riding from Loughborough to London some twenty years ago could have been a most pleasant experience if the distance was to be covered on the two cylinders of a Scott motorcycle. Due to a slight trouble however I was obliged to "pop" down to London on only one co-operative pot and for the first time for some years I was to be re-introduced to the delights of jumping off a machine at every really formidable hill and running alongside which, of course, in the normal run of events is not tragic but a trifle hot and inconvenient but in this instance I had a large cardboard box secured to my back and another placed across my chest ; this second container housed a Scott cylinder block! On arrival in London I was greeted by a sympathetic friend, who ventured to suggest that I might be mentally deranged. Looking back on my performance I can't help thinking there might have been an echo of truth in his remark.

It is pleasing to realise, however, that now in later age my blood pressure when facially indicated can do justice to a good Scott purple—here's patriotism for you. Nevertheless I have not reached the point in my culture when at the slightest concentrated thought I could similarly do justice to the wartime finish of a W.D. 16H Norton.

I regret that not all persons found it possible to share my enthusiasm for Scotts. A certain gentleman, who must remain nameless, by reason of bitter experience fell into this category. As many will recall, the vogue for building light aircraft powered by motor-cycle engines was very much to the fore in the nineteen-thirties and the gentleman to whom I am referring was firstly my Managing Director and secondly the owner of a Scott Inverted Air-cooled Twin powered "Flying Flea." One bright and Brooklands type afternoon some years ago the aviator was prepared to take off in the delightful little acroplane and I mentioned that everything was just fine with a Scott engine for power. Alas! for some inexplicable reason the motor seized solid in mid-air and the whole device dashed itself to the ground in the manner of a rather undignified suitcase. The pilot was thrown clear but landed heavily on his face and unfortunately bent his nose. This feature has never been put right, thus every time it is my fortune to meet him I am clearly reminded of the sad experience.

The delights of side-car driving came my way one summer's day during happier times. The local carrier in our farming community used his Scott and box-float for lighter hauls. Indeed the dimensions of the box were such that a good-sized Saddleback could be accommodated without any fuss. However the fatal day was now at hand and I requested the goodly carrier to loan me his outfit in order to deliver some day-old chicks to the station. At this point I must mention that I was attired in a long brown herdsman's coat, secured at the front with the traditional piece of bass. Now, for some reason, the otherwise fully equipped outfit boasted not a rear chain guard and while buzzing merrily along I felt a snatch as if some spirit from the Heavens was intent on whisking me away from this earth and in no time I was lying backwards along the machine, as my coat became more deeply entangled in the rear chain as it ran around the sprocket: the pulling motion causing me to, without desire, open the throttle to near all-out position. My Guardian Angel must have decided that I should not be called for higher duties, for the outfit took a sharp turn to the right and shunted into a flowered bank in the lane, scattering a box or two of very young Rhode Island Reds in the process. I was never a very pretty youth but the combination of a curly-haired young man standing (after extraction from the wreckage) with a now harlequin-bottomed coat and around me the chirping of England's future egg-producing mites, could surely have aroused some enthusiasm for the Victorian romantic artist to put brush to canvas.

Although having watched the racing at Brooklands and Donington I can remember but two or three names of racing Scott riders at the Track and Circuit respectively, although I hasten to add that many Shipley products were to be seen snarling round in the large capacity classes. If my memory serves me correctly, I think that a gentleman by the name of Spillane was quite a keen racer at the Weybridge Saucer and another, the namesake of the rider of possibly the fastest Scott of the present period—Mr. Williams.

One Brookland's Scott I recall to mind, when being used for the "timed half" sprint along the Railway Straight was completely void of any radiator, the inlet and outlet stubs on the block and head respectively being joined by the usual hose but having a finned length of metal tubing to connect the two, this piece of tubing lying across the head between the plugs, a very primitive form of thermo-syphon still, however. For roughly half-a-mile I don't think there was any question of seizure.

About the time that I am remembering, Noel Mavrogordato was racing an ex-Freddy Dixon Brough Superior but some years later, in 1950, we were treated to a grand exhibition of fast Scotting, when Mavro. won with considerable ease the Vintage race at Silverstone during Motor-Cycling's Silverstone Saturday. The spectacle is as clear in my mind now as if I were standing on the pit counter, just above the rise from Abbey Curve (the pits were situated before Woodcote Corner in those days) this very afternoon. Noel Mavrogordato (Scott 1930), with the famous yellow pullover, yowling up through Abbey Curve in the brilliant sunlight of an April day sixteen years ago. Perhaps I

am getting too old to appreciate that the thrill of the chase still exists in as concentrated form as ever but I will wager that the real sportiness has gone, in modern big-time racing. The Vintage meeting on May 21st. at Cadwell Park was, however, one of the best events I have had the privilege to attend in many a year.

Now my eyes have become somewhat dewy and I find myself wandering from the keys of the typewriter. This is an indication for me to light another pipe of tobacco and start my private reminiscences which are those that I have written on, plus others that flit through my mind, and then on.

Should the Scott Owners' Club wish to track down an interesting Scott to write about in their journal, I would suggest that some-one may wish to try and make contact with a Mr. J. C. Ord of Liverpool, if he is still residing in those parts. In 1949 or 1950 the gentleman converted an early Flyer to a very sporting specification, in which the radiator was placed behind the cylinders, among other modifications. I think it would make an interesting article.

THE OTHER BRADFORD WATER-COOLED TWIN

by *Tom Bellamy*

Every Scott enthusiast knows that, for a short spell in the early history of the marque, Scotts were constructed at the works of the other Bradford water-cooled twin, the Jowett. Most Scotters will let the matter rest at that point but it has always seemed to me that there were so many points of similarity between the two concerns that I hope I will be excused for developing this theme a little.

One of the immediately endearing facets about the Jowett, for me at any rate, is that, like the Scott, it has become a lost cause and Jowetts take their place annually at the Beaulieu "Lost Causes Rally," amongst the Alldays and Onions and other exotics from the dim and distant past, together with more homely breeds like the Clyno, Lea-Francis and Lanchester.

Like the Scott, the Jowett had an unparalleled production run of the same engine design and after the Jowett-Scott of 1908, the flat-twin watercooled light car was made in basically unchanged form up till 1953 at Idle, Bradford.

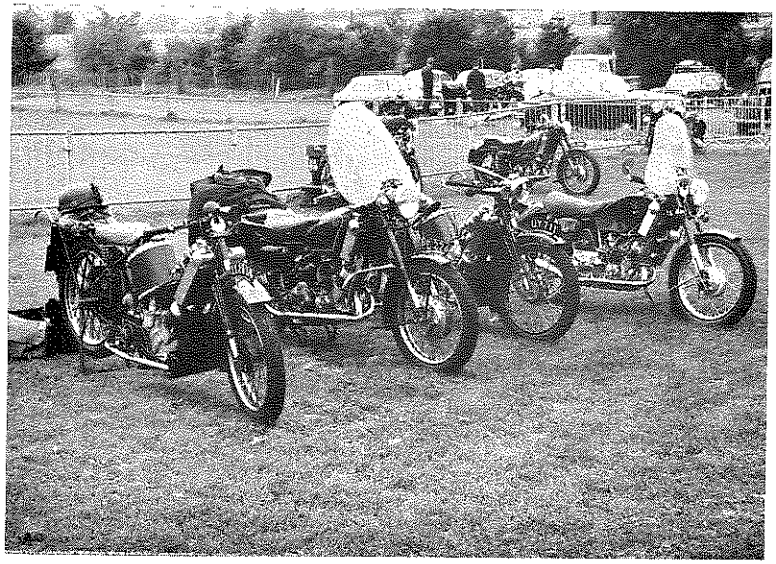
Although economy motoring was always the aim, Jowetts had established as early as 1923 a clientelle enthusiastic about the car's additional qualities, the chief being the engine's virtual indestructability; this led to the formation of the Southern Jowett Car Club.

The stories of Jowett longevity are legion. With 102,000 miles to its credit, a friend of mine recently decided that his 1937, 8 h.p. engine must come down. Examination showed that the bores and pistons were original; indeed it was evident that the engine had been undisturbed for all those years, apart from routine valve-grinds. The piston rings were like confetti and oil consumption astronomic!

All through the years, Jowetts pulled elephantine bodies (very different from those cramped Austin 7's) but Ken Braddock of Leighton Buzzard records how a 7 h.p. twin engine was fitted into a lorry in the thirties and used for towing broken-down vehicles up a steep hill in Yorkshire.

Just as the possibilities of the Scott have been developed by the Japanese, it has fallen to DAF and Citroen to exploit the possibilities of flat-twins in their very successful light cars.

At the moment a Jowett twin can fortunately be obtained for a sum a good deal less than a middling side-car, so if your tastes extend only to Scotts in solo state and you have a family of about a dozen, then a Jowett is worth considering. Admittedly it is only a four-stroke but one of the better ones for all that.



A SELECTION OF THE WINNING MACHINES.

SCOTT OWNERS' CLUB
9th ANNUAL NATIONAL RALLY

Report and photograph by *Andrew Marfell.*

Being one of the most successful rallies we have ever held, our yearly get-together was at its usual venue in Crown Meadow, Evesham.

Although receiving little publicity owing to the late delivery of the August "Yowl" there was still a fine turn-out of Scott machines. In all 51 Scotts were gathered. (I believe the largest number of entries was 68 machines at the National Rally four years ago).

I meant to write "among the more notable Scotts present" but this would not be fair, for every Scott be it a humble Cyc-Auto, or that dynamic duo of Messrs. Greenway and Lyall (yes—I watch Batman too !) are all worthy of singular praise, regardless of age or model for they all bear the brand of the "Limit Gauge" endorsing them as part of the Scott legend.

Perhaps I may be permitted then to mention but a few, like the Arnott Supercharged sprint machine of Derek Shire's or the ex-works 1928 trials bike of C. H. Wood ridden to the rally by Ivor Slack of Sheffield. Despite early rainstorms both Johnny Lyall and Stan Greenway rode their veteran machines to the rally. Incidentally Stan provided another concours machine, although not eligible for a Scott award, in the form of a restored Cyclemaster !

The awards this year were more numerous than ever before for it was decided that with so may concours entries the classes would be made smaller, so that instead of one award to encompass machines manufactured between 1918 and 1930 there would now be three trophies.

There were also four new awards to present. Mr. Scott gave an award for the best competition machine. Mrs. Mountain presented the E.A.M. Bowl. (E.A.M. being the good lady's initials). Mr. Chamber's Shield, presented at the A.G.M., was awarded to the most "Unique Scott." The last new award the beautiful Mountain Shield, for the winner of the Scott Sprint, should have been presented to Mr. Hartshorne but owing to a slight oversight this was not so, still, the Shield was forwarded later.

We were joined later in the day by the British Two/Stroke Club who had planned for their own rally to finish at our venue.

Finally may I conclude with a few "howlers" that were dropped !

As with all Scott gatherings some members of the un-enlightened masses who come to investigate what must appear to them to be weird contraptions, make statements which make even a Clubman with a broken crank howl with laughter.

One young O.H.C. type motorcyclist (?) with about a fiver's worth of scrap brass on the back of his jacket, after observing a group of Club members chatting called to his pal, "Hey Alfie, look at these men, some of them are as old as your dad ! "

Perhaps the best howler, surely among the "award winners," concerns a group of riders from the local ranch who were standing awe-struck around one machine debating on the strange but apparent lack of fins on the cylinder block, "What sort of engine's that ? " enquired one. "Dunno" replied his comrade. then placing his hand on the still warm radiator he continued wistfully "But I think it runs on hot water."

After the award-giving and the raffle (prizes kindly donated by Matt Holder and Ginger Thomas) the Rally came to an end.

After tea, however, many members gathered at the Ferry Inn on the banks of the Avon for a few jugs. Notably missing was Lofty Avis so, in lieu of music, the crowd thus assembled amused themselves with yarns and stories some old, some new, some blue.

AWARDS

Presented by our President—Mr. Harold Scott

Concours d'Elegance.

Award	*Class*	*Winner*
Midlands Trophy	Machines up to 1919	S. Greenway, J. Lyall } joint winners
Premier Trophy	1920-1924	D. Tallboys
Mountain Trophy	1925-1930	D. Cox
Late Vintage Trophy	1928-1930	J. Best, B. Bliss } joint winners
Dallon Trophy	1930-1939	J. N. Miles
E. A. M. Bowl	1940-1950	R. F. Dalling
Phil. Smith Award	Best B/ham Scott	B. L. Rawlings
Tavener Trophy	Best Combination	Mr. Corbishley
"Potty" Chambers Crank	Most Unique Scott	Mr. Fisher
President's Award	Best Competition m/c	D. Shire.
George Silk Shield	Clubman of the Year	George Stevens
Scott Trial Replica Cup	Main Road Trial	E. Lemon

The Scott riding tests event was won by John Round with a loss of only 5 points.

John Hartshorne is to receive the Mountain Shield for winning the Scott Class Sprint in 16.09 seconds.

A SCOTT AND THE A.C.U.

by *B. Russell*

I ride in this event every year and was naturally anxious not to miss this year's run even though "new" to Scotting. It is two years since it was last held. About a month before the rally a friend asked if he might have a short ride on my recently purchased Scott. He duly set off but was unfortunately involved in an accident with a Mini—the type covered in chequered tape and minus hub-caps etc., ("stage 1 tuning" I believe they call this !) The Mini driver admitted it was his fault and wrote a letter to this effect. This naturally did not please his insurance company.

I was still keen to enter the rally but with a machine that had a slightly bent frame, damaged radiator and split tank, things did not look too bright. A friend at work offered to lend me a Velocette Viper but as the machine did not appear to be in very good shape it was decided to use the Scott or nothing.

The petrol-tank was patched up, using fibre-glass. Various attempts to find a radiator failed until "Lofty" Avis was approached. He rummaged through various odds and ends in his garage and lo, and behold, a radiator was found. This was very kindly lent to me for the rally. I returned home at midnight on the Thursday prior to the rally and set to work to see what could be done. The radiator required soldering in some places but otherwise was O.K. Being pressed for time I decided to have the Friday off work. I sent a friend into work telling him to let the foreman know that I was not feeling well due to dining at the local Chinese restaurant the night before ("sweet & sour" and bird's nest soup etc.,) which I thought a good excuse, except that the boss's son, riding a Triumph, started at the same control as myself!

It was found that the tank would only fit if the front mounting bolts were left out, due to the radiator being of an earlier pattern, so, with the front of the tank resing on old inner tubes and secured by Aerolastics, the machine was quite rideable and that's how we entered the 1966 National Rally.

We only covered 525 rally miles due mainly to bad signposting in towns. It was originally intended to drive the full 600 miles but about 6 a.m. on the Sunday morning it was apparent that, apart from driving rather madly, we would not be able to cover the total distance. Hasty re-routing put us into the "Silver Plaque" class.

Two other Scotts were entered. One was a new model with side-car attached, the other a 1930 machine. The new Scott had the misfortune to break a primary chain but this was repaired and, happy to say, all three Scotts finished. Perhaps this will encourage more Scott owners, who like long rides, to enter in future.

Well, that's about it. I can still remember the garage attendant's remark when I asked if they had any water,—"Want a drink mate ? "

I expect many of our older members will recall "Lesters" at Sonderburg Road, Finsbury Park. The proprietor, Frank Cox, had a dubious reputation but I always found him fair and spent a lot of money there when I first started with Scotts. Frank used to break dozens and would willingly remove parts there and then from bikes in the shop ! He now has a similar establishment in Markhouse Road, Leytonstone, specialising in B.M.W. machines but when I last called in, about 6 months ago, he told me he still has some few Scott spares, including tanks and cylinders and, of course, is always pleased to see the odd one go by.

TOUR OF BIRMINGHAM

by *Stan Thomas*

Although the annual "Tour of Birmingham," organized by the V.M.C.C. has only been in vogue a few years, it has built up over those few years something of a tradition for bad weather. This year was no exception, for it poured down nearly all afternoon. The deluge rendered the roads as treacherous as an ice-rink and I believe two competitors were unlucky enough to drop their models. Val Ward, who came to spectate, had a nasty spill in Coventry on the wet cobbles, when a dog ran out under his front wheel. Some hasty work rendered his machine rideable, but rather than return home, he continued to Birmingham, arriving about 4.30 p.m.

Of the 142 starters, 13 were Scott riders, but unfortunately John Lyall could not compete with his 1912 model, as two of his children had mumps. John did, however, manage to come along for a few hours.

The standard of the Scott turn-out was, as usual, very high and three awards were taken in the "concoures." They were :—

Stan Greenway (1912)—Best 2/stroke.
D. Williams (1930)—Best Vintage 2/stroke.
B. Hares (1938)—Best Post-Vintage.

As you will gather, Stan Greenway has cured his gasket trouble that put him out of the Banbury Run. Incidentally, Stan tells me that he "blew" the troublesome gasket returning from the Colwyn Bay Rally. When one realises just how many events Stan competes in and considers the age and beautiful condition of his machine, then one can really begin to appreciate just what a true enthusiast is made of. Likewise, Alan Cooper, although probably not so interested in "concoures" standards, attends many meetings, with his machine always looking smart and tidy.

Barry Hares, on the other hand, "panicked" a little over the condition of his bike, so he completely stripped it, re-enamelled and re-plated it in one week flat. Perhaps we should have a cup for the "Quickest Rebuild" at the next Rally !

After a soaking run and a lot of handshaking, the riders dispersed homeward—and the rain stopped.

THE FLYING FLEA

by "*Potty*"

The Scott-engined Flying Flea shown in the August "Yowl" belongs to Mr. R. R. Mitchell who is the Hon. Sec. of the Kent Branch of "Air Britain" to whom I am indebted for the following details, mainly taken from a booklet written by him on Flying Fleas and on sale to help keep the one shown in repair !

The Pon-du-Ciel (Sky House) was first built and flown by its French designer and constructor, the inventor Henri Mignet, in 1933, who once claimed that any-one who could build a packing-case could build a "Pon" and learn to fly.

The aircraft is peculiar in several ways, having no elevator or ailerons. Instead, the upper main plane (wing) pivots about the front spar, tilting the wing up in relation to the fuselage and thus making the aircraft go up or down. Absence of ailerons meant that the machine did not execute a banked turn but merely skidded around by using the rudder.

The construction and flying of the Fleas in this country began in 1935 and despite serious shortcomings they became very popular.

120 Flying Fleas are recorded on the Air Registration Board's files of which 83 received permits to fly, the last permit being issued in May 1939. Of course very many others were constructed but never officially flew. There must be several still lying about in old barns etc.

Unfortunately several fatal crashes with Flying Fleas occurred due to these shortcomings in the design, though nothing was done to ban them. Briefly, tests carried out at Farnborough in the wind-tunnel proved that if the wing had an angle of incidence more than 15 degrees down and with the stick then hard back, there was insufficient pitching moment for the nose to rise and the machine flew straight on into the ground.

The machine pictured (August issue—*Ed.*) belonging to Mr. Mitchell was built at Horton Kirby about 1936 or 1937 by a Mr. W. Milton. There is no record of it ever flying but it is known that taxi-ing trials did take place. It was never registered and the number it bears was put on by Mr. Mitchell for authenticity. Actually, it is a number that was issued to a Shortt S.23 Flying-Boat that was never flown.

Interesting entries in the Air Registration Board's records are :—

G—ADSC construction no. NAD. 1. registered between 26.11.1935 and 31.12.1936 and made in France for National Air Displays Ltd. The last owners recorded are Scott Motor (Saltaire Ltd.).

G—AEFK built by Scott's Flying Displays ?

G—AEJX Built by E. Small & Hardie and called the "Angus Flea" and currently stored at Perth.

Some other Fleas were called "Fleeing Fly," "Golden Glory" and "Madam Butterfly."

A very interesting inscription is engraved on the sparse instrument panel of G—AEOF—"Aeroplanes bite Fools."

Specification :—

Wing span 22 ft.	Max. speed 65 m.p.h. at 1,500 r.p.m.
Length 11ft. 10 ins.	Cruising speed 57 m.p.h.
Height 5ft. 6 ins.	Initial climb 250 ft. per min.
Wing area 140 sq. ft.	Range 175 miles.
Taxi weight 325 lbs.	Take-off (no wind) 400 ft.
All-up weight 550 lbs.	Landing speed 19 m.p.h.

Propeller 5 ft. dia. 4.5 pitch.
Engine revs. 1,350 at 50 m.p.h.
Engine rating 25 h.p.
Fuel consumption 1½ galls. per hour.

I am sure Mr. Mitchell would like to hear from any-one who would like a booklet. He did not give a price but I think a 2/6*d.* donation would cover. He would also very much like to hear from any-one who has further details of Flying Fleas, especially as to what engines were fitted but the Construction or Registration number to go with the type of engine is important. His address is :—

16, Varnes St., Eccles, Maidstone, Kent.

"TITCH" ALLEN writes . . .

Could you harness the resources of "Yowl" to try and trace my old De-luxe Flyer, 1930 model 596 c.c. with Scott girder telescopics and a two-into-one exhaust branch (I am not saying Siamese). Reg. No. when last seeen K.F. 2031. The frame has been crudely repaired under the head lug by brazing-in smaller diameter tubes to the sawn-off twin down-tubes.

The point is that it was this machine which really started the Vintage Club . . . if I had not fallen for it, I might never have been inspired to start the Club and as it is the Club's Jubilee next year and we hope to have a pilgrimage to the birth-place on the "Hog's Back" in Surrey, I would dearly like to be able to turn up on the right bike . . . buy, beg or borrow.

There's just a chance one of your members might be able to trace it. My last clue is that it was sold by a chap named Tuckwood who lived at Burton-on-the-Wolds Nr. Loughborough, but he can't remember who he sold it to.

If any member can help here would he please contact Mr. Allen direct at 111, High Street, Ibstock, Leics. (*Ed.*).

MIDLANDER'S VIEWPOINT

by *S. E. (Ginger) Thomas*

As from the 12th September this year I have been kicking myself with a size 14 army boot for not attending the National Rally. Unfortunately I had committed myself to attend a lesser event at Beaulieu. I did, however, dash back in time for a "noggin" and "natter" at the Ferry Inn later.

Elsewhere in this "Yowl" you will read the excellent report of the Rally by newcomer Andrew Marfell. When I called at his home for the draft of his report he plied me with box after box of photographs, all of Scotts or vintage cars. From all this, plus the fact that he is present at all meetings, I shall nominate him as "Official Club Photographer" at the next A.G.M. !

Why is it, whenever I get a scheme in the back of my "Brummie Brain" it always seems to fall flat before I can unleash it on the world. My latest plot was to equip my girl-friend Pamela, (chief P.R.O's typewriter basher and spelling mistake puter righter) with a Scott Cyc-Auto. Then, all being well, young Pam could enter the Main Road Trial, (it's Scott-engined).

For years I've maintained a deathly silence about the Cyc-Auto, believing I was the only one alive who had knowledge of the contrivance. Then, all of a sudden, every-one seems to get in on the act and we see more references to this little auto-bike than the Mongolian S.E.T. "Yer can't win." All the same, if anyone knows of the whereabouts of a Cyc-Auto, I would like to purchase a complete original model to be "Lyallised" for posterity. (David Lawrence wants one as well.—*Ed.*).

I was over at the T.T. races with Lofty Avis and whilst I found the racing itself to be of its usual high thrilling quality, I could not help but feel that the week lacked the "atmosphere," due, of course, to the alteration of the date. Still, there's always next year.

On behalf of the Club, I think it's only fair to make an apology to John Hartshorne, winner of the Sprint event on May 15th. John should have been given an award at the Rally but the award he was to be presented with was given for the "Most Unique Scott." As I was not at the Rally I was unable to help in the re-arrangement of the trophies and Mr. Hartshorne was overlooked. By now, all will be put right however. All the same, sorry about the mix-up John.

Soon the nights will draw in and the season will be over for yet another year. We will be cleaning, oiling and checking over our machines ready for the Spring and the many Scott events to come. Among these there will be the Main Road Trial, Meriden Rally and Scott invasion of the Banbury Run, also Club runs of special interest and the 10th Annual National Rally destined to be the greatest ever as plans are already being made for this Anniversary event, with still almost a year to go!

B.M.F. STAND—MOTOR CYCLE SHOW, EARLS COURT, NOV. 12th—19th

Sponsored by the National Benzole Co. Ltd., the B.M.F. will occupy a prominent position in the "Clubman's Corner" at the forthcoming Show and there will be several Scotts on display. Let's hope for a subsequent jump in membership level !

RAISING THE MINIMUM AGE TO 17 FOR RIDING MOTOR-CYCLES

Jack Wiley, the B.M.F. Secretary reports his receipt of a communication from the M.O.T. in which Mrs. Barbara Castle proposes, on the advice of the National Road Safety Advisory Council, to raise the age limit from 16 to 17. This proposal he says is being fought to the utmost by the B.M.F. Executive,

NEW MEMBERS

Ashwood, F. W., "Son Vida" 1, Beach Road, Carlyon Bay, Cornwall.
Banks, F. H., 170, Crossbrook Street, Waltham Cross, Herts.
Beal, H. W., 25, Beeleigh Cross, Basildon, Essex.
Bowman, D., 13, Wheatfield Road, Old Bilton, Rugby, Warks.
Curtis, C. C., Lincolnshire House, 4, Rawson Place, Bradford, Yorks.
Hawkin, J., 21, Mill Way, Rickmansworth, Herts.
Kneller, B. H., 38, Elgin Avenue, Ashford, Middx.
Land, W. O., The Bungalow, Kayte Lane, Southam, Cheltenham, Glos.
Manners, J. R., 44, Burford Avenue, Swindon, Wilts.
Pease, Len., 1102, London Road, Leigh-on-Sea, Essex.
Rhodes, Donald K., 8, Vardon Drive, Glenrothes, Fife, Scotland.
Rowe, C. B., 14, Hylton Road, Petersfield, Hants.
Shepard, A. L., "Grenaby" 1, Kilburn Avenue, Eastham, Wirral.
Smith, J. R., 4, Green Balk Lane, Lepton, Huddersfield, Yorks.
Steward, G. E., 4, Church Road, Bulmer, Sudbury, Suffolk.
Tetley, R. M., 18, Fountain Court, The Serpentine North, Blundellsands, Liverpool, 23.
Thomas, C., 66, Avenue Road, Tottenham, London N.15.
Tomlinson, H., 76, High Street, Barkingside, Ilford, Essex.
West, W. A., 26, Brentbridge Road, Fallowfield, Manchester, 14.
Whale, J., 2, The Ridgeway, Stanmore, Middx.
Young, D. E., Orchard Cottage, Wickhambreaux, Nr. Canterbury, Kent.
Heskins, Rodney G., 39, Victoria Road, Shoreham-by-Sea, Sussex.
Tunstill, C., 28, Hillside, Banstead, Surrey.

CHANGE OF ADDRESS

Budd, L. H., 63a, Portland Road, South Norwood, London. S.E. 25.
Smith, T. A., 5, Portland Close, Mickleover, Derby.
Sprague, L. T., "Coppers" Poltimore, Nr. Exeter, Devon.
Williams, W. C., 4, Great Wheal Seaton, Tuckingmill, Camborne, Cornwall.

All members who change their address should notify the Membership Secretary, Mrs. Avis, (and her only please) immediately, at 3, Bosworth Road, Eastwood, Leigh-on-Sea, Essex. Yowls are distributed from this address also. Back numbers are available for any months '64 or '65 at 3/- per copy.

A young chap at work, having just celebrated his sixteenth birthday, has just joined the motor-cycle brigade by buying some "Tokio Tonware." Whilst kitting himself out he went into the local "Halfords" for some "L" plates. The eager assistant produced a whole range, starting with a pair of carboard plates for ninepence, (the ones that dissolve in the first shower) to a really posh pair in embossed celluloid. Said the assistant "These are really good value at 4/6*d.*, and will last for years and years!

WANTED. Fairly decent Scott Flyer. Complete if possible. Must be vintage. 596 c.c. engine essential pref. short stroke. Also vintage sidecar chassis (sports variety). Requirements necessary in order to give Broughs a run for their money at Cadwell next year. Financial leniency appreciated. Howard, Old Conduit House, Lyndhurst Terrace, Hampstead, N.W.3. Ham. 7746.

WANTED. Rear chain-guard 1950 Flyer. Langdown, 3 Dennis Road, East Molesey, Surrey.

WANTED. Rear wheel. Complete if possible. To suit '26 2/speeder Also fork sliding member. R/H gear cover. Godwin, 59, Normanhurst Rd. Walton-on-Thames, Surrey.