

“Scott”

TWO STROKE

1911

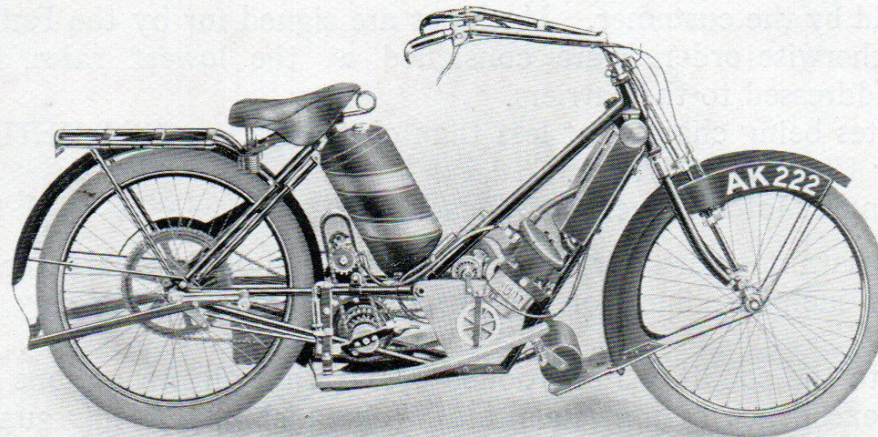


*"The car on two wheels."*

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Makers  
of the  
"Scott" Motor  
Bicycle.

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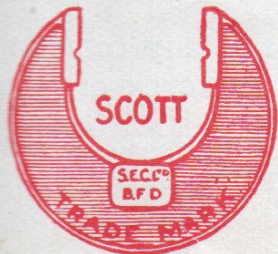
Telegrams:  
"Twin, Bradford."  
Telephone No. 2819.

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# The Scott Engineering Company

Limited

"MADE TO LIMIT GAUGE"



Mornington Works,  
BRADFORD.

# Terms of Business

**Payment.** £10 deposit with order.  
Cash against Pro Forma Invoice.  
Terms nett.

**Carriage.** In all cases must be paid by the customer. Machines are signed for by the Railway Companies as being received in good condition, and unless otherwise ordered are consigned at the lowest rates, *i.e.*, at consignee's risk. In case of damage all claims should be addressed to the carriers.  
Packing Cases and Crates being charged at less than cost price, are **NOT RETURNABLE**.  
Crates for single Motor Bicycles, 4/6 each.  
Crates for export for single Motor Bicycles, 25/- each.

**Guarantee.** We give the following guarantee with our Motor Cycle, instead of the guarantee implied by the statute, or otherwise as to the quality or fitness of such machines for the purpose of motor cycling, any such implied guarantee being in all cases excluded.  
We guarantee subject to the conditions mentioned below, that all precautions which are usual and reasonable have been taken by us to secure excellence of materials and workmanship, but this guarantee is to extend and be in force for six months only from date of purchase, and damages for which we make ourselves responsible under this guarantee are limited to the replacement of any parts which may have proved defective. We undertake, subject to the conditions mentioned below, to make good at any time within six months any defects in these respects. As motor cycles are easily liable to derangement by neglect or misuse, this guarantee does not apply to defects caused by legitimate wear and tear, misuse or neglect.

**Condition of Guarantee.** If a defective part should be found in our motor cycles, or if machine itself is sent to us for overhauling, alteration or repairs, **IT MUST BE SENT TO US CARRIAGE PAID** with sender's name and address attached, and accompanied by an intimation from the sender that he desires to have it repaired free of charge under our guarantee, and he must also furnish us at the same time with the name of the agent, if any, from whom purchased and the date of the purchase.

Failing compliance with the above, no notice will be taken of anything which may arrive, but such articles will lie here at the risk of the senders and this and any implied guarantee shall not be enforceable.

We guarantee only those machines which are bought either direct from us or from one of our duly authorized agents, and under no other conditions.

We do not guarantee the specialities of other firms such as Tyres, Saddles, Chains, etc., or of any component part supplied to the order of the purchaser differing from our standard specification supplied with our motor cycle or otherwise.

**Repairs and Alterations.** Before sending machines to the works for repair or alterations, either under guarantee or otherwise, it is necessary to notify us of the date and Railway Company by whom despatched, and to clearly state the defect or nature of alteration required. We are not responsible for tools and accessories sent with the machine.

## *Introduction*

# *The Scott Motor Bicycle*

has proved its worth by its striking list of successes during the 1910 season, and by an unbroken series of victories in hill climbing, and reliability competitions (quite out of proportion to the number of machines on the road) has justified its claim to be regarded as

### *“The Successful Two-Stroke Motor Bicycle.”*

We are supported by the experiences of “Scott” riders and by the expert opinion of the Motor Press in claiming an excellence of design, placing the Scott years ahead of the ordinary make. The Scott is in a class by itself.

#### **THE ONLY MOTOR BICYCLE ADAPTABLE BY ALL PERSONS FOR ALL PURPOSES.**

For example. As a **SPEED MOUNT**, the Scott can more than hold its own with engines of the same capacity, and is notorious for its exceptional power on hills.

**FOR ALL WEATHER RIDING**, its immunity from side slip, its protection from mud, and proved reliability, are all essential for serious winter work.

**FOR TRAFFIC RIDING**, the instant starting from the saddle the almost unconscious operation of the foot lever engaging the gears, and the general feeling of security derived from the smoothly running engine and low centre of gravity.

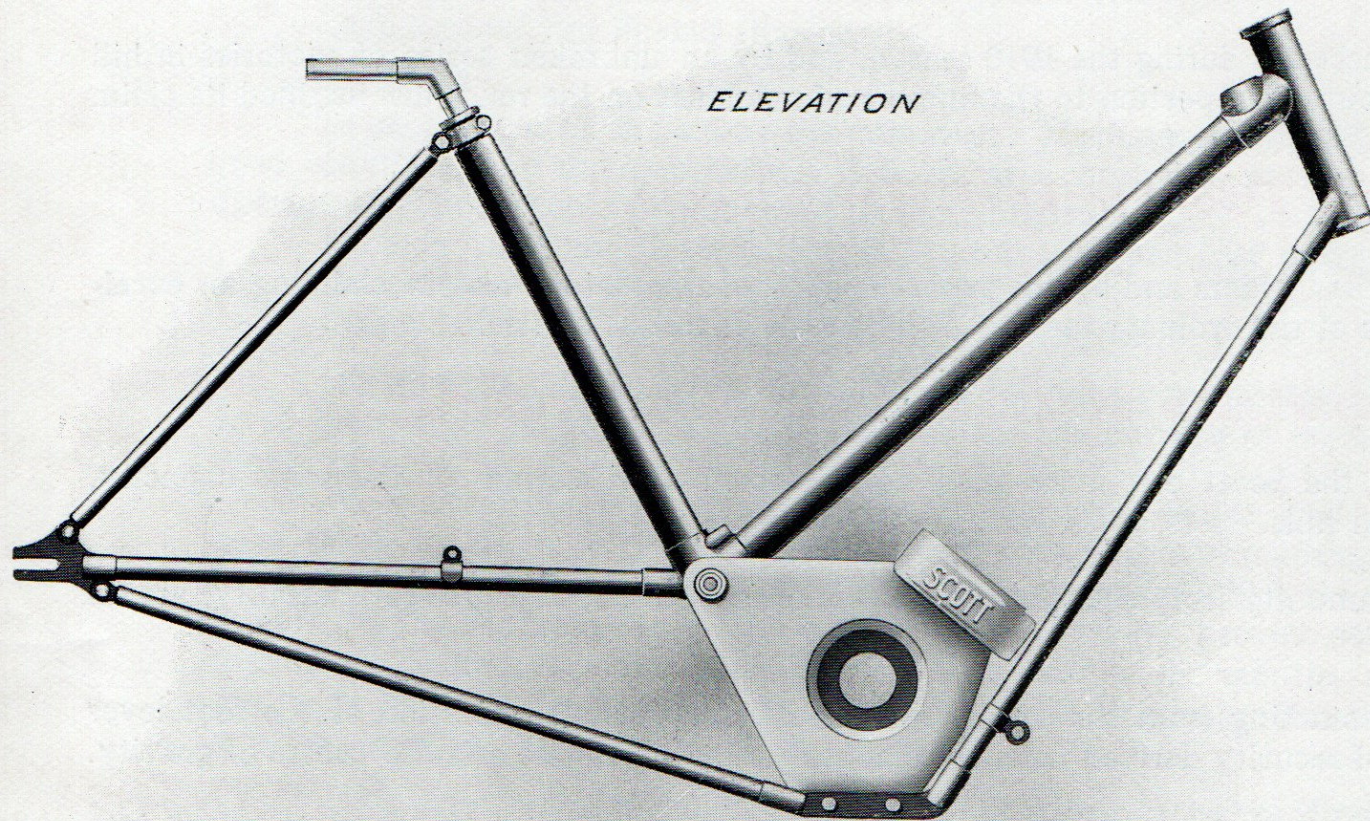
**FOR THE ELDERLY MAN** who is unable to manage the usual “running alongside” with the precarious leap into the saddle, or the laborious winding up of starting handles, there is an especial attraction in the “Scott” which can be started with comfort and ease while seated on the saddle, and where the complete absence of engine vibration, coupled with the silent silky running, reduce to a minimum the fatigue of long-distance touring.

And all these things :—The dropped frame, the safe starting, the easy control of the gear, the low centre of gravity, and the smooth and silent running of the two-stroke engine—special features all combined in one machine—justify the frequent comment of the “man in the street,”

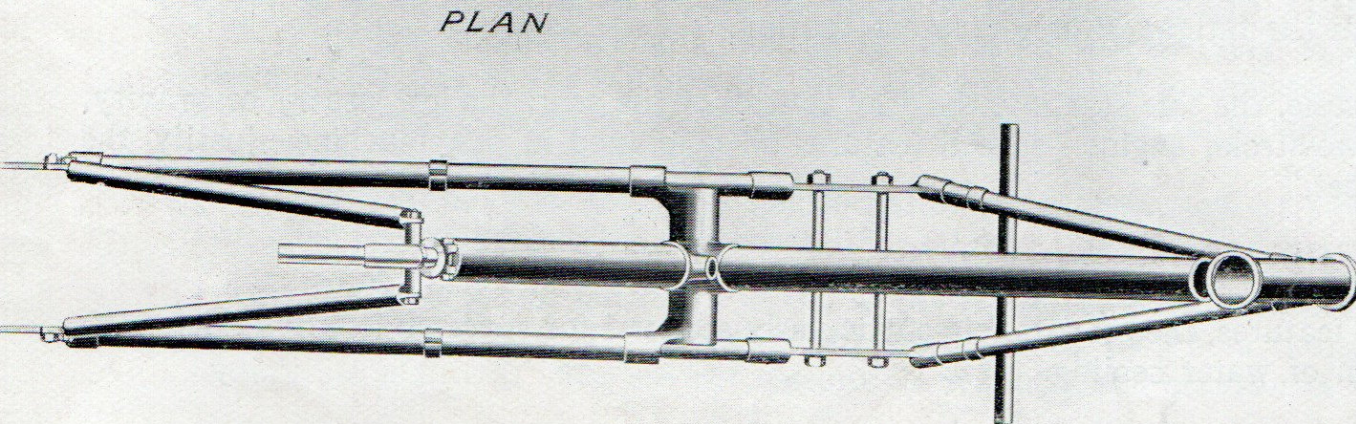
### *“A Lady could ride that!”*

and finally, in addition to all these desirable features, the “Scott” is particularly adapted for successful combination with **SIDE CAR**, on account of its simple system of water cooling.

# The Good Points of the "Scott"



ELEVATION



PLAN

**The Perfect Two-Stroke.** It will be seen at a glance that in the "Scott" Motor Bicycle a complete departure has been made from the standard type of Motor cycle, with its noisy and jerky single-cylinder motor, its exposed belt drive, and pedal cycle frame, and above all—by the successful development of the "SCOTT" TWIN-CYLINDER TWO-STROKE ENGINE, the objectionable vibration and the intermittent bangs of the exhaust have been replaced by the smooth and even running of the "Scott" engine, with the continuous and almost silent discharge of the exhaust.

**Reliable Transmission.** Further, the twin-cylinder two-stroke engine has rendered possible the successful introduction of a perfect system of **CENTRAL CHAIN DRIVE**, permitting of a highly efficient and reliable method of driving the back wheel.

**Rigidity of "Scott" Frame.** THE "SCOTT" FRAME has been designed to first of all provide for the strains set up by the transmission of power from the motor to the driving wheel. Secondly, to provide a low centre of gravity combined with an extreme lateral rigidity. This has been achieved by the adoption of a dropped girder frame, consisting of **STRAIGHT TUBES THROUGHOUT**, with the engine acting as the nucleus of the frame—ensuring maximum strength

# The Good Points of the "Scott"

## No Bent Tubes.

with minimum weight. **BENT TUBES**—which are so frequently used on motor cycles for no other reason than to permit of a low saddle position—or to serve as convenient props to hang tanks on to, are nowhere used on the "Scott" machine.

Each tube of the girder frame performs a definite purpose, and is subjected to either direct thrust or pull in a straight line. The unnecessary curving of the handlebar tubes—so general on the ordinary machine—is for the same reason avoided.

**An Advance in Spring Fork Construction.** The design of the frame is completed by the "one-piece" construction of the "Scott" spring fork, which, allowing of a direct vertical movement only, is so designed that without the use of levers, links, toggles, etc., the wheel, while firmly held in a separate front fork, can move freely up and down, controlled by the compound action of the compression and recoil springs concealed within the plated spring cases above the fork crown.

## Automatic Adjustment of Wear.

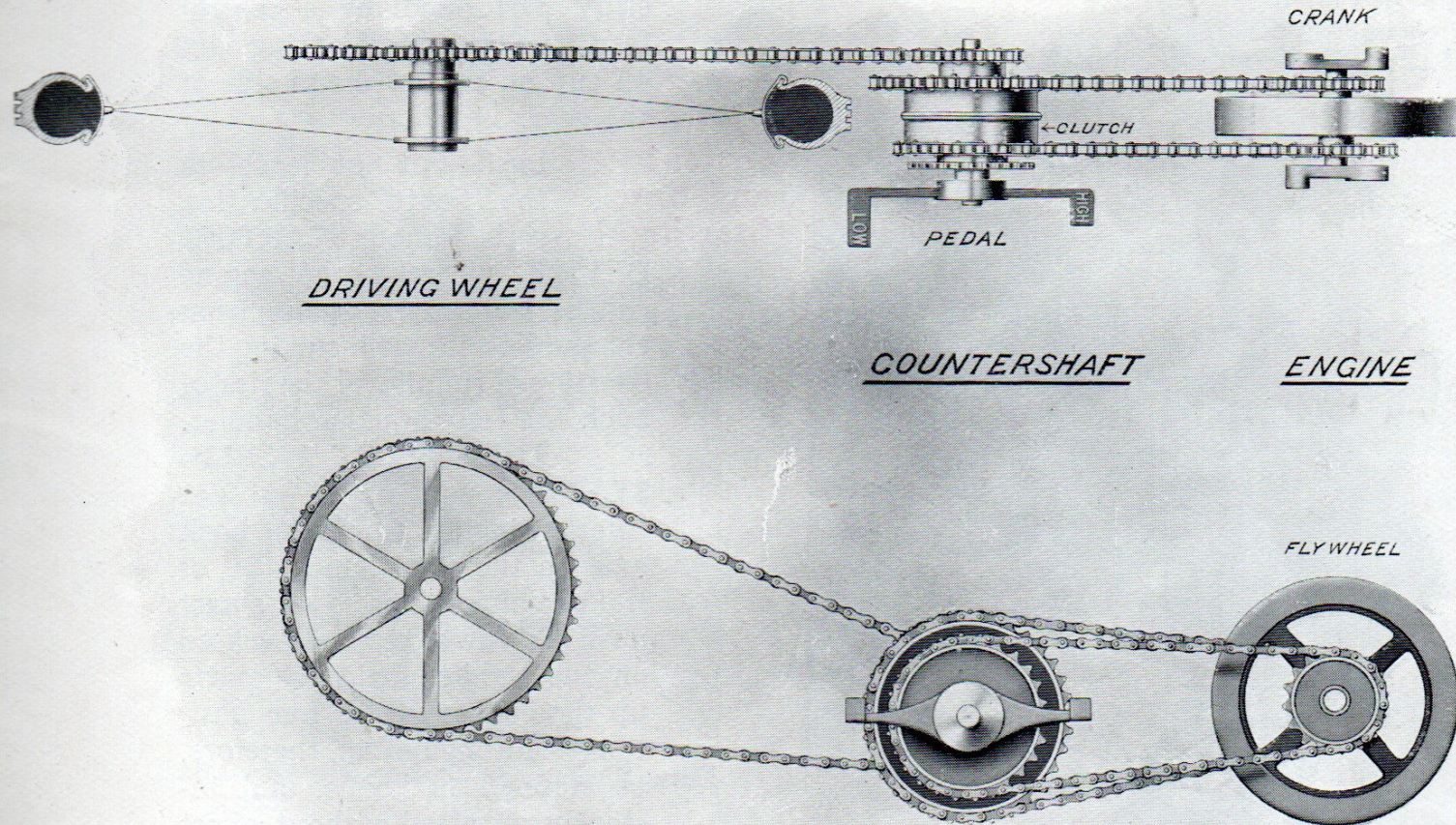
The possibility of sideplay and consequent rattle developing after prolonged use, owing to wear taking place, is avoided by the automatic adjustment afforded by the spring of the main fork blades.

The next important feature to notice is the "SCOTT" **TWO-SPEED GEAR**, which differs from the majority of variable gears on the market in the fact that each gear ratio gives a direct drive, without the intervention of gear wheels of any sort, and it stands alone among variable gears in its

## Direct Chain-Driven Two-Speed Gear.

**LIGHT WEIGHT** (9.5 lbs., complete with gear pedal).  
**IMMENSE STRENGTH** (steel forgings throughout).

**LASTING WEAR** (ALL parts case-hardened and ground to limit size), and **FRICTIONLESS FREE ENGINE POSITION** (substantial ball bearings throughout and frictional surfaces out of contact when clutches disengaged).



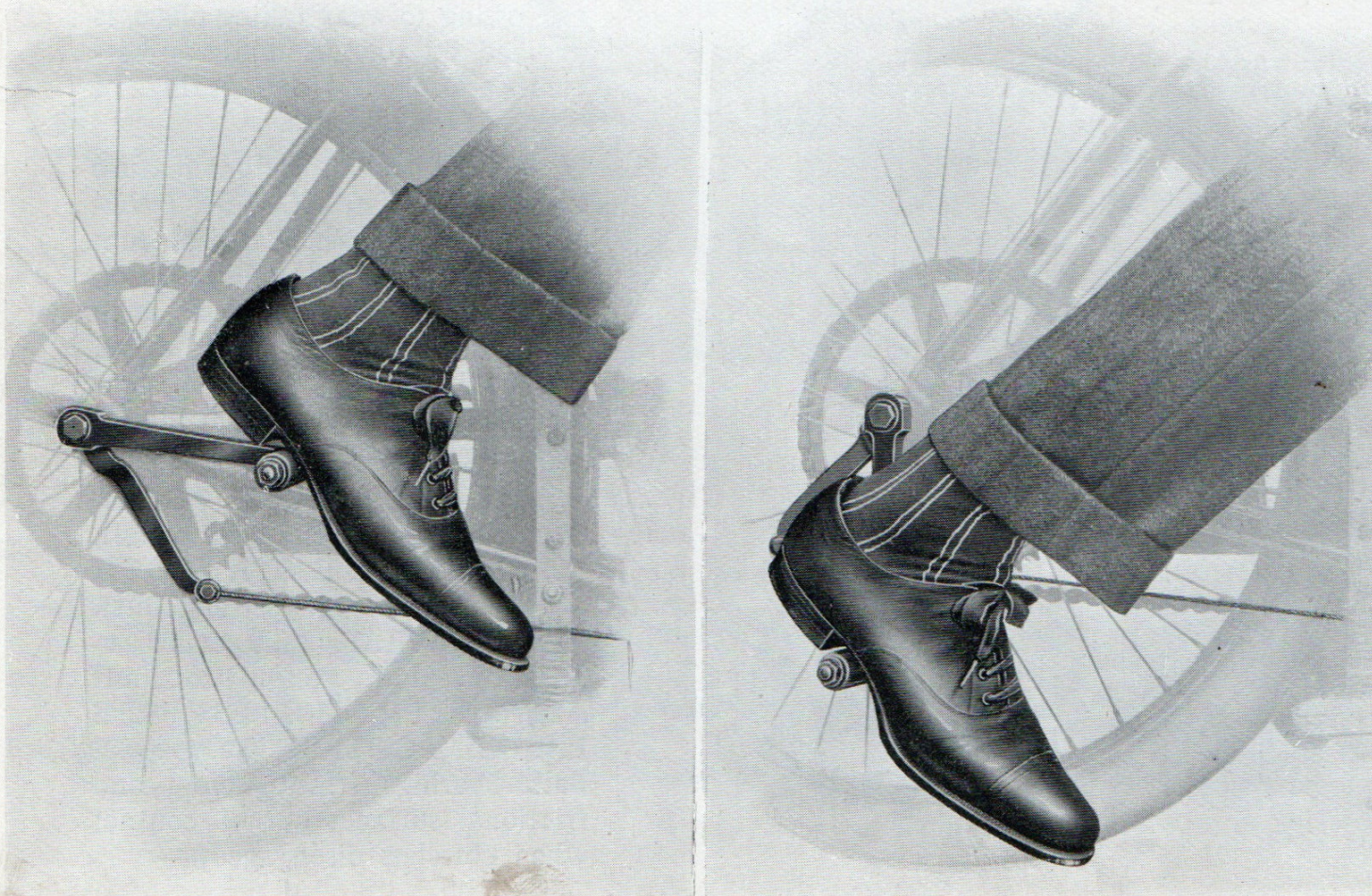
# The Good Points of the "Scott"

**Expanding Ring Clutches.** The gear is incorporated in a countershaft driven by a pair of chains from the engine, and driving by a single chain on to the back wheel, and consists simply of a pair of expanding ring clutches so arranged that by the rocking action of a pedal lever, either clutch can be expanded during the running of the machine whilst its companion clutch runs free.

The clutches are fitted with different size chain wheels so that the variation in gear is obtained by the simple expedient of engaging either clutch at will. Consequently the drive is always taken from the engine by one of the pair of chains, whilst the other chain runs idle—ready to be brought into use by change of gear.

**Foot Operation of Gear Lever.** The double-ended pedal mounted on the right-hand side of the gear is pressed backwards to engage the **LOW GEAR** when starting from a standstill, and then when under way is smartly pressed forward to change into the **HIGH GEAR**. In the midway horizontal position of the pedal neither gear is engaged, allowing the bicycle to run free.

**Gears Locked in Position.** The pedal is retained in either the high or low-gear positions by a "spring grip" device which automatically releases its hold of the pedal when at its midway, horizontal position, and thus enables the rider to tell by the feel of the pedal the exact "Free engine" position.



Lubrication of the gear is efficiently performed by a central feed from the large spring cap oil cup on the left-hand side of the gear.

**Instant and Safe Starting.** Last—but not least—in the "Scott" specification is the famous **STARTING DEVICE**, whereby the engine can be instantly set going from the saddle without incurring the exertion of running or the risk of back fire from starting handles.

**THE "SCOTT" SELF-STARTER** consists of a foot lever swinging from the back axle on the right-hand side of the machine which, by a smart push downwards, while seated on the saddle, instantly starts up the engine in the free position. The engine can, therefore, be stopped in traffic, and instantly restarted without effort and without dismounting from the saddle.

# Three Years' Competitive Performances of the "Scott" Two-Stroke

## 1908.

(1) July 29th.

Bradford M.C.C. Hill Climb on Wass Bank.  
3 h.p. Scott **1st** and 2nd, winning **Gold Medal**  
and **Dyson Shield**.

(2) Aug. 15th.

Coventry M.C. open Hill Climb on Newnham Hill. 3 h.p. Scott.

Class 3 (Twin. Cyl.) out of 17 entries **FIRST**  
on formula.  
,, 4 (open to all, ,, 26 ,, **FIRST**  
on formula.  
,, 6 (variable gears),, 6 ,, **FIRST**  
on formula.

Winning **Three** Gold Medals.

## 1909.

(3) July 28th.

A.C.U. Quarterly Trials.  
3½ h.p. Scott **Non-Stop**, full marks.

(4) Sept. 3rd.

Tourist Trophy Race.

Extract from the "Car," 6/10/09.

"A point which probably appealed more to the public than anything else was the sensational start of the Scott with two-speed gear and clutch, which enabled it to move off the mark with great celerity, and without effort on the part of the driver."

(5) Oct. 16th.

A.C.U. Quarterly Trials.  
3½ h.p. Scott, one stop, 93 marks.

(6) Oct. 20th.

Amulree Hill Climb. 3½ h.p. Scott.  
Class 2 (Multi Cyl.), **First on formula and time**.  
,, 4 (Variable gears), **Only One** to get up  
out of 8 entries.  
,, 9 (Unlimited), **THIRD**.

Extract from the "Scottish Cyclist," 20th Oct., 1909.

"The Scott, which made its first public appearance in Scotland, went away with a greatly enhanced reputation, its ease of starting, sweetness of running, and hill climbing capabilities being greatly admired."

## 1910.

(7) Jan. 29th.

A.C.U. Quarterly Trials. 3½ h.p. Scott, **NON-STOP**, 192 marks.  
Full marks for Hill Climb and **highest total**.

(8) March

Harrogate Open Hill Climb on Sutton Bank.

(9) April 20th.

3½ h.p. Scott, **First, Second and Third**, and fastest time of the day.

(10) May 20th.

A.C.U. Quarterly Trials. 3½ h.p. Scott **NON-STOP**, 175 marks.

(11) May 26th.

Edinburgh M.C.C. 150 miles Reliability Trial.

3½ h.p. Scott, **Highest Award**, 100 marks (Amateur).

Edinburgh M.C.C. Speed Contest.

3½ h.p. Scott. Class 1 Second and Third. (Amateur.)

(12) May 28th.

,, 4 **First** and Second.

Tourist Trophy Race. (1) Winner .. 3 h. 7 min. 24 sec.

(2) 5 h.p. Scott 3 h. 31 min. 47 sec. (ten minutes lost through puncture).

**TWO ENTERED, TWO FINISHED.**

Press extract from "Motor Cycle," June 9th.—"The Scotts have now got what they have been looking for, a great public test of reliability with banners flying."

(13) June 9th.

Dublin and District M.C.C. Hill Climb on Sugar Loaf Mountain.

3½ h.p. Scott, **FIRST on formula and time** (Amateur).

(14) June 17th.

Pontefract M.C. Hill Climb on Milnthorpe Hill.

3½ h.p. Scott. **Fastest Time of the day** (Amateur, 15 stone rider).

(15) June 28th.

Bradford M.C.C. Open Hill Climb on Stockshott Hill.

3½ h.p. Scott, Class 1. **FIRST** and **SECOND**.

5 h.p. ,, ,, 5. **FIRST**.

(16)

A.C.U. End to End 6 days' Reliability Trial.

3½ h.p. Scott, **GOLD MEDAL**.

Judge's Report.—Condition of machine clean and excellent. Engine very clean. Magneto clean and protected, same chains used throughout, half-inch pitch, in excellent condition. Mudguards and control good, Machine in excellent condition throughout. Water in tank not changed since leaving Bradford. Starting apparatus and wheel bearings perfect.

**ONE ENTERED, ONE FINISHED.**

(17) July 16th.

A.C.U. Quarterly Trials. 3½ h.p. Scott, **NON-STOP, FULL MARKS**.

Tying for first place for "Motor Cycle" Cup.

(18) Aug. 11th.

Westmoreland M.C.C. Hill Climb on Orton Scar. 3½ h.p. Scott, **FIRST**.

(19) Aug.

Dublin and District M.C.C. Reliability Trial, 160 miles.

(20) Sept. 15th.

3½ h.p. Scott, 96 marks (Amateur).

Pontefract M.C. Non-Stop Reliability Trial, 85 miles.

(21) Sept. 13th.

3½ h.p. Scott, **NON-STOP**, 2nd (Amateur).

Westmoreland M.C.C. Hill Climb on Underbarrow Scar.

4 h.p. Scott, **First** and Second (Amateur).

(22) Sept. 17th.

,, ,, Winning the "**Wakefield Cup**."

A.C.U. Open Hill Climb on Sutton Bank.

Class 6, 3½ h.p. Scott Second on especial handicap. (Bradford M.C.C. section).

(23) Oct. 12th.

Class 3 4 h.p. Scott, **SECOND**. Class 5 4 h.p. Scott, **FIRST**.

A.C.U. Quarterly Trials.

3½ h.p. Scott. **NON-STOP, FULL MARKS**, winning **A.C.U. Cup**. (Ties

# The 1911 $3\frac{3}{4}$ h.p. "Scott"

The result of last year's experience of the behaviour of the "Scott" in the hands of all classes of motor cyclists has fully confirmed our confidence in the especial features we have introduced, and all the well-tried points of the 1910 machine are reproduced in our new model.

We have, however, gone still further ahead in the development of the "Scott," and by the introduction of several important improvements, have produced a **HIGH-GRADE TOURING MACHINE**, far ahead of anything else.

## *The $3\frac{3}{4}$ h.p. "Scott" is entirely Water-cooled and Mechanically Lubricated.*

The complete water jacketing of the engine gives the following advantages:—

Increased efficiency with consistent power at all times.

Impossibility of overheating, no expansion and distortion of the cylinders.

Freedom from carbon deposit at all parts of the cylinder and piston.

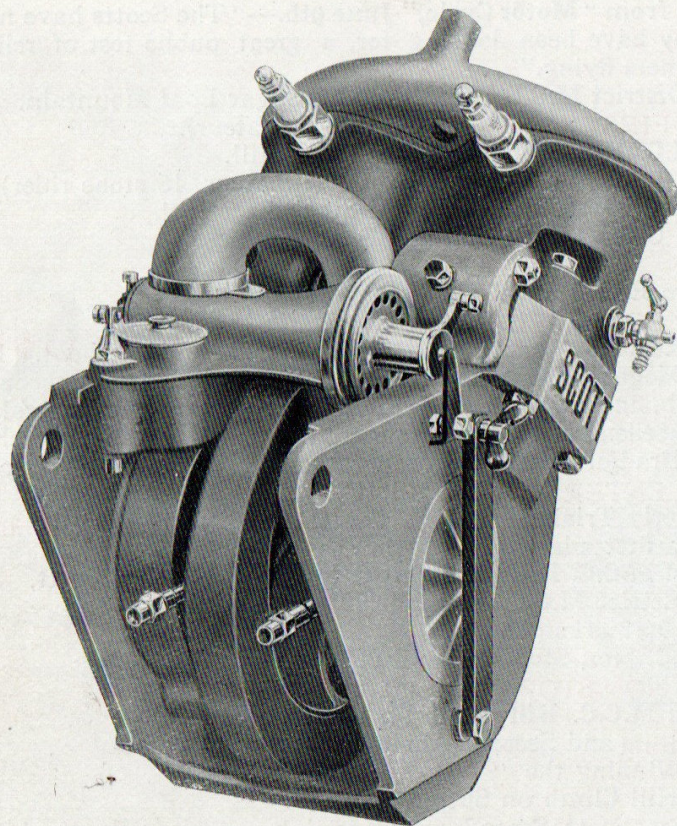
Avoidance of gummed up piston rings, and the maintenance of excellent conditions of lubrication, etc., contributing to prolonged life of wearing parts.

The twin-cylinder water jacket casting quickly detached by the removal of four bolts on the **OUTSIDE** only.

Without any mechanical addition to the engine in the way of extra moving parts—a simple and reliable system of automatic lubrication is now provided, so that it is not necessary for the rider to do more than see that the tubular oil tank is kept supplied with the proper lubricant.

The hand pump, however, is still retained, so that on especial occasions (such as for hill climbing competitions) an extra dose of oil can be instantly forced into the crank-case in addition to the regular automatic supply.

Our new registered design of combined Number Plate and Side Shield on front mudguard is fitted to every machine.

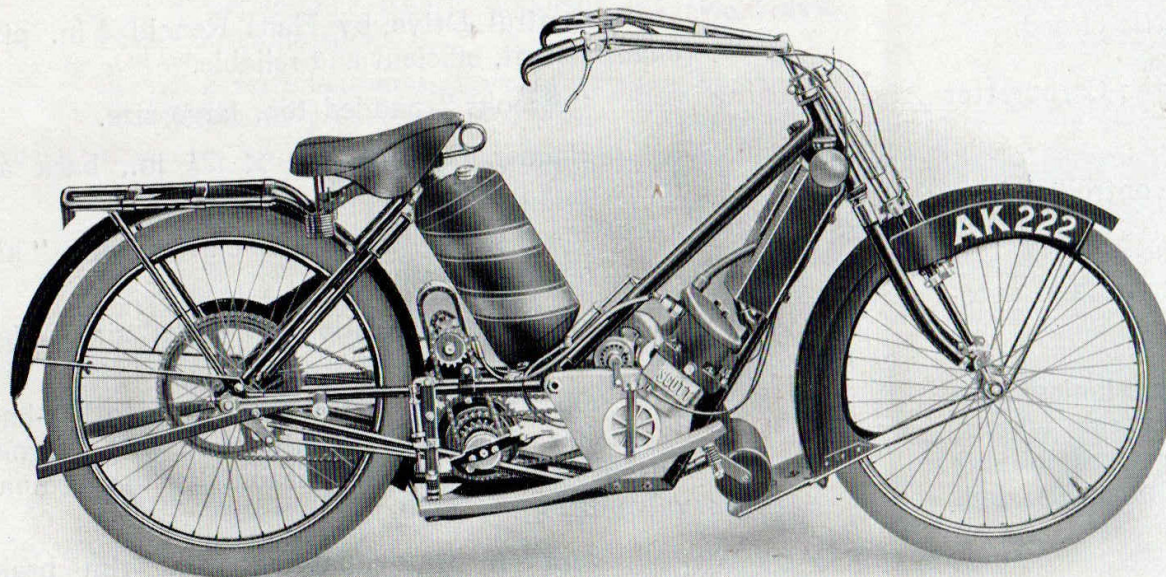


## The 1911 $3\frac{3}{4}$ h.p. "Scott"

Among many other improvements we draw attention first to the CARBURETTOR, with its "push on" spring grip inlet pipe—(no bolts or nuts to bother with), also the AIR INTAKE DUST-CASE and the HANDLEBAR CONTROL TO EXTRA AIR LEVER.

Then, to the LARGE SILENCER with its drain tube leading aft, effectively silencing the exhaust without back pressure.

Finally, we must mention the very great advantage now offered to our customers in the  $2\frac{1}{2}$  in. PALMER CORD TYRES FITTED TO BOTH BACK AND FRONT WHEELS—vastly increasing the comfort and prolonging the life of the tyres—further, owing to this size of tyre being more effectively supported against side strain by the increased width of rim, the tendency to side slip or catch in tram rails is largely avoided.



1911  $3\frac{3}{4}$  H.P. SCOTT  
Price £60

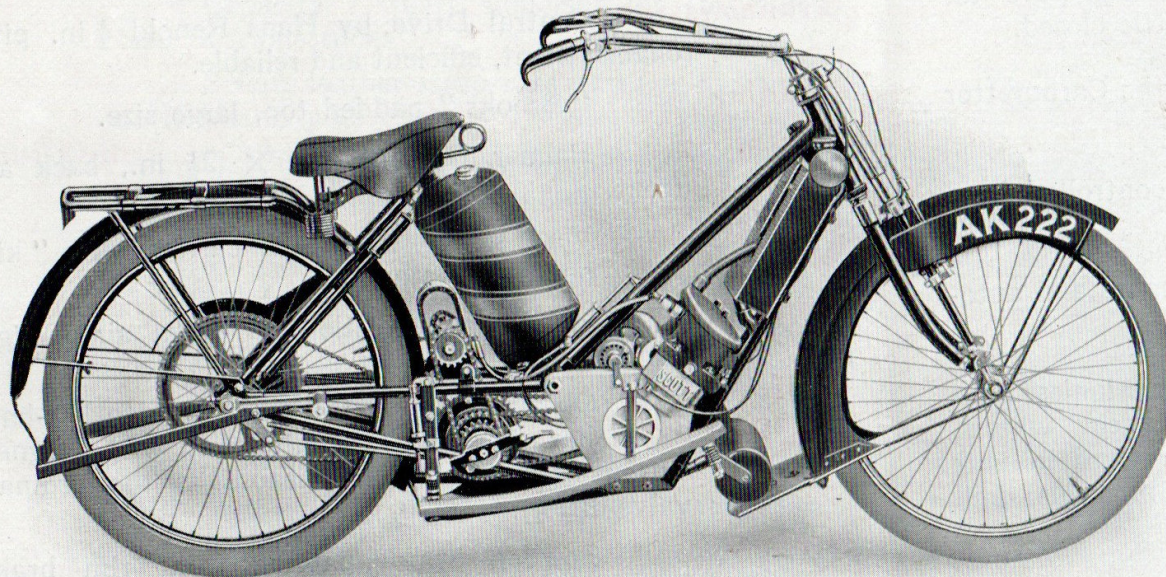
**Side-Wings.** We also supply specially designed Sidewings, extending from radiator to footboards, so as to provide complete protection for the legs and feet, and which also improves the efficiency of the radiator by acting as wind-scoops—readily detachable. Price 8/6 per pair.

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# Specification

*"The Best of Everything"*

## Engine.

3 $\frac{3}{4}$  h.p. Scott, two-stroke Twin cyl., entirely water-cooled. Roller bearings throughout, all parts in "constant thrust," extra heavy leaded flywheel. Bore 2 $\frac{3}{4}$  in., stroke 2 $\frac{1}{2}$  in., capacity 29.7 cu. in.

## Radiator.

Immensely strong and efficient, improved Honeycomb type, Thermo syphon.

## Carburettor.

"Scott" Semi-automatic special synchronized throttle, automatically allowing pure air only to enter cylinders when throttle closed.

Inlet pipe and all parts of the Carburettor instantly detachable.

Extra air adjustment now controlled from handlebar.

## Lubrication.

Mechanically operated by engine and automatic in action, also hand pump.

## Two-Speed

## Gear and

## Free Engine.

"Scott" foot operated, frictionless expanding ring clutches. No gear wheels. All steel case hardened and ground to limit gauge, thus avoiding wear and renewals, ball bearings throughout.

## Frame.

"Scott" girder principle, immensely strong and rigid, providing open frame with low centre of gravity designed to meet the strains of a motor bicycle, not an adaptation of a pedal cycle frame.

## Forks.

"Scott" spring forks, vertical movement only, no side play, compound springs and working parts entirely covered in and protected from dust and mud, made with taper gauge steering post and fork blades to stand the strains of side car use.

## Starting Lever.

**Fitted to back axle, always ready for use.**

The ideal method (see Motor Press), much easier and safer than hand starting; simply requires smart push with the foot when seated on the saddle.

## Transmission.

Central Drive, by Hans Renold  $\frac{1}{2}$  in. pitch chains, silent, efficient and reliable.

## Saddle.

"Brooks," padded top, large size.

## Tyres.

Palmer Cord 26 in.  $\times$  2 $\frac{1}{2}$  in., back and front.

## Carrier and Stand.

Very strong oval tube carrier, with "kick operated" stand.

## Control.

Handlebar, throttle and extra air on right hand.

## Half

## Compression.

Obtained by the lever fitted to left-hand bar, working in conjunction with magneto cut-out (serving similar purpose as the ordinary valve lifter).

## Brakes.

Bowden heavy pattern front rim brake. Footbrake actuating on large chain wheel drum.

## Mudguards.

Substantial 4-in. guards with large mud flap and side wings. Especially designed back chain guard.

## Specification.

**Undershield.** Metal spring clip undershield (immediately detachable), fitting under engine chains and countershaft.

**Footboards.** Luxuriously sprung on compound springs. Aluminium pyramid matting and substantial aluminium edge beading.

**Ignition.** Bosch twin cyl. ball bearing.

**Petrol.** Capacity  $1\frac{1}{2}$  gallons, oval tank (no square corners), large spring catch filler cap with inserted petrol strainer. Box body spring plug petrol taps with petrol filter.

**Oil.** Capacity 1 quart, sufficient for 150 miles, held in frame tubes.

**Tool Bag.** Strong leather strap case fitted to footboard on left-hand side.

**Tool Outfit.**

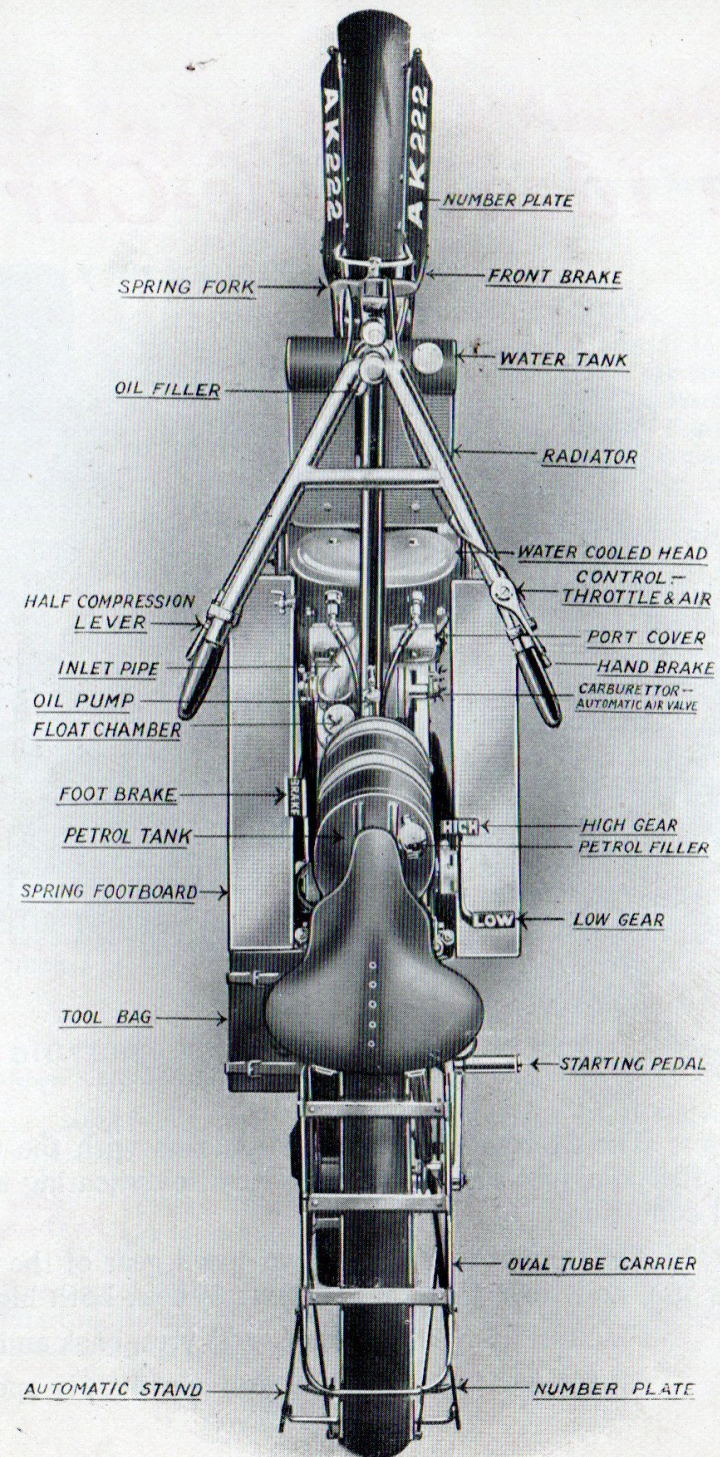
- (1) "Patchquick" tyre repair outfit.
- (2) Large adjustable spanner.
- (3) B.S.A. Spanner.
- (4) Pliers.
- (5) Jet Key.
- (6) Magneto Key.
- (7) Bosch Knife.
- (8) Oil Can.
- (9) Screwdriver.
- (10) Spare gauzes and washers.

Petrol squirt, Tyre inflator, Number Plates (registered design).

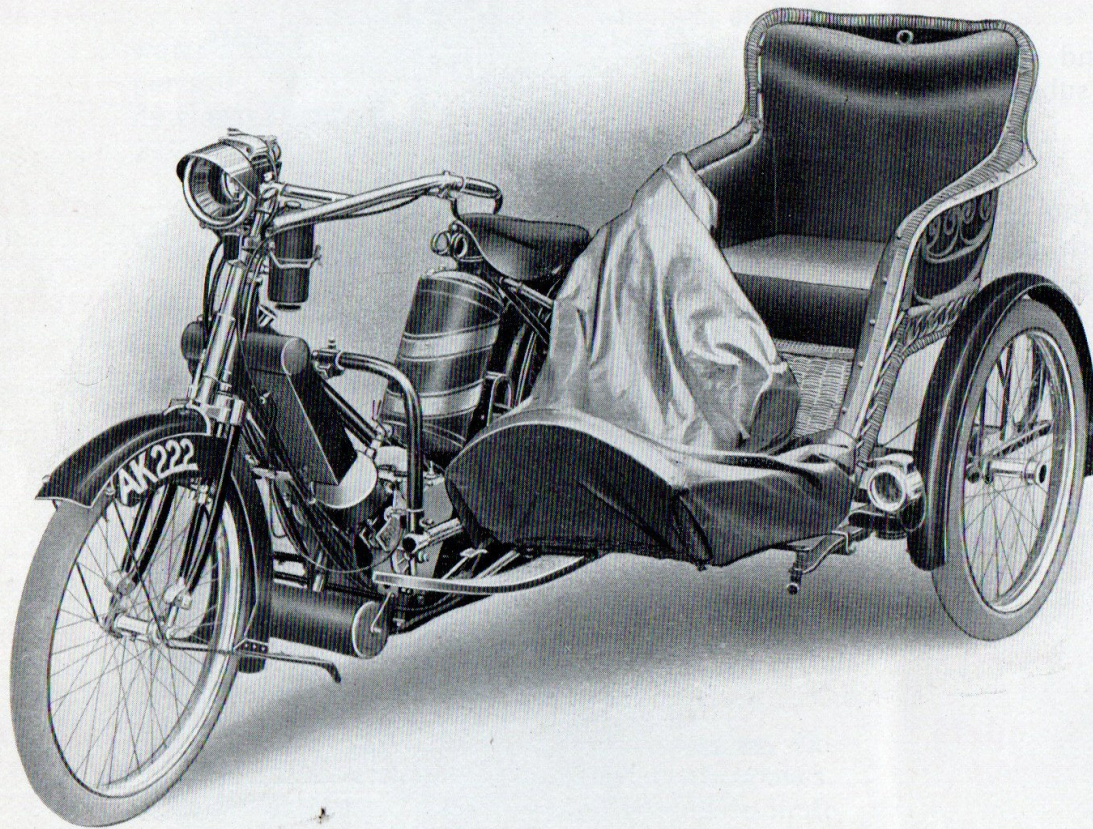
**Finish.** Finest black enamel on cosletised tubing. Plated Radiator, Tank artistically lined.

We reserve the right to deviate in minor particulars from this specification.

Every machine is subjected to a severe road test of 20 miles, over a course including 1 in 4 gradient.



# *The Ideal Side-Car Machine*



In view of the increasing popularity of the side car, the design of the "Scott"—so peculiarly adapted for this purpose—has received especial attention in the 1911 model, and we have no hesitation in recommending the  $3\frac{3}{4}$  h.p. "Scott" as capable of drawing a side car anywhere, and under all conditions.

In order to meet the severe strains thrown upon the side-car motor cycle by high speed on twisting roadways, an especially strengthened frame and front fork is advisable.

The "Scott" frame is strengthened for this purpose by fitting a diagonal top tube with a long butted top end for taking the front side car fixing, and by the use of an unusually strong back axle, so as to allow of the rear attachment to be directly fixed here, the strongest part of the bicycle.

Further, on account of the unusual side strains thrown on the front forks by the steering effect of the side car combination, taper gauge front fork blades, as well as an especially strong taper gauge steering column, are fitted to all 1911 models.

The  $3\frac{3}{4}$  h.p. engine in combination with the two-speed gear provides ample power for all contingencies, and owing to the complete water-cooling system, overheating is impossible, so that the full power of the engine is maintained under all conditions.

The famous frictionless two-speed gear of the "Scott" with its foot operated pedal, is particularly adapted for side-car use, and since there are no gear wheels, both high and low gears are direct drives.

Finally, the  $2\frac{1}{2}$  in. Palmer Cord Tyres, back and front, complete the specification of the machine for heavy side-car work. All the leading makers of side cars supply special attachments to fit the "Scott" frame.

# The Expert Opinion of the Press

(PRESS EXTRACTS).

**THE CYCLE TRADES REVIEW**, Nov. 29th, 1909  
(Stanley Show)—

The "Scott" two-stroke Motor Cycle has attracted a great deal of attention throughout the season. It is a three-port system, and there are practically two engines though they are built together, each is independent and will run alone.

The heads are water cooled, and the transmission is by central chains to a two-speed countershaft, and single chain to the back wheel.

**Well-considered details.** An open frame of strong design is employed, and one of the best features consists in the simple foot starting gear. A direct action spring front fork is fitted, and this is built without links.

THIS IS NOT A MACHINE IN WHICH THE DESIGNER HAS GONE NAP ON HIS IDEA, AND NEGLECTED EVERYTHING ELSE.

The details throughout have been very well considered—carrier, tanks, curved spring supported footboards and other points. The two-stroke engine appears to be coming, and as far as the "Scott" is concerned, it has already come.

**MOTOR CYCLING (Report of T. T. Race)**  
28th Sept., 1909—

We believe this machine is destined to materially affect designers' ideas (quite apart from the two-stroke engine), for it embodies a clever two-speed gear, and a most ingenious starting device. The rider sits in his saddle with one foot on the ground, kicks a small pedal backwards with his heel, the engine then fires, and he then engages the clutch, and sails away without an effort.

**Starting without effort!**

The roar of astonishment that went up from the crowds of spectators when Myers skurried away at the start showed how well they appreciated the fine exhibition. The contrast to the tremendous efforts exerted in the running jump into the saddle by the rest of the men excited the keenest admiration.

**DAILY NEWS**, August 4th, 1910—

AN ORIGINAL MOTOR CYCLE.

A motor cycle that has many features which liken it to a car on two wheels and withal is of most ingenious and unusual construction is the "Scott." Built, as it is with a drop, though rigid frame, it can be ridden by a lady and permits a man to wear a comfortable long overcoat without inconvenience. A special two-cylinder, two-stroke engine is fitted. This, of course, gives as steady running as a four-cylinder petrol engine of the ordinary type. The heads of the cylinders are water-cooled, a point the need of which is often overlooked in two-stroke engines. It can be started from the saddle by pressing the heel on a starting lever, and the engine then runs free until the clutch is thrown in. A chain drive is adopted instead of a belt and a two-speed gear is provided, so that the machine will negotiate any hill with ease. A characteristic feature of the general arrangement is the vertical petrol tank, which is placed just in front of the seat pillar. Altogether, the design of this motor cycle shows evidence of very careful working out. An engineer could spend a most interesting hour in examining the well-thought-out details, and yet the construction is not too complicated for the understanding of the ordinary motor cyclist, who has no taste for mechanics. The rider's comfort is assured by placing the weight of the machine low down and the provision of two long rubber-covered boards on either side of the machine for his feet to rest upon.

**The car on two wheels.**

**BICYCLING NEWS AND MOTOR REVIEW**,  
May 11th, 1910—

Again and again is the "Scott" Motor Bicycle the subject and object of praise, and as one of the earliest to give publicity to what seemed from the first to be a good thing, I rejoice in the constant commendation which this Northern invention and production receives.

**A good thing from the first.**

The two-cylinder two-stroke engine gives the steady running of a four-cylinder of the ordinary type. Again, the facility of starting from the saddle, by pressing the heel on a starting lever, is something not to be despised.

# The Expert Opinion of the Press

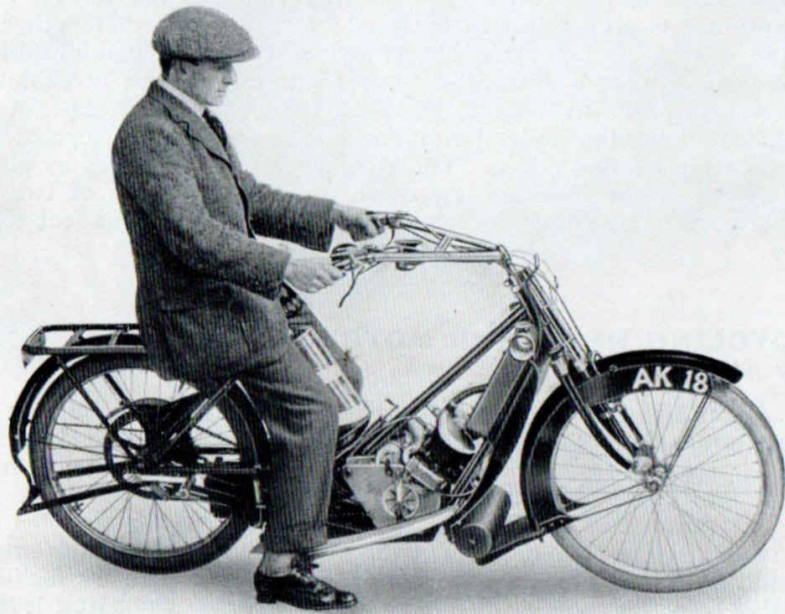
## MOTOR CYCLE (Article by Rev. B. H. Davies)—

But for style in hill climbing there is nothing to touch the "Scott." It may be beaten for speed, but for pretty work on a tricky hill there is nothing to touch the two-stroke.

The four-stroke can mop up twenty per cent. grades, as if they were level, but put it at a hairpin when five miles of previous climbing have hotted it up a bit, and it will clank a trifle as its head comes round into the straight again, and its valve is dropped once more. But with the two-stroke no rattle, no fuss, no "you listen to me," no dexterous wrestling by an agile driver—just a sweet silent swoop upwards, slowing down evenly and smoothly for the bend, no spitting or ceasing of the purr as the wicked twist in the white tape folds down towards it, no clank, or rattle, or labour as the guarding banks loom up straight against the horizon. Just a gentle curbing of the purr for fifty yards, then a modulated lowering of its note, then pf!—and she's up.

**Pretty work  
on tricky  
hills.**

The Scotts have now got what they have been looking for—a great public test of reliability with banners flying."



## AUTOCAR, Oct. 8th, 1910.

Of late I have been taking some of my ozone on a "Scott" Motor Bicycle, which I may explain for the information of the uninitiated, possesses a two-cylinder two-stroke engine equal in power and cost to the ordinary four-stroke touring machines, which seventy-five per cent. of our motor cyclists ride. It is perfectly satisfactory in economy and reliability and hill climbing, but above all, the sounds it emits are continuous.

**The sweet  
subdued  
purr of the  
exhaust.**

No sharp, distinct bangs emerge from its exhaust, but instead, a sweet, subdued, constant purr. For all practical purposes it runs like a well-silenced, four-cylinder, four-stroke engine.

## MOTOR CYCLING, July 12th, 1910.

**Like no  
other.**

There are several very quiet machines, Philipp's "Scott" being about the pick of the bunch. This machine always attracts attention when running, as it runs as no other vehicle on the road.

## MOTOR CYCLE, Correspondence, Nov. 15th, 1909.

Although I enjoy your correspondence columns regularly, I am usually content to allow others to fill them. In this case, however, I am moved to comment on the judge's report of the A.C.U. Quarterly Trials published in a recent issue. In comparing the two-stroke "Rex" with the "Scott," they say, "Whilst in appearance it is a neater machine than the 'Scott,' two-stroke, it (the 'Rex') certainly did not perform so well."

**Correct  
mechanical  
design.**

Now the "Scott" machine is, to my eyes at least, far and away ahead of the present standard for neatness and comfort. Further, anyone who wishes to take the trouble may by means of some fairly simple mechanics prove to himself that the "Scott" frame gives maximum strength for minimum weight for the stresses set up in a motor cycle frame as distinguished from a push-bicycle.

**Originality  
of design.**

My whole point is that, putting aside the question of the two-stroke principle, the judges in the trials have mistaken originality for lack of neatness. I quite understand that a design as unusual as that of the "Scott" would be noticeable, but I fear most of us are prone to brand anything not exactly standard as freakish. . . . —"Cosmopolis."

# The Experience of "Scott" Riders

Charlestown, St. Austell, Cornwall.

Dear Sirs,—In ordering one of your 1911 model Motor Cycles, I at the same time take the opportunity of expressing the great satisfaction which the machine I purchased from you in 1910 has given me. This machine, which I have had in practically constant use, mainly in the hilly countries of Cornwall and Devon, has never once failed me and at the present moment appears to be in as good mechanical condition as when I took delivery.

As an all-round hill climber I consider it to be (in the hands of the average user) unequalled, and only on rare occasions have I found it necessary to drop into low gear.

After careful adjustment I find my petrol consumption to average over 60 miles per gallon, and on the comparatively level roads in the South of England over 70 miles. It has proved a most handy machine in London traffic, once full understanding of its control was arrived at. From a speed point of view, I personally do not desire anything faster, as I can get up to 50 m.p.h. by fitting a somewhat larger jet than I generally use, and with my ordinary jet over 40 m.p.h.

As regards carbonisation, I had my cylinders off after over 1500 miles running, and found the deposit to be remarkably light, so much so that there was no noticeable effect on the running of the engine. To one such as myself, having to use both brain and hands after riding considerable distances, the vibrationless engine of the Scott is a revelation of comfort after previous motor cycling experiences; I certainly consider the Scott to be a great advance on general motor cycle constructional practice, and should like to congratulate you on your pluck in embodying so many new features in a machine unknown to motor cyclists in general, previous to 1910. —Yours faithfully,

C. J. GRACE.

\* \* \*

Shaftesbury, Dorset, Oct. 29th, 1910.

Dear Sirs,—I have ridden the "Scott" 2000 miles in all weathers and never had to clean a chain. The hill climbing powers of the "Scott" are simply marvellous, in fact the sweet even running makes riding a pleasure, and after riding over 2000 miles I have nothing to say but in praise.

I must own when first seeing the Scott I felt very anxious about mud on chains, but now after riding through streams of mud, can safely say there is no danger whatever of clogged chains.—Yours faithfully,  
F. P. HOOPER.

\* \* \*

Burpham, Arundel, Oct. 29th, 1910.

Dear Sirs.—In reply to your letter dated 28th inst., I am pleased to inform you that the machine which I ordered at the 1909 Show is running as well as ever, and gives me extreme satisfaction.

During the summer I have only had two involuntary stops by grit in the throttle sleeves, have adjusted the chains once, cleaned the exhaust ports twice and renewed the gauzes.

Compression is as good as ever, and the engine bearings as tight as new. The gear is perfect, and has not been touched, the low only being used for starting and slow going, as I get up most hills on high gear, the cooling system having driven away thoughts of overheating with full throttle. I am pleased to note that you are taking the water all round the cylinders.

Its quiet running, novel, easy, and certain starting attract favourable notice everywhere, and I seldom start in a town without expression of surprise at a common motor cycle starting minus the usual run and jump, and going off as smoothly as a car.

I can get 70 miles to the gallon with a low petrol level, but find the average 65 or 66.

The impulse is imperceptible and so smooth that the ribs of the driving tyre are not worn down. I think an automatic oil gear very desirable, and want to know if your new device can be fitted to existing machines. In fact, gentlemen, I am convinced that the "Scott" in its originality, simplicity and many refinements is a long way ahead of any cycle, and shows the greatest amount of ingenuity it is possible to find on two wheels.

I am hoping to see your 1911 m/c. at the next Show, and to find it still nearer my ideal, and beg to congratulate you upon your great success in the past trials. Yours faithfully,

GEORGE B. ROADNIGHT.

# The Experience of "Scott" Riders

27, Henry Street, Dublin, March 31st, 1910.

Dear Sirs,—. . . I take this opportunity of congratulating you on your machine, it is the first one of any make that I have ridden for 1600 miles without an involuntary stop of any kind, the starting arrangement is most efficient, the engine extremely flexible and smooth, and it is, in my opinion, the most comfortable machine to ride and control.—I beg to remain, gentlemen, yours faithfully.

A. O. CAIRNS.

\* \* \*

Kentrigg, Kendal, Sept. 28th, 1910.

Dear Sirs,—I have great pleasure in testifying to the wonderful reliability of the famous Scott. I purchased my machine from you on June 2nd of this year, and since then I have covered 2,356 miles, including to-day, Sept. 28th, without the slightest mechanical trouble. My petrol consumption for the above 2,356 is  $31\frac{1}{2}$  gallons, which is practically 75 miles to the gallon, and for this district is very good.

I take this opportunity in stating that the machine has not, by any means, had an easy time of it during the three months running. My occupation demands covering practically all the roads in Westmorland, both bad and good. Some gradients are as great as 1 in  $3\frac{1}{2}$ , and my Scott cycle climbs them with the greatest ease.

I am delighted with its performance, the two speed gear for these hills, the water-cooled engine for long distance running, and the self-starting device, altogether represent the acme of perfection.

The silent, silky running makes business a pleasure. I would certainly recommend both commercial men and pleasure seekers to indulge in a Scott, "a car on two wheels," for their next mount.—I am, yours faithfully,  
J. W. NELSON.

\* \* \*

11, Clarence Drive, Hyndland, Glasgow, Nov., 1910.

Dear Sirs,—As the period covered by your twelve months' guarantee has now practically expired, I should like to give you my opinion of the  $3\frac{1}{2}$  h.p. Scott I got from you last November.

I will preface my remarks by saying that, before getting a Scott, I had done a good deal of *bona fide* touring on other and good motor bicycles. I have had, however, no competitors' experience of organized speed trials and hill climbs; but I have done about 5000 miles on my Scott, in all weathers, and without giving any thought to the nature of the country ahead—knowing that my machine would be equal to anything in the nature of a hill at any point in my day's mileage; and further, that if I should be checked on a steep hill by sheep or cattle, etc., on the road, I need not even leave the saddle to get under way again. Here's an example. On a narrow by-road coming round a sharp corner on to a steep pitch, I found a motor car stuck near the top because the steepness of the incline had reduced flow-pressure between tank and carburettor. Hand filling of the carburettor enabled the car to get going and make room for me to pass. I then started my machine where I had put it upon its legs (gradient about 1 in 7) in the interval, put in the low gear, went firmly, and without any fuss, up that 50-yard steep pitch—which is not much less than 1 in  $4\frac{1}{2}$  near the top.

I consider the Scott an excellent motor bicycle for *bona fide* touring and convenient for "pottering"; I have not yet been beaten by a hill. As regards the engine getting hot it certainly does, but I have never had to stop from heating—which is, thanks to the water cooling preventing overheating. The complete water jacketing of your 1911 engine should confer still greater advantages over the cylinder head cooling, than this latter gives over the air cooled head of the ordinary motor bicycle engine.

On the score of petrol consumption I have no complaint, but I think it would be an advantage to fit a  $2\frac{1}{2}$  in. tyre on the back wheel, and automatic lubrication which is adjustable. I am glad to see you are specifying both these for your 1911 models.

After my Scott experience of chain transmission I would not go back to a machine with the belt form; for when the back wheel has a good fat tyre on it the tyre gives as easy riding over rough surfaces as is claimed for the belt on the score of its "slip"; while the points for wet weather riding are entirely in favour of the chain—obviously.

The two outstanding features of the Scott are, to my mind, the starting device and the even, smooth, pull of the engine. I would advise Scott riders to keep their engines clean—there's nothing much else to worry about—and with the 1911 engine cleaning will be less of a necessity than is the case with the 1909 type.

# The Experience of "Scott" Riders

As the appreciative owner of a machine which is most inoffensive to those of the public who loathe the "phut, phut" of some (and they are many) I wish success to your very successful departure from the orthodox.—Yours truly,

Capt. F. A. FYNNEY.

\* \* \*

37, Auckland Road, Ilford,  
July 11th, 1910.

Dear Sirs,— . . . I can now say that my "Scott" beats any machine I have ever had, and that is about ten. It is quite a revelation to ride after other twins.

Oct. 30th, 1910.

Since I wrote you in July I have tested it under more severe conditions, and I have never had a fault to find with it, nor had a roadside stop of any description. In comparing your machine with the ten I have had, I might add that they have all been the latest patterns and new machines at the times I have had them, and the last four were two-speed twins of well-known makes.—Yours faithfully,

W. G. EVERINGHAM.

\* \* \*

Lockwood, Whitburn Road, Cleadon, via Sunderland,  
Sept. 21st, 1910.

Dear Sirs,— . . . I am still highly satisfied with my Scott, I have done well over 1000 miles since I got it and like "Johnny Walker," it is still going strong. If a few of my cycling friends about here are sincere I can see you having a very busy time of it next season.—Yours faithfully,

E. L. LEE.

\* \* \*

3, Mesnes Street, Wigan, Oct. 17th, 1910.

Dear Sirs,—The gratification I feel and the pleasure I have derived during the past six months I have had a "Scott" compels me to write you in praiseworthy terms of your excellent and marvellous production.

I am more than satisfied with my choice, and am now and for ever more a confirmed "Scottist," as after riding a "Scott" nothing else

seems to have the combined "vim" and comfort of your machine, and the delightful sensation of "free-wheel Scotting" down the Derbyshire long and delightful gradients must be experienced to be believed and fully appreciated.

During the time I have had my machine I have been asked on numerous occasions what were my troubles; of course I have answered none, as such really is the case. The engine, gear, transmission and spring forks, are, I find, ideal, and the water cooling a distinct advantage, since you can maintain such a high average speed and still keep cool.

I must admit I was rather chary at first about the engine keeping its time and crank case and cylinder compression lasting, but my slight suspicions have proved unfounded as the compressions are as good as the day I got the machine, and it has now done over 5000 miles. Anyhow, in conclusion, I thank you for your kindness and promptitude in answering my little queries and in sending what little things I have wanted from time to time and for a good reliable motor cycle.—Yours faithfully,

J. BAKER.

\* \* \*

Station Road, Knowle, Warwickshire,  
May 3rd, 1910.

Dear Sirs,— . . . I am very pleased indeed with the machine, it is in my opinion simply bristling with good points and I am delighted with its smooth running. I am going a tour in Wales with it at Whitsuntide, and it might interest you to know that my sister who has already ridden the machine several times, is going to ride it on this tour while I ride another make. It seems an ideal machine for a lady.—Yours faithfully,

A. F. AVERY WRIGHT.

\* \* \*

Catholic Church, Caterham, Surrey.

Dear Sirs,—Your Scott 3½ h.p. has given me great pleasure during the summer, and I have had practically no trouble with it. Now I am rejoicing in being able to ride it in the cold weather clad in a long leather-lined coat, and so keep warm, an advantage I believe to be impossible on any other machine.—Yours faithfully,

W. H. FILMER.

# The Experience of "Scott" Riders

The Sedbergh Café, Market Place, Sedbergh,  
Oct. 11th, 1910.

Gentlemen,—We would like to express our appreciation of the 4 h.p. Scott we purchased from Messrs. Parker & Son, your Kendal agents. There is, however, that sense of reliability and confidence in the Scott that cannot be expressed in words.

As our business necessitates our journeying all round this hilly district and almost daily runs to Kendal over that well-known terror to motorists, *viz.*, The Kendal Fell, we have had a good chance of testing its climbing powers, and we have never yet had the slightest difficulty with the machine. The gears work smoothly and surely, and we consider the water-cooling arrangement a great boon, especially in this land of mountains. We frequently ride together from here to Kendal and back, one of us on the carrier and "Sir Walter" has never yet required that old-fashioned method of pedalling, in fact, one looks for hills and we would welcome the gradient at which the "Scott" would shake its head. As a touring machine and a climber we consider the "Scott" a revolution in motor cycling.

H. SHAW & R. C. SHAW.

\* \* \*

Newstead, Ripon Road, Harrogate, March 14th, 1910.

Dear Sirs,—I am just writing to say how pleased I am with the "Scott." One Sunday there were quite twenty-five motor cyclists all over Sutton Bank, my machine taking me up five times without a falter at averaging over "legal limit." Of course, I never had to tinker with it, unlike 99 per cent.

Believe me, no one speaks ill of the Scott when I am about, and I am quite prepared to back up my arguments with cash and they know it.—Yours faithfully,  
W. FAWCETT.

\* \* \*

1, Crescent Green, Kendal; Oct. 17th, 1910.

Dear Sirs,—You will be pleased to hear that the 4-h.p. Scott I purchased in June this year through your Kendal and district agents, Messrs. Parker & Son, is running splendidly. I have covered a distance of 2,221 miles in all weathers and it has given practically no trouble. It is an ideal machine for me, as a main road superintendent, I have often

to stop on very steep gradients and we have a few in Westmoreland; that is what I like about the machine, you can start on any hill. I have started on the steepest part of Kirkstone, and I am no featherweight (close on 14 stone), neither has it refused any hill I have put it to. Although this part of the country is so very hilly and hard on machines, my petrol consumption is from 70 to 75 miles per gallon. My average stops per day are thirty, which I consider very good when you get up the hills without pedalling.

I am delighted with the machine, the two-speed gear for hill climbing is simply a treat, and the self-starting is what I have been looking for the last year or so, for I am no chicken, in fact it is as much an old man's mount as a young man's. I had never ridden a motor bicycle before I bought the famous Scott, but after being shown by the agent how to work the controls, etc., I got in the saddle and started it off and in less than half an hour I could ride up hill and down, in fact on my second trial I rode over the notorious Shap Fells and back. It runs quite smoothly and free from vibration.—Yours faithfully,

WM. RODGERS.

\* \* \*

65, South Eldon Street, South Shields,  
April 29th, 1910.

Dear Sirs,—Pleased to let you know the "Scott" is doing exceedingly well, in fact it seems better every time I use it. I have done 200 miles these last few days and have only had one stop for a sooted plug. The starting is perfect, I have no trouble whatever, in fact I find the "Scott" only wants understanding and I don't think anyone need have any fear of trouble.—Yours truly,

D. McDONALD.

\* \* \*

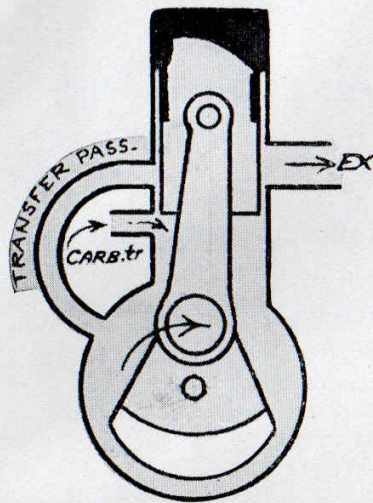
10, Priory Gate Road, Dover, Sept. 10th, 1910.

Dear Sirs,— . . . As I said before, the work my motor has done with very often a 15-stone passenger in the Montgomery castor wheel side-car over rough roads and steep hills to contend with, but it never once failed me. This makes the third motor cycle I have had, but the Scott for comfort, ease of starting and reliability cannot be beaten.—Yours faithfully,  
J. D. DIACK.

# The Action of the Two-Stroke Engine.

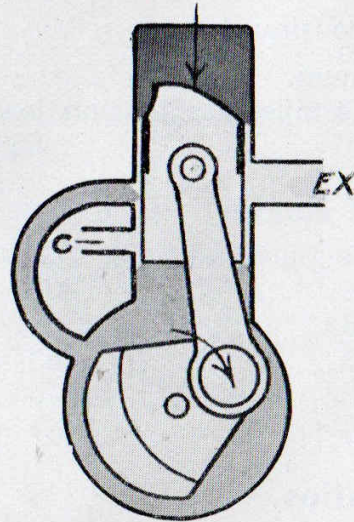
(The shading indicates pressure in the cylinder or crankcase, while blank spaces indicate suction or vacuum.)

## Explosion.



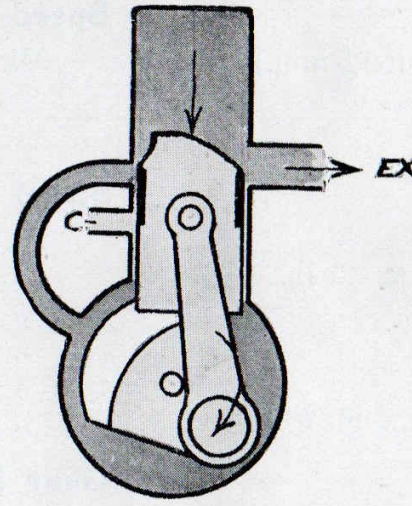
I. Inlet.

## Expansion.



2. Compression.

## Exhaust.



3. Compression.

(1) The piston at the beginning of the power stroke begins to move downwards under the force of the explosion, whilst at the same time, a carburetted mixture enters the crankcase at the **inlet ports** (below the piston) from the carburettor.

(2) The piston descends further with expansion of the products of combustion in the cylinder, and the lower edge of the piston now **closes off inlet ports**, so that the mixture begins to be compressed in crankcase by downward movement of piston.

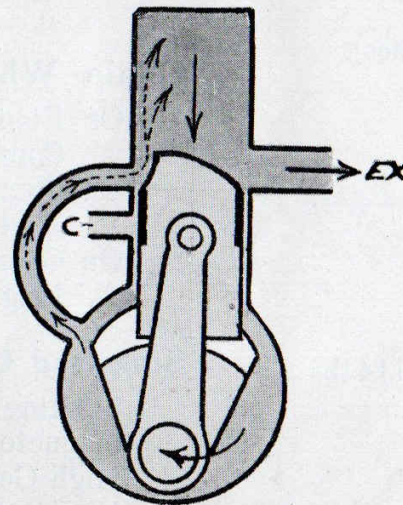
(3) The top of the piston **uncovers the exhaust ports**—allowing the exhaust gases to escape to the silencer, with an instant reduction of pressure in the cylinder. At the same time the further downward movement of piston causes continued compression in crankcase.

(4) The top of the piston now **uncovers the transfer ports**, and the charge compressed in crankcase blows through (by way of the transfer passage) and is deflected upwards by the piston deflector ledge, so that the remaining exhaust gases are swept out, and the cylinder filled with a fresh charge of carburetted mixture.

(5) The piston begins to move upwards, and **first closes off the transfer ports**, and **then the exhaust ports**, whilst its upward movement creates suction, or partial vacuum in the crankcase.

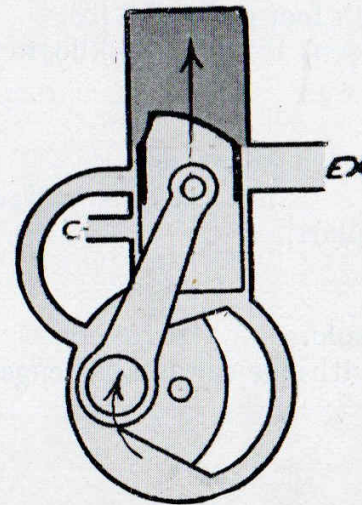
(6) The piston moves further upwards, and compresses the charge in the cylinder whilst increasing the suction in crankcase until the lower edge of the piston **uncovers the inlet ports**, allowing a flow of carburetted mixture from the carburettor to enter and restore the vacuum produced in the crankcase by the outward movement of the piston.

## Distribution Period.



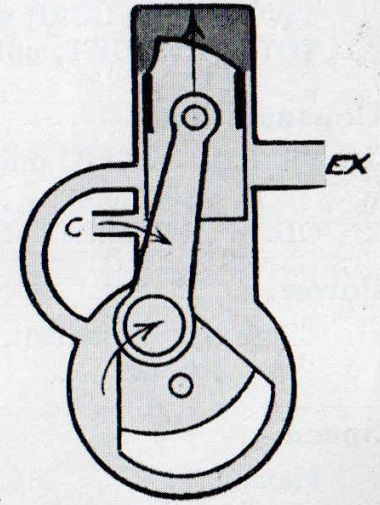
4. 'Blow-through' from Crankcase.

## Compression.



5. Suction.

## Compression.



6. Suction and Inlet.

# Useful Particulars of the $3\frac{3}{4}$ h.p. "Scott"

## Dimensions.

ENGINE, 2.75 in. Bore (70 mm.), 2.5 in. stroke (63.5 mm.)  
 29.7 cu. in. capacity (486 c.c.).  
 WHEELBASE, 4 ft. 6 in.  
 OVERALL LENGTH, 7 ft.  
 WIDTH, 16.5 in. over footboards.  
 21 in. handlebars.  
 HEIGHT OF SADDLE from ground, 29 in. to 30 in.  
 ENGINE CLEARANCE " " 5.5 in.  
 TYRES, 26 in. dia., 2.5 in. wide.  
 MUDGUARDS, 4 in. wide.  
 CHAINS,  $\frac{1}{2}$  in. pitch,  $\frac{3}{16}$  in. width from engine,  $\frac{1}{4}$  in. width  
 to back wheel.

## Weights.

ENGINE and Carburettor, 48.5 lbs.  
 TOTAL AMOUNT OF WATER, 4.75 lbs.  
 TWO-SPEED GEAR with foot pedal, 9.5 lbs.  
 TOTAL WEIGHT, unladen, 185 lbs. (84 kilogrammes).

## Consumption.

PETROL 70 to 80 miles per gallon solo.  
 50 to 60 " " side car and passenger.  
 OIL 150 miles per quart.

## Power.

Climb 1 in 4 gradient, solo.  
 " 1 in 6 " with side car and passenger, 114 lbs

## Speed.

Maximum.  
 50 miles per hour solo.  
 35 " " with side car and passenger.

## Speed—continued.

### Minimum.

4 miles per hour on low gear } without slipping  
 10 " " high " } clutch.

## Speed of Engine. With gear, 4 to 1.

At 10 miles per hour, 538 revolutions per minute.  
 " 15 " " 807 " "  
 " 25 " " 1386 " "  
 " 35 " " 1883 " "  
 " 45 " " 2420 " "  
 " 55 " " 2961 " "

## Gear Ratios.

Standard D 3.95 high gear, 6.73 low gear } solo.  
 " E 4.34 " 6.95 " }  
 Standard F 4.6 high gear, 7.35 low gear } side car.  
 " G 4.93 " 8.8 " }

## Chain Wheels.

On Engine 20 th. sprockets. }  
 " Countershaft 25 th. and 40 th. }  $\frac{3}{16}$  in. width.  
 On Countershaft 17 th. 18 th. 19 th. or 20 th. }  
 " Back Wheel, 60 th. or 66 th. }  $\frac{1}{4}$  in. width  
 On Countershaft, 20 th. }  $\frac{1}{8}$  in. width.  
 " Magneto, 16 th. }

## Standard Chain Lengths.

Starting gear .. .. 19 links }  $\frac{1}{8}$  in. width.  
 Magneto .. .. 46 " }  
 High Gear .. .. 66 " }  $\frac{3}{16}$  in. width.  
 Low Gear .. .. 72 " }  
 Back Wheel 115 and 117 " }  $\frac{1}{4}$  in. width.