SECTION 1

MODEL IDENTIFICATION

1.1 General Identification Notes

MACHINE IDENTIFICATION

I have just received a plea from a member, who although he CAN tell the difference between Stork and Butter, is unable to tell the difference between a T.T. Replica and a Three Speed Super and suggests that a series of articles would be of interest to all, and may assist in renovations.

Well—it's your magazine, so if that its what is required—here goes.

I would in advance warn that most of this series will be from memory as various books, cuttings etc. have been loaned and not yet returned, but it has been noticed that any slip brings a deluge of letters, so this may encourage reticent readers to put pen to paper and finally assist all.

Where to start? Perhaps with machine age. The Scott Works in common with most manufacturers of the era, produced their new models for the November Show and they were then available to the Public from that time, this could mean that a machine which in the Log Book is shewn as 1932, could in fact be a 1933 model. I saw a few days ago, a 1928 T.T. Replica being advertised, the Replica was in fact from the 1929 range of models, but it was available to the Public from the latter part of 1928. Do you get the point?

All members who are anxious for information regarding Scotts would be advised to contact George Stevens of Pen y Graig, Coed y Parc, Bethesda, Caerns., and if they have not yet placed an order for his book "Made to Limit Guage" which is being published in parts for eventual binding, they would be well advised to do so now. He has also a small publication (2/4d. including postage) which covers and illustrates "T.T. Two Strokes" (The Editor has also a small supply at the same price).

For the purpose of this article, which is just to give the uninitiated some idea of how to distinguish the various models seen around, there is no point in going back too far, and the prefixes seen with engine numbers did not appear until the early twenties, with the exception of the letters SC which denoted that the engine (532 c.c.) had been overbored for sidecar usage. A word in passing however may help certain readers—Z denotes 498 or 486 c.c. engines whilst Y denotes 596 c.c. The letter P in front of either denotes the "Power Plus or long stroke engine, and again D in front of these shews Detachable Head and this coding DPY was carried up to the early B'rum Scotts. The genuine Replica Engine had the letter R after the number and Clubman Specials carried the letters C.S. Should you be fortunate enough to discover a Scott with the letters G.P. or Z or Y, with larger crank case covers held by studs instead of the usual "straps" then you have one of the few Grand Prix Scotts produced during 1934.

Another important point, Scotts were never "churned" out, they were individually built, and so it should be said at this stage that I doubt if there are two Scotts of the same year that are identical!

Now for the classification as defined by the Vintage M.C.C.—"Veteran"—those machines registered before the end of 1914. "Vintage"—machines registered before 31st December, 1930. Post Vintage—machines registered after that date.

VETERAN SCOTTS. I think that for all practical purposes the Jowett built early Scotts can be disregarded, for so far as I know none have survived and the earliest Scotts I know of are of 1910 vintage. Up to this year the Scott engine had an air-cooled (finned) barrel with a water cooled, but again fined head with finned riser pipes to the radiator, which consisted of a header tank and separate flattened tube radiator.

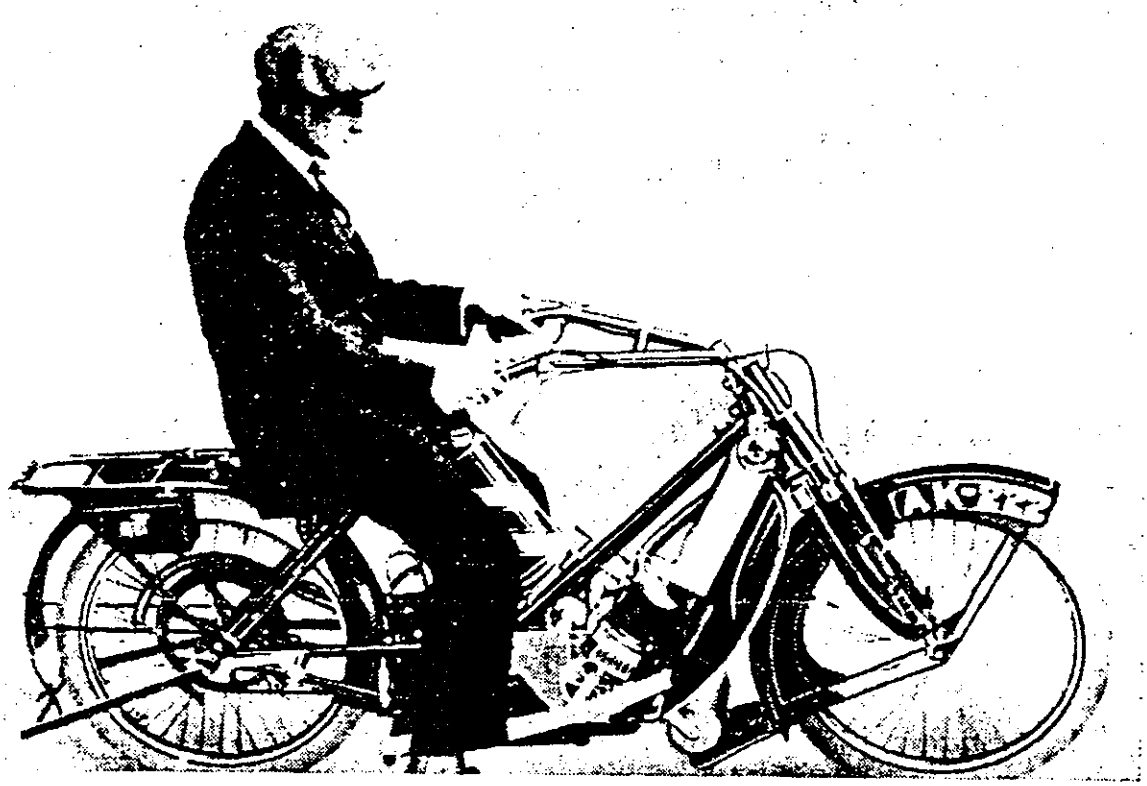
1911 saw the first water cooled Scotts, with the normal radiator, but with square section holes, and a four point fixing, which was a feature of all pre-1914 models. The barrels had a pronounced "waist" to the water jacket, and the crankcase door straps of the 1911 models were vertical, as against being in line with the cylinders which were the feature on all models after 1912.

Whilst the frame and cycle parts remained much the same—up to 1912 a much lighter type of two speed gear was utilised.

Machines up to 1912, had a curved flattish blade to the fixed member of the front fork, which in 1913 became the taper tube that was to be used up to 1930.

1913 saw the machine redesigned by A.A., who thought that the head or the region around the sparking plug was over cooled, and the shapely aluminium head was abolished, and the space at the top of the water jacket was sealed by two large notched rings, this being a feature of the engines up to about the end of 1923.

(to be continued)



The 1912 Scott

Sorry—but this was the best picture I could find. Note the curved front fork blades and sliders. Open Bosch magneto. The number plate on the front mudguard is a separate fitting which with the two plates and the mudguard portion (all in one piece) acts as a front valance. Eagle eyed members will note the cable passing to the Scott carburettor (the bulge seen over the crank case flange. No gear shields fitted. Sartorially minded readers will observe that the cap is of 1912 (genuine) vintage.

MACHINE IDENTIFICATION (Pt. 2.)

V6/12 July 1970

All machines prior to 1914 were fitted with Scott curburettors, which fitted in the space between the crank cases and the side flanges. The cables for the air slide and throttle, being taken at each side of the engine, and the cable was held in a small slotted and threaded projection between the cylinder bolts, which on all engines up to about 1922 were fixed to the cylinder barrels by a small pin which was tapped into place after the bolt was inserted, the pin passing through a small hole in the bolt.

To allow access to the Scott carburettor, a small aperture was cut in the side plate at the upper rear part of the flange. (Any pre-1914 model without either of these points (i.e. pin fixing bolts and the aperture) is not genuine and the crankcase has been replaced by a later model.)

The final point of ready identification of pre-1914 models lies in the fork sliders which in all early models were carried on two rollers which bore against flats on the member itself, the two rollers being set at a slight angle, and there was no tubular cover to the lower part of the fork member.

In the Veteran and some early Vintage Scotts, the oil was always carried in the frame tubes, up to 1912, the filler being at the top left hand side of the down tube near the steering head, but from 1913 the filler was under the nose of the saddle, which prior to that year was of the large cycle type, with looped spring at the nose. After 1913 the "X-L All" type of saddle was utilised.

Carriers on the models prior to 1912 were angled at the front and taken down to the seat tube to clear the saddle, but after 1913, the carrier was taken to the oil filler and looped to clear the springing action of the "X-L All" type saddle.

No gear shields were employed on the light gears of the 1912 models but were introduced with the redesigned 1913 models and it will be seen that the leading edge of these are straight instead of being angled as were the later two-speeed models.

Again—up to 1912, the Scott was distinguished by the vertical lines on the petrol tank, the rexine covering being introduced with the 1913 models and continued with the whole range of 2 speeders up to 1930.

This article is not really concerned with renovation, but it should be mentioned of course that all bright parts shewn are nickelled, though some handlebars from 1913 on were covered with black celluloid.

I am told that Thornley & Knight's "Tekaloid" is the best coach paint to use, but you would be advised to pour a little each time into a saucer, in order that you can keep the lid on the tin, and whilst painting, clean your brush after each few applications, for it is amazing how much dust it appears to attract. (If you use it straight from the tin it will really be fouled after a time and you will never get the finish as seen on the "top machines".) Thornley & Knight also make a Scott purple which I am told is to original specification.

One last point—if you are renovating a Veteran Scott, it is no use utilising the modern transfers—the early transfers were a simple outline in gold, with the letters "made to Limit Guage". If you don't know what it looks like—then again George Stevens' book for you is over due. Place your order now!!!

Any member attempting to renovate a Veteran Scott would be advised to obtain and study as many photographs as possible, particularly catalogue illustrations, or you can make a point of atending any event at which any of the following machines are exhibited.

Wally Green's 1912 model is perhaps the most original and the finest example of the numbers of 1912 Scotts in the Club and Vintage world, though John Lyall's is certainly the most handsome and eye-catching. Stan Greenway's should this year emerge again after a winter's work, and I am told may stagger both!

Derek Cox's 1914 model is just perfect and ranks with Wally Green's for originality and finish.

These then are the early machines to study, and if you can achieve something approaching their standards, then you have something to be proud of.

I cannot without giving our hard working treasurer more grey hairs, publish as many illustrations as I would like to shew the development of the various models, but we will give one at least in each edition, which by referring back to the various articles, should put the new comer on an equal footing with certain grey beards. Who knows but that by the time of the next Rally, you too can get proud owners frothing at the mouth, just by shaking the head, "tut-tutting" and muttering "No—no—that's not original, didn't introduce that until . . ." which as we all know is the hall mark of the "expert"!!!

To the others—don't be too harsh on the errors, but if we have "boobed" -- then let us have your corrections. After all one object of the Club is to assist each other.

To summarise then before passing on the next but perhaps more interesting era, which saw the development of the sporting Squirrel, the old 532 c.c. Standard models ALL had the following features prior to 1914.

1. Fork sliders operating on rollers.
2. Prior to 1912 (though some early 1913 models may have been so equipped) flat curved blade to fixed member of fork.
3. Up to 1912 — oil filler on front down tube.
4. Fabric covered tank introduced 1913. Prior to that painted with two horizontal contrasting bands.
5. Four point fitting to square hole radiator.
6. All machines fitted with Scott carburettor.
7. Carriers — up to 1912, angled to point below saddle on seat stays after 1913 to top of seat stays and curved to clear XL-All saddle.
8. Gear shields introduced 1913.

If you can keep these simple points in mind then you should be able to pin-point the Veterans you see around at the various rallies.

Just to complicate the issue, we should remind you that right up to the fiftes, the Scott works always supplied conversion kits to bring old Scotts up to date, and their latest issues were teles and full width hubs to convert pre-war Scotts. From the handbook of 1919, we quote "1909 and 1910 engines have been discardd, 1912 engines can be supplied to fit 1909 and 10 frames. 1909 and 10 gudgeon pins, piston and con-rods fastened by screw through top of piston have been discarded, but we can supply these to fit 1909/10 engines same design as 1912.

Piston well blocks have been discarded: we can supply screws to take their place at 6d. per set.

1909/10 radiators have been discarded and we can supply new pattern radiators ready to fit, price £3."

No wonder original Veterans are scarce! Now you know why they're all different!

(From the mass of information collected by Chas. Hooke in his attempt to produce a Scott "gen" book we reproduce this brief history of Scott development over the Vintage period. — Ed., V.M.C.C. Bulletin.)

1908 Water-cooled Head, Finned Air-cooled Barrels. Spoked Flywheel.

1911 Air-cooled Head. Water-cooled Barrels. Spoked Flywheel. Capacity 532 c.c. Bore 2⅞in. Stroke 2½in. (?).

1921 **Sports Squirrel,** 486 c.c. 2⅝in. x 2½in. b. and s. Hub Front Brake. Alloy Pistons.

1924 3 Speed version of 532 c.c.

1925 (?) **First Super Squirrel.** Hemispherical Heads, Alloy Pistons, 498 c.c., 2 11/16in. x 2 11/16in. b. and s., Z Series Number.
596 c.c., 2 15/16in. x 2 11/16in. b. and s., Y Series Number.
Hub Brakes, Gear Shields, Best & Lloyd Oil Pump on Crankcase Door; made in 2 and 3 Speed models, Oil Tank fitted on tube above Radiator.

1926 **2 Speed Flyer** introduced.
3 Speed Flyer used in T.T. **Wide Type Big Ends introduced using ⅜in. wide ¼in. rollers.**
Engines have wider crankcases and have A after series number (e.g. FZ 2322 A).
Pilgrim oil-pump driven by Magneto.
1926 Flyer. Engine Letters FY or FZ, but engine of basically Super type, highly tuned. Combined Petrol and Oil Tank. "Open" frame, i.e., no top tube. 2 Speed Gear. B. & D. Stabilisers on front forks.
1926 T.T. Models. Duplex Frame. 3 Speed Gear. Girder Forks. 7in. Front Brake. Two Exhaust Ports in cylinder block. Forerunner of 3 Speed Flying Squirrel. Expansion Box in front of crankcase with twin short tailpipes of large diameter. Binks 3 Jet Carburettor. Chain Oil-tank beneath saddle lug. Bore 68.25 x Stroke 68.25. Coupled Brakes.

1927 **Flying Squirrel.** First production model 3 Speed Flyer. Duplex frame, etc., a replica of the 1926 T.T. model. 498 or 596 FZ and FY Engines. Expansion box in front of crankcase with twin long tailpipes of small diameter. No chain oiler. Timken type bearings in steering head. Independent brakes.
1927 T.T. Special job never produced. Very short frame. Special forks like a very heavy Scott Super-type with exposed spring. Special crankcase with short sides. Internals as F.Z. and cylinder block. Two-into-one exhaust system on **left hand side.** Chain oil tank beneath saddle lug.

1928 Cylinder wall oiling fitted as standard. Electric lighting fitted.
* **The Flying Squirrel** of this year was the forerunner of the Replica (introduced in 1929), it was fitted with auxiliary hand pump oiling to the cylinder walls and was of very similar appearance to the Replica, except it was a short stroke engine.

The frame was about 1in. or 1½in. longer than any subsequent model, necessitating a longer gear tray.
Enfield rear wheel was fitted, having non-detachable brake drum. This wheel was heavily "dished", having the spokes built into the outer edge of the 8in. brake drum.
In Scott literature of the period, a claim of 85 m.p.h. was made for this model.
Chain sizes and lengths:—
1928 and previous:
Magneto Chain — ½in. x ⅛in. x 69 Links + S.L.
Primary Chain — ½in. x 5/16in. x 74 Links + S.L.
Rear Chain — ⅝in. x ⅜in. x 94 Links + S.L. (approx.).

* **Not to be confused with "FLYING SQUIRREL TOURER" introduced in 1929,** when the "REPLICA" was also first catalogued.
This model was very similar in appearance to the Replica of 1929, except for the slightly longer wheelbase and different petrol tank.
IT, OF COURSE, HAD THE **SHORT-STROKE ENGINE.** THE FIRST LONG-STROKE ENGINE BEING FITTED TO THE **REPLICA OF 1929.**

Note: Care to be taken re difference between long-stroke and short-stroke cylinder blocks. **They are not interchangeable.**
Short-stroke blocks have 4 "cutaways" in skirt.
Long-stroke blocks have 6 "cutaways" in skirt.

1929 **Tourer Flying Squirrel** first introduced. (Cheaper version of the standard Flying Squirrel.)
Duplex Frame. White side panels on tank. Webb forks and wheels, **narrow** saddle tank, **wide** saddle tank fitted to "de Luxe" and "Replica" models. Shorter wheelbase than 1928. Wide ratio gearbox.
"Replica" Engines: 498 c.c., 2⅝in. x 2⅞in. b. and s.
596 c.c., 2⅞in. x 2⅞in. b. and s.
Sprint Special. Single tube, open "Super" type Frame, Replica engine.
Dirt Track. As above, with "Super" type plunger forks.
Sports 2 Speed also introduced. Similar tank to early "Flyer", except Oil Tank Filler Cap **behind** Petrol Filler Cap (not side by side). Large brakes (8in. and 7in.) (?).
"Replica" Model introduced. (See 1928.)
Long Stroke engines:
RZ 498 c.c., 66.6mm. x 71.4mm. b. and s.
RY 596 c.c., 73.0mm. x 71.4mm. b. and s.
Detachable 8in. brake drum on Enfield rear wheel introduced (attached by 6¼in. B.S.F. bolts and nuts or ¼in. x 26 T.P.I. bolts and nuts).

Chain sizes:—
1929 and later:
Magneto Chain — $\frac{1}{2}$in. x $\frac{1}{8}$in. x 67 Links + S. Link.
Primary Chain — $\frac{1}{2}$in. x $\frac{5}{16}$in. x 69 Links + S. Link.
Rear Chain — $\frac{5}{8}$in. x $\frac{3}{8}$in. x 94 Links + S. Link.
(Rear chain varies in length, of course, with different size final drive sprockets.)
Speedway Model. Open Frame. RZ long-stroke engine with R/H pipe. 3 Speed gearbox. Ultra small sprint tank, small radiator. Super Squirrel forks.

1930 2 Speed Frames made smaller. Handlebar extension fitted and forks modified.
"Replica" became "Powerplus Replica". Stiffer Crankcase.
PZ — 498 c.c. — b. and s. as Replica (see 1929).
PY — 596 c.c. — b. and s. as Replica (see 1929).
Flying Squirrel Tourer. Gearshields fitted, otherwise no change.
Flying Squirrel de Luxe. Gearshields fitted, otherwise no change.
T.T. Replica. Powerplus Engines fitted — PZ and PY (see above). Pilgrim Oilpump on R/H Crankcase Door.
Sprint Special. New Model with Open Frame and oval Tanks. Powerplus Engine, Close Ratio Gears, Webb Forks.
Speedway Model. As 1929, but Webb Dirt Track Forks.

More Scott Data

Some years ago, in the very early days of the V.M.C.C. Bulletin, the Editor asked me to provide information on Scotts. I failed him, for what I then considered to be very good reasons. My enquiries showed me that the more I delved into Scott history, the more queries arose. It was therefore decided that if the job could not be done properly, I would not do it at all. To obtain the necessary information, most of which I believe was — and still is — available, would have meant considerable search of old records, for which I simply could not spare the time.

Now I see in the Bulletin certain data on Scotts provided by Mr. Hooke. It is not for me to criticise his efforts on a subject I failed to do, but the information given contains some errors which I feel it my duty to correct. There are also several points which the author himself has queried. The amendments given below are supplemented by additional notes and are, to the best of my knowledge, correct and can be verified. Here I must offer to Mr. Hooke any assistance I may be able to give him in compiling his records and to express regret that he was not put in touch with me at an earlier date, which would probably have saved him much toil.

Note. All dates given refer to catalogue listings and not necessarily to dates of manufacture, which may be some months earlier in certain cases. Mid-season alterations are shown as first listed, namely, in the ensuing year.

L. E. SHELLEY.

1908 (late) First production Scott. Finned air-cooled barrels and deeply finned aluminium water-cooled cylinder heads. Finned riser pipe to radiator header tank, which was tubular and separate from the flattened tube radiator. U-shape water return pipe. Cylindrical petrol tank concentric on saddle tube and cut away to clear magneto. Horseshoe cycle type rear brake on tyre rim. Oil filler cap central on down tube behind steering head. Light type gears. Separate bolt-on exhaust manifold.

1910 As above, but considerably cleaned up. Tank mounted forward-of-centre on saddle tube and not cut away. Rear brake inside chain sprocket.

1911 Waisted water-cooled cylinder barrels and water-cooled heads (not air-cooled as given in the November Bulletin). Normal type of radiator with square section holes and 4-bolt fixing. Oil filler cap offset to left of steering head on down tube.

1912 Again considerably cleaned up. Less pronounced waist to cylinder barrels. Crankcase door straps in line with cylinders and not vertical as formerly. Legshields supplied as standard equipment. Larger tank of familiar oval shape used. A conventional guard was fitted over the rear chain in place of the peculiar and quite indescribable fitting previously used.

All the above had petrol tanks embellished by two wide horizontal silver bars. They used the light type gear with two-piece hub and light chains. No part of this gear is interchangeable with later types. Engine had separate bolt-on exhaust manifold and all had water-cooled heads.

1913 A completely new design, using an engine with water-cooled cylinder barrels and air-cooled heads. Larger engine bearings were incorporated. Covers over exhaust ports and single exhaust outlet integral with cylinder casting. Heavier type 2-speed gear with single piece hub. Heavier chains throughout. Guards fitted over gear unit. Heavier frame. Oil filler on extension of the pillar carrying the XL-all saddle. A small additional silencer was fitted to the end of the exhaust pipe.

This machine was the type which was basically unchanged for the next ten years.

All Scotts up to and including 1914 had Scott carburetters; all had roller-type forks, the rollers acting as bearings for the sliding unit of the spring forks, where this passed through the fork ends.

Early post-war Scotts were very little different from the pre-war types; major points of recognition are: forks with telescopic guides instead of rollers, British (or American) magnetos in place of Bosch instruments, use of a proprietory carburetter, fitted to an induction stub held in place by a bracket on the down tube, and honeycomb radiators. Twin horizontal drip feeds were fitted in place of the single type previously used. 1921 series machines had twin Best & Lloyd drip feeds, but these could be fitted to earlier machines and many sets were supplied for this purpose.

1922 This season saw the first important introductions since 1913. The famous Squirrel was a sports machine of 486 c.c., 62.5 x 70mm. A redesigned frame was used and footrests replaced the footboards, whilst an undershield was used and legshields omitted. Mudguarding was of the sports type and there was no carrier. The characteristic straight sports Squirrel bars were first used on this machine. The engine had a redesigned crankcase and cylinder fixing. Cylinders had watercooled barrels with uncooled heads. Plugs, which had hitherto been in the rear wall of the cylinder on production types, were in the cylinder heads on the induction side. Oil was still carried in the frame and lubrication was by suction, the drip feeds being mounted half-way up the down tube from the steering head. Modified forks were used. Rear wheel was as fitted to earlier machines.

1923 5in. Webb front brake used in place of cycle pattern. The first 3-speed machine was listed for 1923, this being a standard type with 532 c.c. engine. Engine and gearbox were mounted on a substantial aluminium tray bolted into the frame. This gearbox was not a very satisfactory unit. Specification was otherwise similar to standard 2-speed machine: oil carried in frame, drip feeds as on Squirrel, legshields, footboards. 'A'-shaped handlebars. Both brakes, however, were of the internal expanding type, that on the rear wheel being in the chain sprocket.

1924 All machines of this date had internal expanding brakes on both wheels, which were carried on knock-out spindles. Bearings of the rear wheel were of the journal type. A separate oil tank was provided with two independent drip feeds, with a separate oil line to the gear, controlled by a tap. This type of oil supply was continued on the 486 c.c. Squirrel until it went out of production in 1927.

1925 The Super Squirrel was first listed for this year, being similar to the 1924 Squirrel, except for the engine. This had watercooled cylinder heads with centrally placed plugs. A new design of bolt-on induction stub was used, carrying a 1in. choke Amac carburreter. 1925 Super Squirrels had smaller exhaust outlet pipes than later machines. Bore and stroke were: 68.5 x 68.5 mm. (498 c.c.) or 73.5 x 68.5 mm. (596 c.c.) Drawbolt adjusters were fitted on the frame behind the 2-speed gear mounting. A 3-speed Super Squirrel was also marketed. Tyre sizes were increased to 700 x 80.

1926 Super Squirrels had larger exhaust outlet pipes. All machines except Squirrel had Best & Lloyd mechanical pumps on offsied crankcase door, feeding to a Y-shaped distributor on the down tube. These engines cannot be converted to suction oiling unless the glands are changed. Both 2-speed and 3-speed standard touring machines were also built during this period, these being externally similar to the Super Squirrels except for touring type legshields, optional footboards and handlebars, larger rear sprockets and, in some cases, luggage carriers. Mudguarding, also, was more complete.

The first Flying Squirrels appeared in the 1926 catalogue, although they were a mid-season production of the previous year. Both 2-speed and 3-speed versions were made and were highly tuned examples of the Super Squirrel, as far as the engine was concerned. B. & D. stabilisers and Andre steering dampers were fitted. Petrol tanks were optional. Where the oval tank was used, this carried a large silver diamond transfer with red centre, over which a flying squirrel was superimposed. The alternative tank was of the combined petrol and oil type, similar in outline to the later Flyers. Earlier tanks were short and deep with concave sides; later products had a long tank of very ugly shape, extending far back over the magneto and contained a hand pump for gear oiling. Filler caps were one behind the other — never side by side as stated in the Bulletin. Early Flyer tanks had smaller oil filler in front; later types had equal size fillers, oil at rear. Where separate oil tanks were fitted to 2-speed standards, Supers and Flyers, these had modified outlets and had a hand pump for gear oiling.

Late 1926 Flyers had wide big-end bearing engines with modified crankcases.

1927 Wider big-end bearings ($\frac{3}{8}$in. x $\frac{3}{8}$in.) replaced the $\frac{3}{8}$in. x $\frac{1}{4}$in. rollers previously fitted to Super Squirrels. These measurements are incorrectly given by Mr. Hooke. $1\frac{1}{8}$in. choke carburetter fitted on large induction pipe. Oil pump was mounted on magneto platform. Earlier 1927 machines had Best & Lloyd pumps. Later types had Pilgrim pumps and suction glands. Wider forks (7in.) in place of 5in. type; deeply valanced front guard. Similar modifications on 3-speed Super Squirrel and Standard touring types. Last year of Squirrel 486 c.c., which was unchanged, and of standard touring types.

1928 Last year of the 3-speed Super Squirrel, which is distinguishable by gate change for gears in place of long lever on gearbox.

1929 Wired-on tyres fitted to Supers. Modified undershield fixing by one central bolt. Sports Squirrel introduced; this was merely a Super Squirrel with a tank reminiscent of early Flyers, with two filler caps of equal size instead of smaller oil tank cap on the Flyers. A bead round the edge of the top surface of the tank also distinguishes this type from the 2-speed Flyer. Brakes were 7in. diameter front and rear on Sports Squirrel (5in. on Super), but this was too powerful for the fork design.

1930 Cut-down frame on both Super and Sports Squirrels. This necessitated shorter petrol tank of 2-gallon capacity on Super. Adjustable handlebars fitted. Shorter forks to suit frame. Fourth point fixing on front of crankcase. Sidecar lug omitted from steering head. Armoured leather toolbag on offside chain stay in place of triangular toolbox used 1923-29. Front brake of 6in. diameter.

This was the last year of the Super Squirrel type.

(*Reprinted with acknowledgements to V.M.C.C. magazine, November*, 1953)

All text books of pre-war days refer to the great development of the internal combustion engine and motor engineering owing to the demands of the Great War 1914/18.

Younger members may therefore be inclined to think that the civilian models of 1919 were to be a great and decided improvement upon pre-1914 models, but in practice this was not to be so.

Most firms were still geared to their war time Government contract specifications and it was these that really decided the order of the day when Peace reigned. Again, it was to be a seller's market for the early days of Peace.

Most 1919 models therefore bore a great resemblance to those of 1914, and to those that had appeared in khaki or battleship grey paint for the various Forces and Services.

The typical D.R. mount was to rule the roost for several years to come. The side valve engine, generally of 500 or 550 c.c. (then referred to as the 3½ h.p.) together with the two- or three-speed gear box, with chain cum-belt transmission was to be the typical motor-cycle, and up to 1925, new models with belt drive were being turned out by a variety of factories. Belt drive was still to be seen in the Island for several years to come, and in fact did survive at Brooklands in a couple of cases right up to the early thirties!

It was to be 1922 or '23 before the results of the war-time research were to be seen and then only in one or two isolated cases.

All this of course has little to do with the 1919 Scott, but it cannot be argued that the Scott, with all chain drive, two-speed gear, etc., was a decade ahead of its rivals.

The Scott of the pre-war period, with sprung footboards, an excellent sprung saddle and the "sit up and beg" style of handlebars, was a really comfortable machine to ride, and as a touring mount, possibly the only machine with which it could be compared in recent times, would be the L.E. Velocette.

So. when we say that the new post-war model was little different to the pre-war model, this is not to say that those who expended their hard-earned bounties or demob pay on a brand new Scott, had an antiquated model.

There were detailed improvements, though you had to look fairly closely to note them.

Had the war not intervened, the differences may not have been so great, for the Scott carburettor had been dropped with the 1914 model, one of the drawbacks being the long induction tract, which gave a "delayed action" to the throttle control. The front forks too, had received some attention during the war, and the old roller bearings with their stauffer grease cups had been replaced with the bushes and dust covers that were to last up to the last of the two-speeders in 1930.

The main external differences (and that is all that we are concerned with in this series of articles to assist with recognition) are seen in the generous shielding to the mudguards both front and rear, which had also been increased in width.

It will be seen from comparison with the 1914 model that the front mudguard was deeply valanced for the whole length of the guard, and whereas the 1914 item was so narrow that it fitted between the narrow front forks, with the stirrup type front brake operating outside this, for 1919 and later models, this part of the brake was to run through the guard, and to be fully enclosed with small bulbous shields held in place by four screws at each side.

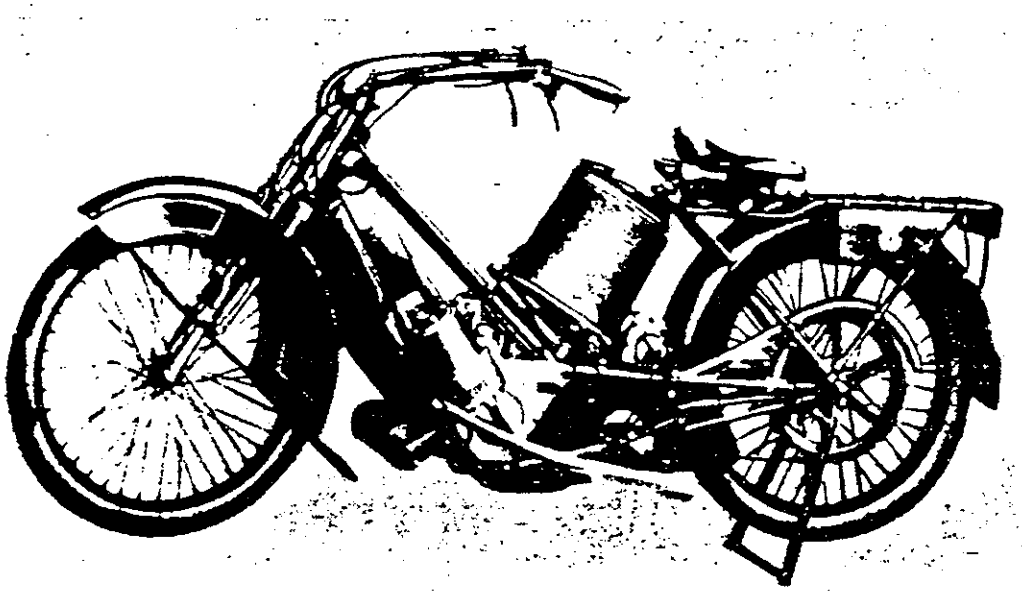
The 1914 rear mudguard again was a narrow one, with valance at the lower part from the seat stay to the lower chain stay, for 1919, this was to be increased in width also with the valance extended to almost half the length of the guard. The guard was in two parts, with the join in the valances hidden behind a small blade brazed to the seat tube, into which the two halves fitted.

The war too, brought a change in the "sparks" department, and at the outbreak of war, the Bosch magneto had given way to the Splitdorf (American) ones.

Whether the lapse of patent rights during the war or reparations as in 1946, had anything to do with it, nevertheless, British electrical equipment was to be the order of the day, and the 1919 model emerged with Thomson Bennet Type Am2 magnetos.

The carburettor incidentally was the Binks 3 jet, and was held in place with an expanding bolt which pressed down on the inlet tube of the carburettor and on the underside of a clip on the down tube which carried the oil sight feed.

There was no external differences to the engine unit, the aperture on the side flange for the Scott carburettor was still to be seen, though this no longer served any purpose, and it was to be a year or so before this finally disappeared.



The post-war (1914-18) Scott.

Finish was much the same as for 1914, with all cycle parts in black with white narrow lining to the guards, etc., plus gear shields. These incidentally had lost the squared front edge of the '14 models, and now had the familiar angle to the front or leading edge.

This Scott was a fully equipped touring machine, the generous mudguarding and shielding ensuring that the machine could be ridden in bad weather in only a protective coat, which was perhaps the reason why the model was favoured by doctors, professional men, insurance agents, etc., where appearance on calls was an important factor.

The "sporting image" was not for Scotts until the appearance of the famous Squirrel in '22, and the "Standard" model as it was to become known after the introduction of the sporting Squirrel, was to be continued for about five years after that.

The Standard model was to receive little change for the rest of its existence, the stirrup brake being replaced by the external expanding front brake in 1923, the water cooled head motor for '24, and with this an improved sight feed fitted near the steering head, the twin feeds being in line of vision without contortion from the rider. For the last couple of years perhaps, the oil in frame gave way to the oil tank on the down tube as for the Squirrels, giving a rather bitty appearance to the old touring model.

The small cylindrical "pepper box" silencer carried at the end of the tail pipe from the expansion chamber of the 1913/14 Scotts was to give way to a cast "fishtail", for the post-war models.

For the first post-war Scott the price was 110 guineas and there were to be alternative finishes of purple panelling, outlined by white bands, to the mudguards.

A quick 'recap' just to keep in mind the main recognition points:—

1912 Shaped water-cooled heads. No covering to tank plain enamel with two white bands (i.e. no groove to tank top and bottom for aluminium strip holding fabric covering.) Light gears—no shields. Curved fork blades, with rollers.) Oil filler near steering head.

1913 No water-cooled heads. Plugs at rear. Tank now fabric covered. Forks for early 13—as for previous year. Squared gear shields. X-L All saddles. Oil filler at saddle front.

1914 As for 1913, forks changed to straight blades still roller action.

(to be continued)

MACHINE IDENTIFICATION V8/2 Nov. 1972

(A primary guide for those who can't tell a "Rep" from a "Super")

2. The vintage Two speeders.

The early Scotts could not be called sporty mounts. they were fully equipped touring machines. Nevertheless, the "revised" Scott of 1913 was to prove the basic model for one of the most famous sporting bikes of the twenties. and the design with few modifications, being carried right up to 1930.

Scotts had a list of successes in the long distance trials popular in early post war 1 years. The modified 1919 Six Days Trials machines of Clarry Woods was to be the prototype of the Scott Sports model of 1920, and the first sports Scott to be offered to the public. Perhaps it was the Stansfield special ridden by Jesse Baker in the 1921 Scottish Six Days Trial and which caused such a sir in the Press of that year, that it displeased A.A., as so much publicity be deferred from the official mounts, that changed policy.

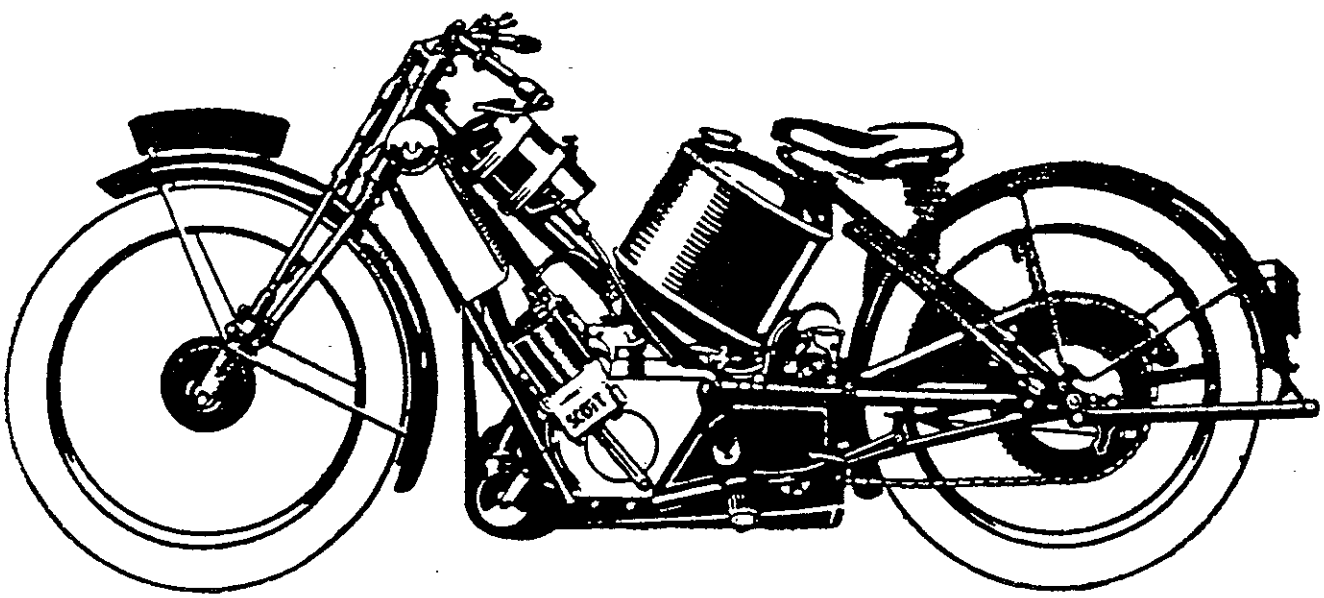
The Stansfield Special was of short wheel base and lowered frame.

and it may have been this that spurred the Works to revise the Sports model. on similar lines. for 1922 saw the introduction of the famous sporting Scott "Squirrel". I can't tell you how the choice of the name came about. but surely it was an apt choice for the busy little engine. and has been a name linked with Scotts since.

Whilst the Standard Scott was of 532 c.c., the Squirrel was of 486 c.c. (70 x 63.5 mm.) and differences lay in the lowered frame. sporting handlebars. narrow unvalanced guards and of course aluminium pistons.

Oil was still carried in the frame with the filler under the nose of the XL-All saddle, with the drip feeds moved to the front down tubes. instead of at the front and base of the petrol tank.

In spite of the lowered frame. the high position of the XL-All saddle with its cantilever action. spoilt the lines of the Squirrel. and 1924 saw a separate oil tank of 3 pints capacity. clamped to the front down tube. the



The 1924 Squirrel

XL-All giving way to a leather saddle of the Brookes type. with the usual coil springs clipped to the chain stays.

The Squirrel engine saw the movement of the plug position from the rear of the cylinder. to a position on top. off centre and in line with the induction tract. on the uncooled head.

The brakes of the early Squirrel. were similar to the Standard. cycle type or stirrup. to the front. and the rear was a rubber block bearing on the inner side of a rim formed under the sprocket.

1923 saw the front brake replaced by a 5 in. Webb internal expanding brake. the rear remaining the same as for the earlier models. and in 1924 both brakes were to be of this type.

The successes with the Works machines in events. saw the improvements incorporated in the machines offered to the public. and 1925 was to see the introduction of the Super Squirrel.

The engine capacity was increased to 498 c.c. (68.5 x 68.5 mm.) and the most obvious external difference was the fitting of the separate water-cooled head (dropped when the machine was revised in 1913). with

centrally placed plugs. The induction stub was redesigned, and was now bolted on instead of being held in place by a type of expanding bolt located on a clip attached to the top downtube of the frame. The 1925 Super Squirrels had smaller exhaust ports than later models, and for the first time drawbolt adjusters were fitted to the frame behind the two speed gear mounting, and tyre sizes were increased.

1926 saw the introduction of mechanical oiling, and Best & Lloyd pumps were fitted, held in place on the offside crank case door by a stepped or cranked strap.

The first "Flying Squirrels" appeared in this year, and were highly tuned Supers, gaining on the experience of the '25 T.T. machines. When these were sold with the old oval tank, they were distinguished from the Supers, by a large silver diamond with red centre, over which the flying squirrel motif was superimposed.

Late 1926 models had wide bearing engines, and this is distinguished by a slight belling of the crankcase face near the door edges.

1927 saw Best & Lloyd pumps being used, but later models that year had Pilgrim pumps fitted with the drive from the magneto driving sprocket, wider forks were introduced that year, with the deeply valanced front guard.

1929 saw wired-on tyres fitted to the Super Squirrels and a Sports Squirrel on the market, this having the T.T. or long tank.

A few words on the 'T.T.' tanks—there were several models, the first being patterned on the '25 T.T. machine. This had deeply valanced sides, with the tank top steeply curved, almost giving a hump backed appearance. Later tanks were not so valanced, with the steep curve removed from the upper part, and the typical heavy beading around the top.

Front brake size was increased to 7 in. diameter from the earlier 5 in. type, but these proved too powerful for the forks, and the brake size was reduced to 6 in. on the 1930 models.

1930 saw the frame redesigned, with the sidecar lug removed from the top of the down tube, resulting in shorter forks etc. and the tank was reduced in size to two gallons from the three fitted to earlier Supers.

The 'T.T. type' tanks do not seem to be so popular today, most owners seem to change these for the old oval tanks, so perhaps a final word on these, which were fitted as optional extras on the Super Squirrels as well as the sports model. Sports tanks had two fillers of equal size, as compared with the smaller oil filler on the Flyer.

The triangular tool box so long a feature on the Squirrel and Super was changed in 1930 for a metal rectangular box with leather flap, situated on the offside chain stay.

Later 1930 engines had a fourth point fitting to the front down tubes.

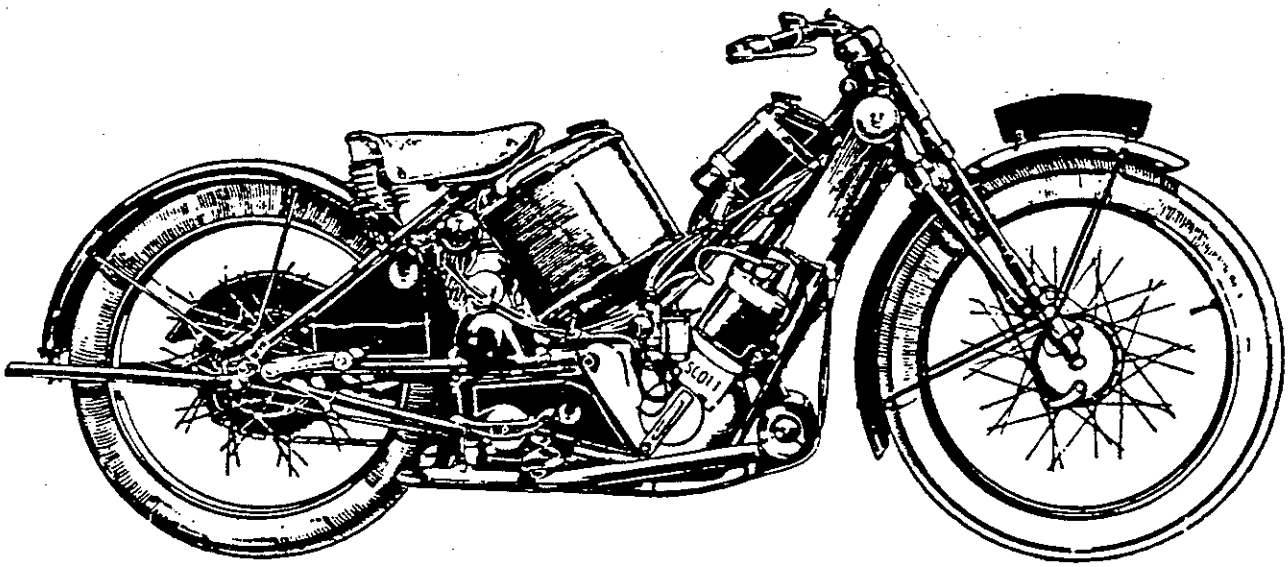
The Squirrel was continued in the range up to 1927 and offered as a cheaper version.

The Standard model was also continued in the range although the capacity was changed around 1924 to 596 c.c., and was the touring version of the range until dropped also after 1927. The oil carrying frame was dropped for this, the same year, and the usual modifications were made to it during the years that remained. The mudguards were always heavily valanced, front and rear, the leg shields and the sprung footboards remained a feature throughout its production.

The Squirrel and Standard models were dropped on the introduction of the duplex framed models, patterned on the 1926 T.T. machines to the range.

More on these and the three speed Squirrels and Super Squirrels at a later stage.

Finish—well, the catalogues always say "finest black enamel, tank



The 1926 Super Squirrel

artistically covered in leather cloth (later ones say purple)". The oil tank would match the tank cover. with fine white lining top and bottom. On certain models. maroon was used. but I cannot help with the years.

A variety of finishes were also seen on the 'long 'tanks, ranging from black. with red or white lining. to purple or white panelling. lined in red.

I do not suppose that you would be able to recognise year of manufacture at a glance. other than the changes as outlined above. Scotts always sold "modernising" kits. to enable owners to bring their machines up to date. The last offered was during the 1946-50 period when the works offered teles and full width hub wheels. etc.

The following may assist in further recognition. although I cannot help as to numbers. (If anyone can supply these. we would be glad to publish them.)

Engine numbers were stamped on machines as they left the factory and are the only real guide to year of manufacture. Up to 1924 only numbers were used. except in those cases where the 532 c.c. engine had been overbored to 596 c.c. and these were stamped with the prefix 'SC'.

After 1924 the prefix 'S' denoted Squirrel 486 c.c.
T—Standard Touring 532 c.c.
Y—Super Squirrel and Standard 596 c.c.
Z—Super Squirrels 498 c.c.

'F2' used also on 1926 2-speed in addition to 3-speeders the first Flying Squirrels.

'FY' was used also to denote the 596 c.c. 2 speed Flying Squirrels.

For 1927 the name Flying Squirrel was used for the duplex framed models only.

During 1927. as numbers approached five figures. the suffix 'M' was added. changed later to 'A' starting with a lower number.

The Three-speed Super

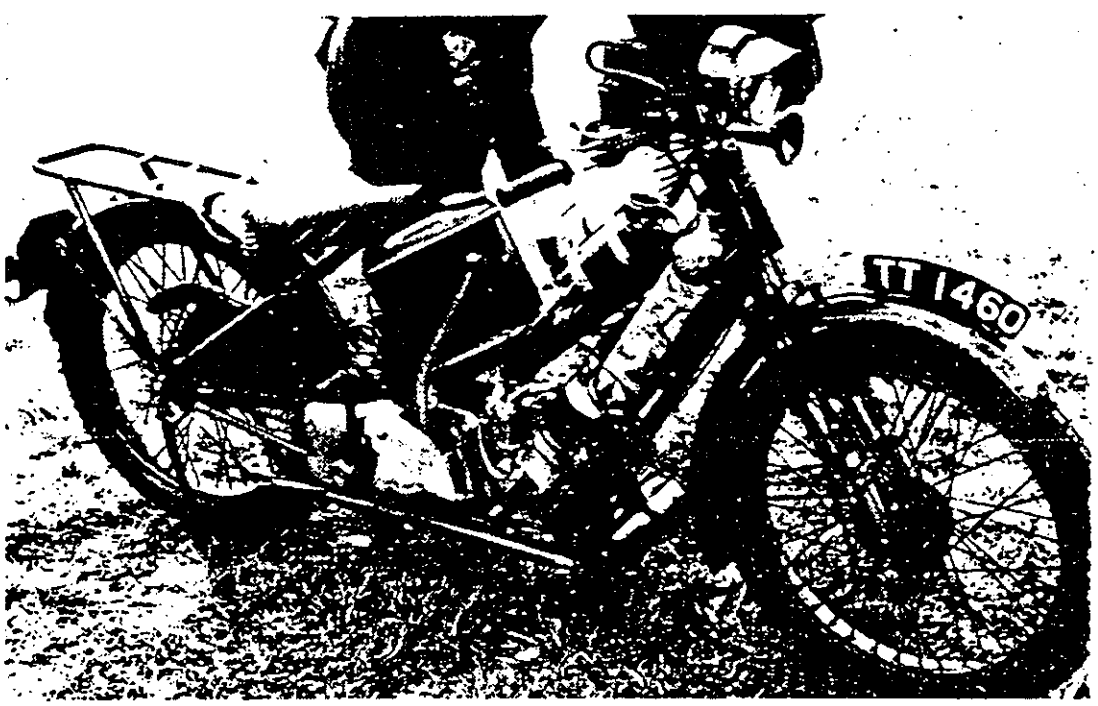
As stated previously — the object of this exercise is for the benefit of those newer members who confess they "can't tell a Replica from a Super" so few technical data will be given.

Remembering the competition that pre-World War 1 Scotts faced, it can be said without fear of much contradiction that they were far superior to the majority of makes then on the market. Enthusiasts of those far off days, had in the main to contend with a side-valve single of about 500 or 550 c.c., with direct belt drive, no clutch, until a variety of "goodies" of the day were offered by the specialist firms of the day, in the shape of free pulleys and so on as extras. Some of the devices of the day for altering gear ratio, (at the risk of offending some of our Vintage minded friends) were really laughable, and in one much vaunted case, included sliding the rear wheel of the machine backwards or forwards, whilst a spring loaded pulley expanded or contracted to take up the slack in the belt!

The two speed Scott with its positive foot operated gear was So Obviously Superior, that it is to be wondered why they didn't forestall another two-stroke of later years, and crib the title S.O.S.

Incidentally — the story behind the name Squirrel has now been explained by our President Harold Scott, and dates from an advertising jingle of the day — "as busy as a Squirrel — and *never* sheds a nut!!!" As with Gilbert and Sullivan — Never?" Well hardly ever!!!

However, improvements to machines as the result of war time developments resulted in the fact that although specifications largely



The 1925 three-speed Super. 1927 models had wider forks with sloping crowns, and wide valanced mudguards. 1928 gate change fitted near oil tank on down tube. This example belongs to Dave Tallboys.

followed the 1913/14 patterns, the three-speed gearbox with chain cum belt final drive largely became the order of the day.

In sporting events, the additional ratio probably placed Scotts at a disadvantage, in so much that 1st gear with the ordinary 5-600 c.c. mount of the day, could be so much lower.

By 1924, some machines were even boasting four-speed boxes, particularly Rudge the old opponents of the 1914 T.T. races.

That year saw the introduction of the Three-Speed Scott, the frame and specification following loosely on the revised 1913 model. Dimensions

of the frame were very similar to the 2-speed Standard model, but at a point just by the foot rest or board hangers of the 2-speeder, the tubing of the frame was dispensed with, as far as the flat metal engine fixing by the two front down tubes.

This was replaced with a long aluminium tray which carried the engine in much the same manner as with the old two-speeders, and formed a tray for the three-speed box fitted behind the engine. This tray was ribbed underneath with two long ribs, and was angled in much the same manner as the frame that it had replaced. The first gear change lever was a rather flimsy affair, being a rod with a large knob at the hand end. This has been termed the "wobbly walking stick type" and although spring loaded, it did give trouble, and was soon replaced by a much sturdier fitment, consisting of a tapered tube, which was angled forward to bring the operational end within easy reach.

The three-speed super, for this machine was fitted with the Super engine when this was introduced, was the favourite mount of a number of sportsmen of the late twenties, including the one and only Billy Moore.

The long aluminium tray proved to be rather fragile for one day sporting cross country events, and "works" machines were fitted with a bronze or gun metal tray, which although without doubt, reduced the cracking that was prone to develop between the engine and the gearbox at the side of the tray, did add considerably to the weight, so the advantage of the light two-speeder with an additional but much lower ratio, was lost!

The three-speed Super was offered in sporting and touring versions in the years 1924 to 1928. The sporting versions followed the Squirrel whilst the touring version followed the specification of the "Standard" model, with swept back "A" type handlebars, wide valanced mudguards, leg-guards, etc., but the most outstanding feature of the Three-Speed Supers were the shapely polished castings that enclosed the gearbox at both sides. The gear change side being rather bulbous at the front end enclosing the quadrant of the gear lever, worked in a slot cut at the top of the casting. The other side was angled at the front in much the same way as the metal shields of the two-speeder.

Whilst it is difficult to tell at a glance the difference between 1924-26 models, 1927 saw wider forks and mudguards ('D' shaped) fitted, and of course mid-way through '27, engine numbers were started again with the result that pre-fixes followed the lower number.

1928 saw the final change to the Three-speeder, which was in that year given a hand gear change, with gate fitted to the front down tube near the oil tank.

Of course, as with other models from 1926 onwards, the three-speed Super could be obtained with the T.T. type tank, but in the case of this model, this was a shapely wedge type affair, which added to the looks of the model.

The three-speed Super is the favourite mount of Con Whitlock of Brum, who has always thought that the 3-speeder was superior to the 2-speed version, except that the longer frame detracted from the handling. With Con's present model, which is no slouch having kept pace with Glyn Chambers' machine, this problem has been solved by a previous owner, who shortened the model in a rather drastic manner, probably clouting the back end of a 'bus, with the result that the front forks have been pushed back somewhat, so altering head angle and wheel base! His "modified" machine is the best handler of a long line of Scotts!

An outstanding feature of these models during the time they were in production was the quickly detachable rear wheel, which was outstanding for the year. The wheel could be removed leaving chain and sprocket in position. Tyre sizes were 70mm x 80mm front and rear.

From the "Light Car and Cyclecar" of January 12th, 1923.

THE UNORTHODOX SCOTT

An interesting Technical Description of the report of a road test.

In considering the claims of the Scott Sociable, one must remember that its designer intended it to be regarded in the light of an improvement on the sidecar outfit rather than in the nature of a makeshift car. If the vehicle is considered according to its designer's ideal, it has many points to recommend it, while even when considered from the other point of view, there are certain features that are worth attention.

INGENIOUS TUBULAR CHASSIS

The Sociable is of unorthodox design, and utilises a water-cooled two cylinder two stroke engine built in one unit, with a three speed gear box and an enclosed shaft drive to the off rear wheel. The chassis and body framing are formed by a triangulated assembly of four standard size tube units, joined with pivoted eye-bolts to which the two-seater body is attached. Suspension is affected by coil springs, steering is by wheel, and both brakes are internal expanding.

The 1923 model has been improved in certain notable respects. First the hand starter has a greater leverage than was formerly the case, and now turns the engine over twice, thus making for much easier starting. The arrangements of the magneto and dynamo has been altered so that the failure of the dynamo does not put the ignition out of order, (it being possible to drive the magneto even if the dynamo is removed) the centrifugal water pump has been simplified, and lastly, the cylinders are now cast in one with the water jackets. To start the car from cold, the driver sits in his seat, slides back the bonnet on the off side, and thus displays the engine, the cylinders of which are then doped by means of a can conveniently located under the bonnet, all this being done with the right hand lying over the side of the body.

The throttle and ignition levers, which are mounted inside the shell of the body, are then set, and with the gear lever in the neutral position, the driver pulls once or twice on the starting hand lever, the motion of the hand being somewhat similar to that made when rowing. The engine then fires, and when the bonnet has been slid back and automatically locked in position, the car gets away in the orthodox fashion, with the exception that it is practically impossible to make a bad gear change, as the three speed gear box is of the constant mesh dog clutch type and the gear control mechanism is interlocked with the clutch.

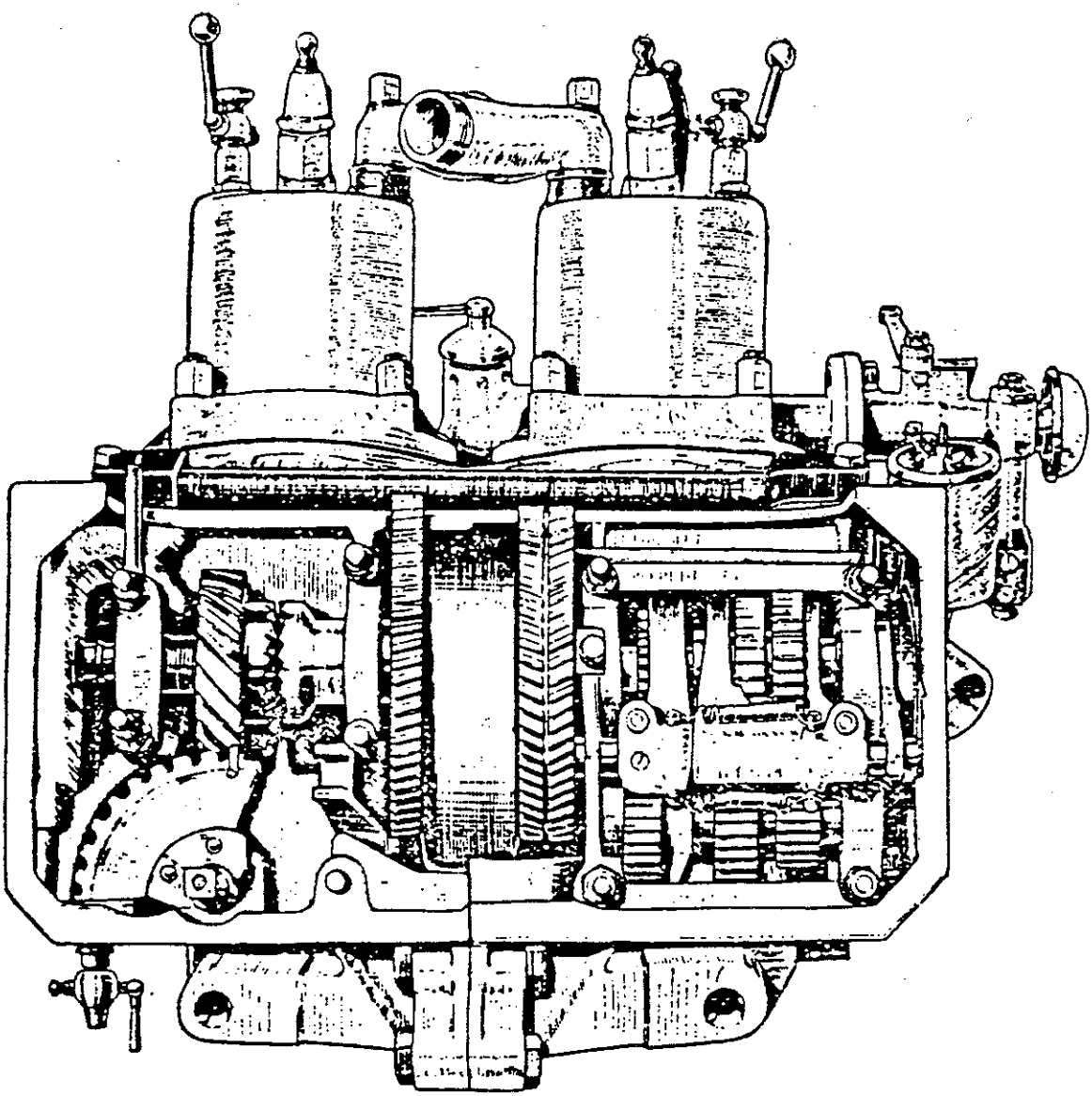
CAPABLE OF 45 M.P.H.

A maximum speed of 45 m.p.h. is claimed for the car, but owing to the fact that a brand new engine was fitted to the vehicle under review, this speed was not attained during the few hundred miles over which the car was tested, although at the same time it was possible to cover some 30 miles in the hour.

It will be noted from the photographs that the mudguards are formed by the sides of the body, arm rests being incorporated on the inside of the over-hung shell. There is thus more room in the hull than one would imagine would be the case at first sight, the provision of a number of pockets also a shelf in the dash is useful for carrying small articles. The spare wheel is accommodated under the detachable cushion, thus leaving the back of the car free for carrying baggage. The hold is sealed by a detachable platform, which can be removed and set to act as a back rest, should it be found necessary to find accommodation for a third passenger. Finally it may be noted that the hood can be erected and locked in position on the windscreen whilst the vehicle is in motion, the 'V' fronted screen being a fixture.

UNCONVENTIONALITY PASSES UNNOTICED

It takes quite a few miles of motoring to realize that one is not travelling on a conventional type of four-wheeler, for the steering is light and positive, the springing is satisfactory, and the car holds the road well. It is only when one harshly applies the brakes on the single driving wheel on grease that a slight tendency to swing is noticed, a somewhat similar tendency being felt when the power is suddenly taken off. The most



The Scott Sociable—line drawing of the engine layout.

remarkable feature of the car is its manoeuvrability, for, like the side car it will turn round to the left in practically its own length, for which reason it can be manoeuvered much more quickly out of a tight corner without a reverse than can the ordinary car with reverse. The small overall dimensions of the vehicle enable it to be stored in the minimum of space, and on this feature alone it scores over the average light car.

The weight too, has been reduced to 5½ cwt., and as each engine has to develop 12 b.h.p. on the bench before being passed out, the car should climb any thing on its 16.7 to 1 bottom gear. As a matter of fact, on a journey from Bradford to the Midlands top gear was practically used the

whole time, and although the engine was driven hard, the cooling arrangements were such that the power was well maintained. Lubrication follows that usually adopted on two stroke engines, in that the oil is fed direct into the petrol tank, which holding 2½ gallons, is snugly located under the single front mud-guard.

IDEAL FOR OWNER DRIVER

The petrol filler cap, when removed, forms a cup into which the oil is poured, two cupfuls being the recommended amount for each gallon of spirit.

The machine positively bristles with novel points, such as would appeal to a keen owner-driver, whilst at the same time it is considered now to have reached an absolutely fool-proof stage. The patent detachable wheels, the curving form of the body allowing instant cleaning, the minimum of grease cups requiring attention, and self contained and removable power plant are a few features of interest on the car, the worst feature of which will, to many people's mind, be its lopsided appearance. This however, is largely discounted when it is remembered that the car is an upward development of the sidecar, and not a downward development of the motor car.

There is much to be said in favour of the particular method of construction used in the Scott Sociable, while the fact that it does actually provide complete protection and side by side seating accommodation for driver and passenger at a cost that is lower than that of a powerful sidecar combination should make it of distinct appeal to many economy motorists who desire to purchase a comfortable mount that is full of interesting features.

THE "KENDAL" SCOTTS

V4/1 August 1964

(PART I)

by George Stevens.

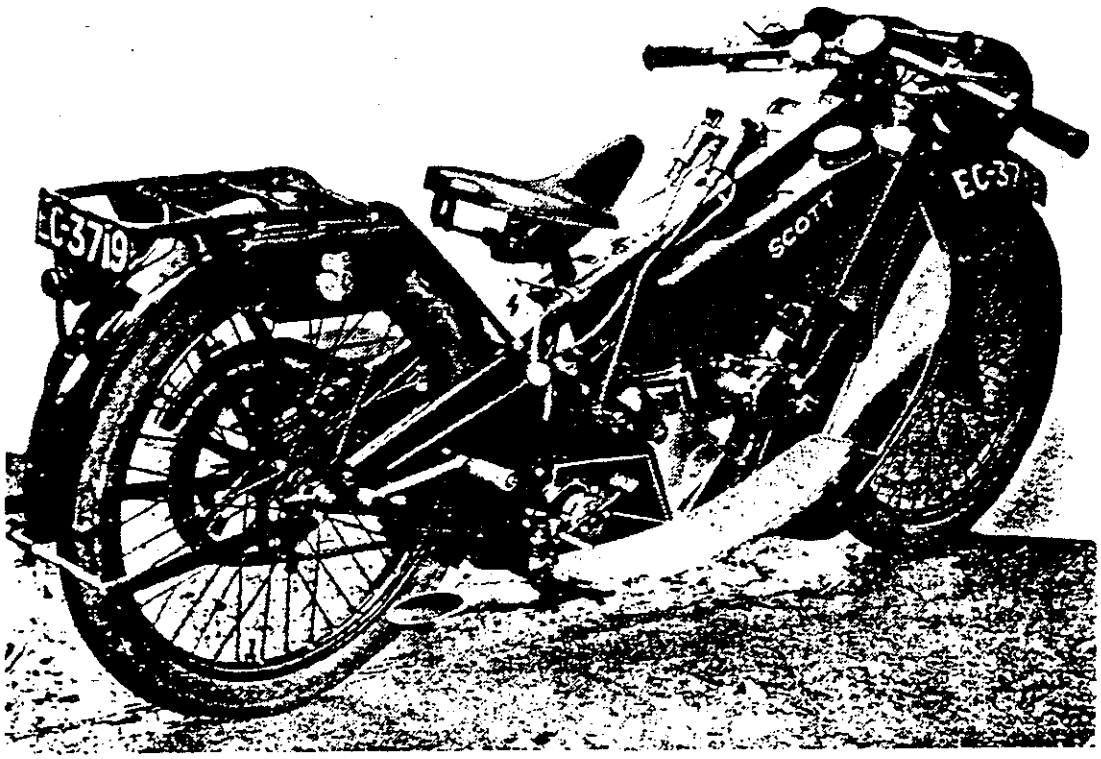
(*Introductory note*: While touring the Lake District just before Easter this year, Kitty and I spent a couple of days near Kendal. We weren't on a Scott, but using a 1952 Morris 8 van—unexciting but extremely practical transport. No holiday of ours passes, however, without some sort of Scott association. I had a fairly thick folder of cuttings, letters and pictures of the Scotts made by L. S. Parker of Kendal; but I had never visited the works before. The old buildings were just about to be demolished, and a load of old machinery scrapped. By good fortune, I met three men who were pleased to find someone still interested in the old Parker-Scotts: Mr. James Parker, Mr. Whiteside and Mr. Bert Hill. They helped willingly, and filled all the gaps in my notes. As usual, I have far more pictures and drawings than we can afford to reproduce, but by splitting the article, it should be possible to use the best few.—George).

Lancelot Steele Parker, the son of a Westmorland blacksmith, was born towards the end of the last century, at a time when the bicycle industry was booming. His father, James Parker, had set up a smithy at Kendal in 1879; but as the new-fangled cycles caught on, he developed his premises into a cycle agency and repair shop—and of course his son entered the business, which in due course became "James Parker and Son, Longpool, Kendal." The family business prospered, and as motor-cycles came upon the scene they, too, were handled by the Parkers, who soon obtained an agency for Indian machines.

At the end of the Edwardian years, when the Scott motor-cycle first appeared, L. S. Parker took a keen interest in the newly developing two-stroke machines, and often displayed Press cuttings in his showroom window. An article on Scotts happened to be on show at a time when Alfred Scott visited Kendal, touring the Lake District on one of his machines; and after introductions had been made, a friendship-cum-business-association began and lasted until Scott's death in 1923.

The Kendal firm became agents for Scott machines (and A.J.S. as well, incidentally), but Lancelot Parker was more than just a motorcycle agent: he was an engineer of considerable ability. His respect for the production Scott did not necessarily mean that he considered it perfect, or even impossible to improve upon, as did many excellent engineers at that time. Patent number 12,573 of 1910—L. S. Parker's two-stroke, four-cycle twin-cylinder engine (and this is not a misprint!)—is one surviving testimony to his ability as designer, draughtsman and practical engineer. Another is to be found in his Provisional Patents 12,248 and 12,375 of 1916—a compound springing device for the frame of the "L.S.P. two-stroke lightweight." But this is jumping ahead.....

In 1913, shortly after the second Scott Senior T.T. win, Lancelot took delivery of one of the 1913 works racers—the rotary valve jobs—registered it for road use (EC 1320) and used it in local sporting events. With this, and other "standard" Scott machines, he made quite a name for himself in Lake District hillclimbs, trials and even speed competitions. His regular successes provided excellent publicity for his Scott agency, and from a distance of fifty years we can surely condone a crafty bit of fiddling that went on just after the 1914 T.T. The Westmorland M.C.C. organised a petrol consumption trial over a 34-mile course which included Shap Fell, and held it on June 11th. This was not the type of event Scotts shone in—as readers will know—and even your author has been somewhat sceptical of the "over 200 m.p.g." figure with which L. S. Parker secured first place on formula. Here is a quotation from one of L.S.P's subsequent letters to Alfred Scott: ".... These figures will no doubt appear rather strange



Stage one—A Kendal Scott with modified frame, fuel tank and saddle mounting. The yoke around the top engine bolt, serving as a pivot for the seat tube, is clearly visible.

(*Photo*: J. Bland, Kendal).

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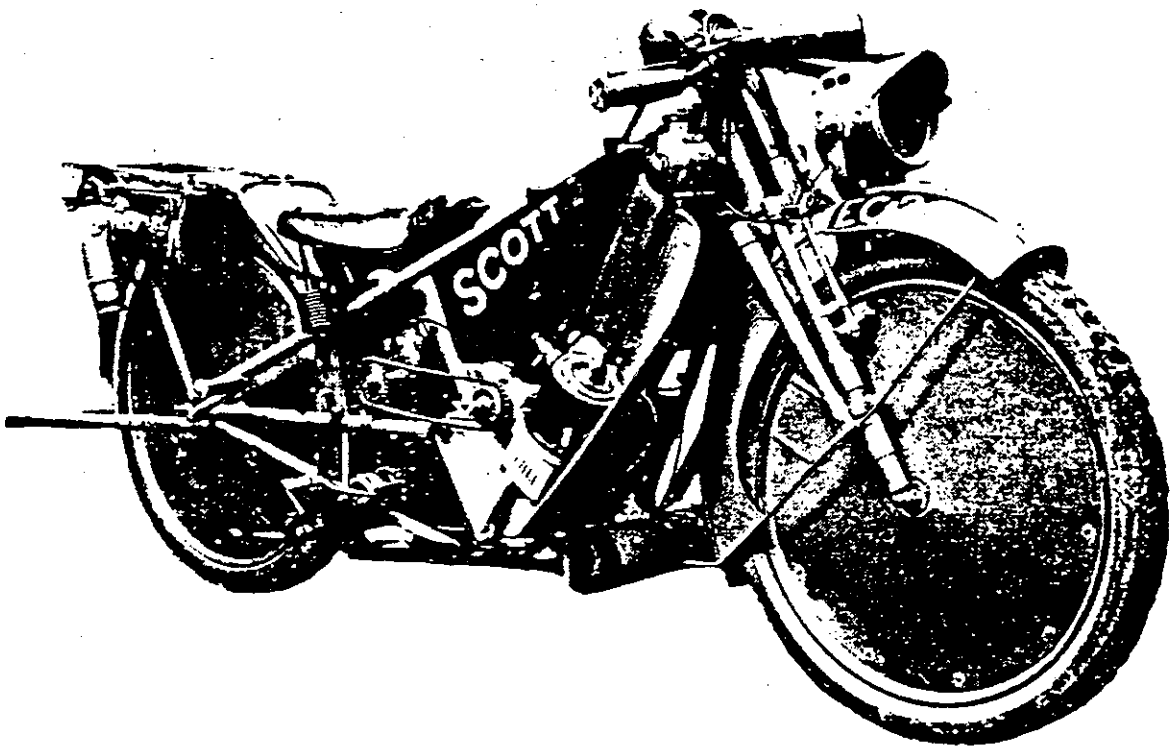
to you, but they are quite correct and should open the eyes of those who consider the Scott a petrol-eater. I should consider it a great favour if you would be good enough to publish my name when advertising my successes, as the advertisement would be of considerable value to us. Thanking you, etc. . . . ."

The machine used was a 1912 Standard Scott which had covered about 12,000 miles and which was fitted with a 2⅞ to 1 top gear. It also had the old frame-tube oil tank, with feeds to each crankcase; and many a chuckle has been evoked in Kendal, over the years, by recalling how a Scott could be made to run many miles on pure air—so long as there was petroil in the lubricating system. . . . . You get the idea?

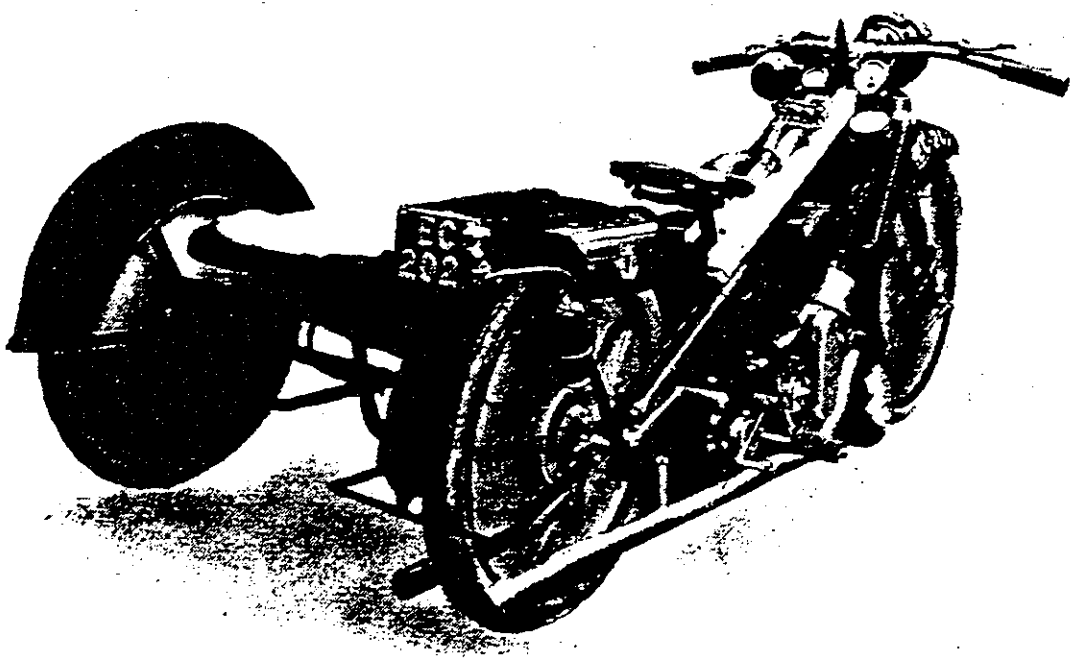
When World War I came along, the Kendal workshop went over to Government work, and it was during this period that an unfortunate accident occurred in the machine room, as a result of which L.S.P. lost the sight of one eye. . . . .but this in no way diminished his participation in "Scotting". As mentioned before, in 1916 he planned the production of the L.S.P., a machine with a triangulated tubular frame, horizontal engine and an ingeniously suspended saddle. The seat-tube was pivoted at its lower end but controlled by long springs in tension, between the saddle and the steering head; and the saddle itself was sprung in the vertical direction—by means of a tube sliding within the pivoted seat tube, but this time compressing enclosed springs. (A patent was applied for in September, 1916, and if possible—that is to say, if the club can afford it!—some of the drawings may be reproduced, along with rotary valve plans, with the next article).



Stage two—The early experimental version of Parker's rotary valve conversion, based upon the 1913 T.T. valve but adaptable to any touring Scott engine of the period.

The situation in 1916 was pretty grim, and a government order stopped the production of all motorcycles for civilian use—so the L.S.P. went into cold storage for the duration. It was never produced, unfortunately, but the very neat method of springing the saddle **was** used—on modified Scott frames. Shortly after the War ended and motorcycle manufacturers got back into their stride, Parker decided to modify production 2-speeders in various ways and to sell them as "Parker Specials" or "Kendal Scotts."

In the first experimental models, the most obvious alterations were to the saddle mounting and the fuel tank. The springing already described was incorporated, a very wide "yoke" round the top engine bolt being used as the seat-tube pivot. The long suspension springs were neatly hidden in a panel-beaten sheath which enclosed the long frame-tubes running from steering head to rear spindle, and a thin "wedge" shaped fuel tank was housed immediately beneath these tubes, behind the radiator. Disc wheels—which enjoyed a brief spell of popularity just after World War I—were fitted, and to start with no changes were made to the Scott engine. Parker, however, felt that there were some advantages in the rotary valve, as fitted to his 1913 T.T. Scott, and set about designing and putting into production a complete induction/transfer valve which could be fitted to a normal Scott engine. The prototype was chain-driven from an overhung sprocket on the magneto shaft (*see figure* 2). This was, perhaps, a shade crude, unsightly and exposed—but it worked. The next step was the "tidying up" of this valve drive, and this was achieved quite simply by



Stage three—The layout finally adopted for the rotary valve conversion: totally enclosed chain drive from the offside crankcase door. Also visible are the special cylinder barrel and heads.

(*Photo*: J. Bland, Kendal).

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moving the drive sprocket to one crankcase door, and enclosing the whole device in a neat, polished aluminium cover. One of these conversion sets turned up at the Birmingham Science Museum a couple of years ago. . . . . and it was identified, by people who should have known much better, as a genuine 1913 T.T. valve!

The Parker rotary valve conversion set was a beautifully made job—all pattern-making and machining being carried out in the Kendal workshops. Almost immediately it was followed by another superb conversion—cylinder blocks with detachable heads, separate exhaust ports (long before they were made at Shipley) and deep, attractive-looking aluminium water-jacket heads.

LATE VINTAGE HOTCHPOTCH

Just to show you how we can be far too critical of what we think are 'wrong' details on Scotts. Here is a drawing from the 1930 *Scott Handbook* that should really confound the Concours judges and experts. It shows the control layout for the Webb forked 'Tourer' model of the Flying Squirrel. Just look at the detail! — Most of which would earn you debit points if you showed such a machine at a Scott event:-

1 Odd handlebar grips. A barrel type on the left, and a straight grip on the throttle.

2 A 'modern' drum type twistgrip instead of the scroll type expected. My 1930 Halfords catalogue confirms their availability.

3 Odd air and mag. levers, a hexagon-topped Amal style air lever, and a slotted-top mag. lever, like a 'modern' Doherty or vintage Sackville.

4 The tank top diamond clearly has three lines outlining it, as if to show that the 'coachline' is inboard of the edge of the diamond.

5 'Oil' and 'Petrol' transfers by the filler caps.

The Tourer was in many ways built 'down to a price' and perhaps we are just looking at the end result, a mishmash hotchpotch of whatever was left on the shelves after the Deluxe model had been built.

In the April 1990 issue I printed two photographs from the same 1930 handbook, showing the same Tourer model, but even when blown up to 9"x6" I cannot confirm that the drawing was based on reality. I suppose it must have been, or they would have made it neater!

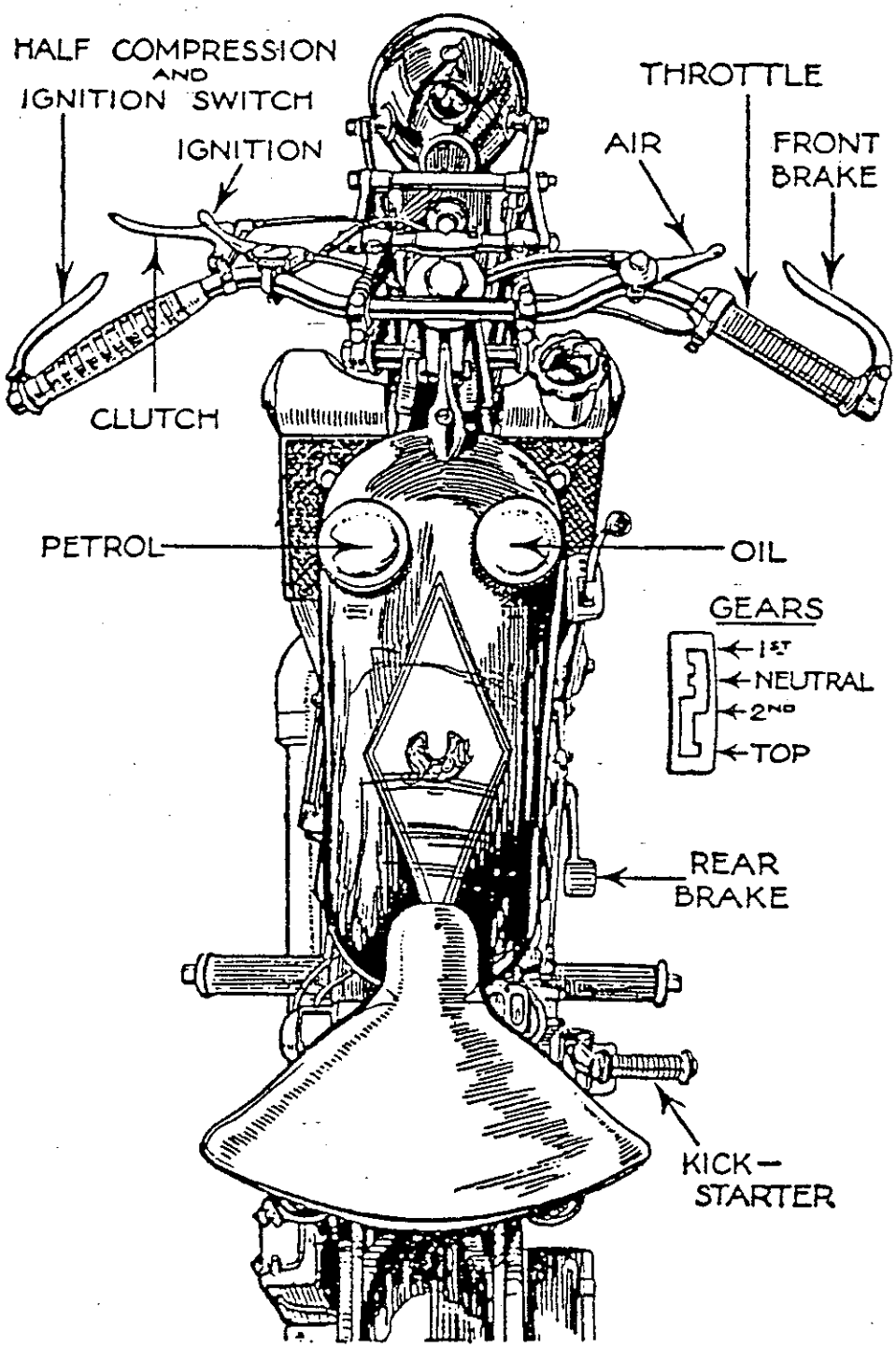
Both my 1927 Flyer and 1929 T.T. Replica have the L/H inverted lever as the clutch, not the 'open' lever as shown in the drawing, but the Rep. does have a drum type twistgrip (Bowden) and not a scroll type.

Some T.T. Replicas, as late as 1930, and the first Sprint Specials, had a left-hand twistgrip for the advance and retard, the idea being that you rolled the throttle and ignition controls back together. (Personally I prefer a magneto to be on full advance with a slack control cable, not a tightened one). As far as I can find out, only the Sprint Special and the T.T. Rep. used the idea, and then not all of them.

There is also the question of tank top colouring, with the change from black top with white (ivory) diamond, to white top with black diamond, being put forwards many times as one of the main cosmetic differences between 1929 and 1930 models. Clearly there were exceptions and variations, and indeed I have a 1930 photo of a new Deluxe Flyer with tank panels that were **purple** . . .

B.M.

The Controls of the Scott Flying Squirrel.



Reprinted from "THE MOTOR CYCLE" 9th JUNE 1921.

T.T. SCOTTS

Aluminium Engine, Four Speeds. Two-spark Magneto

A previous winner of the Senior event should have a sound idea of what is necessary for the Isle of Man course, and since H. O. Wood is responsible for the 1921 T.T. Scott it will be hardly surprising if the new machine develops a large backing for the forthcoming race. Engine, frame, and gears are entirely new, though reminiscent of Scott design.

To begin with, the twin-cylinder engine has a bore of 73 mm. and a stroke of 62.5 mm. Cast iron liners, fixed in the main aluminium crank case and water jacket casting, form the cylinders, and a single aluminium casting serves as a head for each cylinder and the necessary water jacket. For these heads, a copper and asbestos gasket is used at the joint. The head may be removed without disturbing any other part of the machine. In addition to these features the transfer passages are comprised in the main casting, and a separate exhaust pipe leads from each cylinder to the rear of the machine. Large water pipes are used, and the return extends over the front of both cylinder barrels.

Four-speed Gear

Following Scott practice, two chains convey the drive to a normal Scott two-speed gear, but the usual place of the rear driving sprocket is occupied by a gear wheel which drives the layshaft of a two-speed gear box. The rear driving sprocket lies between the high and low mainshaft gear wheels, to either of which it may be locked by means of a separate foot control through the medium of delay action operating gear. By this means four speeds are obtainable, the ratios being in the proportion of 3.3 to 1, 4.75 to 1, 4.95 to 1, and 6.4 to 1.

Both engine and gears are mounted on a sub-frame which may be readily detached from the main frame, which, as might be expected, is an open one of triangular construction, but a considerable increase in lateral rigidity has been obtained by disposing each side of the duplex frame so that no two tubes lie in the same plane, the upper portion of the frame being considerably narrower than the lower portion.

Suspended at the peak by a coil spring the pan seat is carried on two long laminated springs attached to uprights pivoted at their base close to the wheel spindle.

A three-gallon petrol tank fills the major part of the open frame, and a half-gallon oil tank is carried in front of the rear mudguard. Lubrication, it must be added, is entirely automatic, and is operated by crank case vacuum. Quite a novel feature is the substitution of a "decelerator" for the half compression device, the normal half compression lever on the handle-bar operating the switch as usual, and also serving to close the throttle independently of the main carburetter control setting.

An Amac carburetter, Lucas two-spark magneto, and 650 x 65 Palmer tyres complete a very interesting specification.

A FIRST LOOK AT THE WORKS RECORDS

Brian Marshall

When I first heard that the factory records had been acquired by the V.M.C.C. I was rather upset that they had not been offered to the S.O.C. first. Subsequent reflection, however, has convinced me that they are in the *only* correct place to ensure access, safe and proper storage, professional conservation and transfer to microfiche, plus eventual availability of selected copies for purchase. In any event, our Club would not have been able to afford the five figure sum (!) that they were sold for.

The collection comprises the works despatch books from 1914 onwards, through to the final Birmingham Scotts. One despatch book, from the mid-1920s era is 'missing'. (Actually the missing book's whereabouts are known, but I have been asked to say no more than that). In addition to the despatch books there is a very large quantity of photographic material including many glass negatives, lots of printing blocks for advertising material, hundreds of drawings, and much more besides. A lot of the material, especially the drawings, does not relate to motor cycles, being concerned with Admiralty equipment, portable generators, tooling, and so on. Many of the drawings are in poor condition, whilst the despatch books are generally sound. As well as production items, there are many fascinating 'pipedream' and strange prototype ideas in the drawings, including such items as a unit-construction air-cooled single cylinder motor-cycle engine and gearbox unit of around 125cc, very much along the lines of the BSA Bantam, Royal Enfield 'Flying Flea', DKW 125cc, and others of that ilk.

However, my first look at the records was concentrated on the despatch books, especially those of my particular interest era, the late vintage years. The books are VERY detailed, giving engine number, frame number, gearbox (or two-speed gear) number, carburettor number and make, magneto number and make, tyre size and make, make of saddle, accessories fitted or supplied (such as rear carrier, speedometer, lighting set, saddle bags, legshields etc.), type of forks, shipping arrangements, invoice number, and where despatched to (or customer's name if sold direct), and of course the despatch date, model, and engine capacity.

It is obvious that machines were entered, with very few exceptions, on a consecutive ENGINE number basis, with frame numbers being quite haphazard.

Strangely (and for me very disappointing), engine number prefixes and suffixes are not usually shown, and for instance we therefore have no way of telling from the despatch books where the 'R' type TT Replica engine gave way to the 'P' type Powerplus Replica engine, or indeed where short-stroke gave way to long-stroke. These things can only be guessed from the model designation and related back to known original machines in the Register.

It is very obvious that an enormous number of machines would not have corresponded to 'catalogue' illustrations and specifications, a prime example of which is a Flying Squirrel despatched to Prague, and fitted with "Indian Chief handlebars" (Yuk!). Similarly, many ma-

chines had purple tank panels instead of ivory in the 1929/30 period, Enfield rear wheels instead of Webb on Tourer models, Webb forks instead of Scott forks on Reps. and Deluxe models, and so on, *ad infinitum*.

The 1929/30 records are quite tricky to interpret because of the host of different frame sequences all running concurrently, and one has to tread very carefully before jumping to any conclusions when researching a particular model. All these frame types seem to have started at around 1, or a very low number, in this period, and we have:

Short steering-head Supers and Sports Squirrels (two- and three-speed)
Lightweight Squirrels (single cylinder)
Sprint Specials
Dirt-track (Speedway) Specials (first type)
Dirt-track (Speedway) Specials (second type, B-suffix)
Single downtube Flying Squirrels (from late 1930)

SIX different frame sequences, PLUS the duplex frames of the Flying Squirrels and TT Replicas, further complicated by the fact that many of the first run of Speedway bikes had no frame number, and a suspicion of mine, yet to be sorted out, that there was another 'different' Sprint Special series, perhaps the long-tanked variant, to account for the duplication of Sprint Special frame numbers. There was, therefore, a total of SEVEN and perhaps EIGHT different frame types running more or less concurrently, and clearly the engine number was the only way they could all be listed chronologically in the records without having to split the records!

When I first started researching Sprint Specials, several years ago, I was informed by two well-respected experts in our Club that frame numbers of 'genuine' Sprint Specials were prefixed by a zero. I cannot find anything in the records to support that theory, or indeed any frame numbers of any model with a zero prefix.

In a similar vein, the acquisition of the records will, no doubt, dispel many a long-held claim of machine originality and history. The real TT Replicas will be sorted out from the countless fakes, and so will the Sprint Specials. A few, a precious few, values will increase, but many will fall. **The Truth Will Out!** — I am now kicking myself for selling my 1929 TT Replica, for I've found it was the original registration, frame, engine, and gearbox, an incredible 65-year survival intact of a 'production racer'. To compensate a little for that I discovered that my ex-Jack Dodds GW 8845 is an original engine/frame pairing, and that my ex-Captain Eric Odell 1920 Flying Squirrel was originally a *Motor Cycling* staff machine, but my 1927 Flying Squirrel, whilst absolutely to 'period', is a mongrel!

Another rebuild project, my 1929 Flying Squirrel UN 2345, seemed to be a mish-mash of parts, as it has an Enfield rear wheel, Webb front forks and wheel etc.; but amazingly its mix of Tourer and Deluxe parts is absolutely kosher. That is how it was despatched to Reynolds (Liverpool) in April 1929.

I hope to be able to provide more notes on this fascinating subject after subsequent visits to V.M.C.C. archives. (Please do not send any dating, identification, or verification enquiries to me. They should be addressed to our Registrar or the V.M.C.C. archivist.)

Scott Archives at the V.M.C.C.

Dear Tom,

With the knowledge that the V.M.C.C. had recently acquired the Scott works records, the offer of an 'Archive Open Day' on Sunday 30th October 1994 was too great to miss, so it was bright and early when Brian Lilley picked me up to journey over to Burton-on-Trent.

On arrival at Wetmore Road, the road was lined with parked cars, giving rise to visions of shoulder-to-shoulder in the V.M.C.C. library — but fortunately most were attending the Bass Social Club car boot sale across the road and congestion was not to prove a problem in Allen House, where we found John Underhill and Brian Marshall already thumbing through the recently re-bound machine record books, resplendent in a fitting colour of purple.

Each of the four books is about 22" wide by 15" high and open to reveal that one line stretching from the left-hand page and across the right-hand facing page was allocated to each machine despatched, or to be more precise, each engine despatched. For it is by engine number and not by frame number that the records were compiled. The way in which engines were drawn from stores for machine assembly appears to have been somewhat random, so that frame numbers and despatch dates are not in sequence. Not knowing the original engine number means scouring several pages to spot the frame number, then confirming the entry against other known information, notably model, possibly gearbox, magdyno or other fitments.

Seldom did I see a registration number recorded, although details of first owners have often been entered later from cards returned by dealers, according to John Underhill. However, the registration town/county should tally with the recorded delivery address and unless the bike sat in a showroom unsold for months, the Shipley despatch date should just precede the date of original registration.

My TT Rep. details fell into place, with its WW 9582 (West Riding) registration of 30.3.29, it was despatched from the works to Lodge & Garthwaite, Batley (do they still exist?) two days earlier.

Even quicker off the starting blocks was your Flyer, Tom. Despatched to the Manchester showroom on 4.11.27 by passenger train; on the very next day it was registered in Liverpool, KA 9644. This seems a very fitting location, in view of your records of first ownership in the hands of Captain Evans of the Merchant Navy.

An abundance of Scott sales literature, instruction manuals through the years, advertising printing blocks, photographs, certificates awarded from early reliability trials (e.g. a 1911 trial of over 1,000 miles completed by a Scott with the number of marks lost in about 15 categories — NIL!) make this a collection well worth seeing. Brian Lilley hardly knew where to start with the profusion of engineering drawings and was surprised at the ambitious designs for engines which never left the drawing board.

V.M.C.C. members can apparently see the archives at any time (office hours) by appointment — you don't have to wait for the next archive day. If it's a machine you wish to look up, take as much information with you as possible, but beware that you may be out of luck — John showed me a run of about 170 engine numbers from 1927, I think, with no further information. For my part, my 'Grey Squirrel' (see *Yowl*, Dec. '93) which was registered 30.4.31 has its frame number pencilled against an engine number of vintage September 1929 with a note "rebuilt, despatched ?.4.31" and nothing else! Could this have been the works hack for two years?

David J. Waring,
Grappenhall, Cheshire.

P.S. A postscript has arisen following a subsequent phone conversation with John Underhill:

Any members who are not within easy reach of Burton-on-Trent could try approaching Phil Heath at the V.M.C.C. as he may be willing to do a quick check to identify if a particular machine record is present — and a certification service for that record (for a fee) is being planned.

Scott Company Records

Dear Tom,

With reference to the recent V.M.C.C. acquisition of the Scott records.

Having made a special journey to Allen House V.M.C.C. Headquarters by appointment over the Christmas holidays to see the records, I would like to make the following comments to our membership.

Firstly I must say what a superb collection of records they are. They are a must both for Scott historians and members who wish to check or confirm their own machines' histories.

The records broadly consist of four huge purple hard-back ledgers some two inches thick listing most machines back to pre-1920, official catalogues, photographs (again back to pre-1920), patent drawings, publicity printing blocks, and films of working drawings.

The despatch ledgers list model, gearbox, engine, frame numbers, engine capacity, to whom the bike was despatched, and any/many special features. I quickly and easily confirmed my own 1930 TT Replica history.

Finally, a word of caution to Brum Scott owners. Although the records go up to the 70s they are unfortunately incomplete for the later years. For example, my own 1957 Brum is not listed by frame/engine number, and there are other obvious gaps. This is a great pity. Nevertheless, I regard my visit as enjoyable and worthwhile.

I do not know what the attitude of the V.M.C.C. will be to future visits. The obvious minimum requirement will be membership.

Tony Staite,
Clehonger, Herefordshire.

SOME NOTES ON BIRMINGHAM SCOTTS

G. Case

I write on the subject of dating Birmingham Scotts, prompted by the photo of one on the last page of the June '88 *Yowl*, and the caption which read "early Birmingham Scott, produced before (Matt) had perfected the petrol tank styling". Can I indulge in friendly debate on Matt Holder's Brum models? I was talking to his son David, some time ago, and he thought that about 350 or so Brummies were sold.

Jeff Clew's book on Scotts states that Brum Scotts followed (Shipley) Scotts from engine number 5427, using old stock Shipley-built engines. He makes no mention of frame numbers though. My own small collection of Brum data lists: 1957 frame S1009 to 1978 frame S1536. Assuming they started at frame 1000, this would mean that at least 536 bikes were made.

The first 300 machines were sold between 1956 and 1962. I have details of about fifty 'bikes, from 1957 to 1959, but very few on later-built machines. I'm wondering if all the other 236-odd did exist, or was there a gap in the numbering sequence? This would make David Holder's estimate of 350 or so about right.

Turning to the petrol tank in the photo in the last *Yowl* issue, I think that all production Brummies used the same shape tank, although on early bikes the lining was slightly different. (The two lines dipped under the Scott badge). Most had the lining going over the top of the badge. The bike in the picture is leaning over, giving the impression of having a 'droopy' tank.

The first few *prototype* Brummy bikes had sloping tanks, and had recesses at the back for the nose of the seat. They also had two filler caps, as the tank held fuel and oil.

Well-known South Wales club member, Graham Gardner, has Brum prototype number two (1954), reg. no. OOX 206. There are plenty of differences from the later production bikes, the tank being just one of them. The front end is all Shipley—air/oil Dowty forks, Lucas headlamp on tubular stays, duplex 6" brake, etc. The back wheel is Shipley. The seat, rear mudguard and stays look B.S.A., as do the tool boxes. The prototype frame does *not* have the box member (under the front of the seat) which acts as a joining point for frame tubes on production models.

Page 203 in Clew's book has a good photo of this and other prototype Brum Scotts.

Graham has made lots of other interesting mods to this bike, so somebody should twist his arm for a write-up in *Yowl* (Hint!)

Brum Scott Specification Changes

1956 The first few had speedometer on the top fork yoke, and a Lucas headlamp. Most had the speedo set in a Miller headlamp.

1956/7 Lucas D.C. dynamo

1958 on—Lucas alternator in pancake casing, with Scott logo on cover.

Oil tank 56/7—Triangular shape. Later type were flat on the top.

Rear shockers 56/7 Armstrong adjustable
57 on Girling adjustable

Rear number plate 56/7 Open-sided, 57 on 'filled-in' sides.

Distributors—Lucas or Miller. Miller commoner on later bikes

The bike shown in the last *Yowl* showed all the latest mods, so I think it's post-58 and not an early example. Sorry if I sound nit-picking! My 57 Brum (nearly finished, at last) has frame number S1100 and engine number 5432. It would seem to be the 100th built; but if we take the engine number, it's the 6th one built. As both numbers match the original July 1957 logbook, which is correct? I think it's probably number 100.