

REVS

THE ROYAL ENFIELD MAGAZINE

VOL. 4

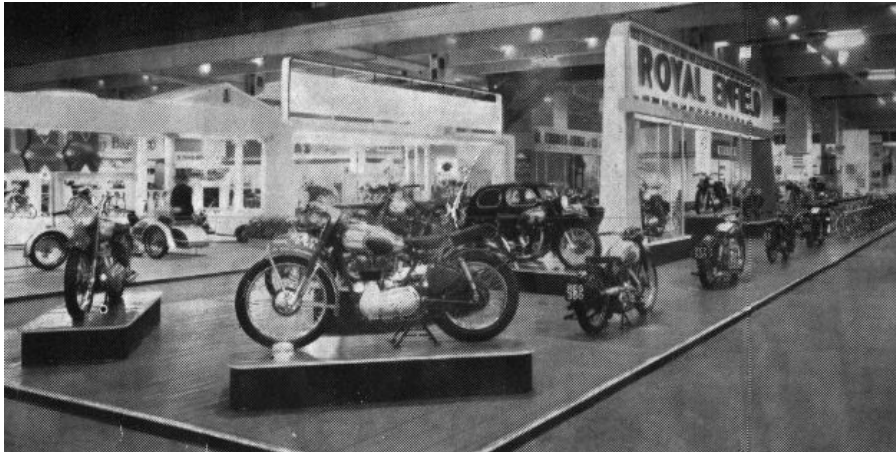
SPRING 1950

No.10



REOC - Not For Sale

The 1949 Earls Court Show



THE Royal Enfield Stand at the Silver Jubilee Exhibition of Cycles and Motor Cycles at Earls Court was designed in a striking yellow and blue colour scheme. The centre of attraction was a working model, demonstrating the suspension of the Spring Frame 500 c.c. Twin, which was designed and constructed in the Enfield Works.

Charlie Rogers, the noted Royal Enfield Trials rider, was present with the "350 Bullet" which he rode as a member of the victorious British Trophy Team, in the 1949 International Six Days Trial.

Mr. Rogers had the honour of being presented, together with his Trophy Team-mates, to H.R.H. Princess Margaret, who was an interested visitor to the Show.

OUR FRONT COVER Illustration shows the well-known Yorkshire rider, Geoff. Broadbent, in action on his Royal Enfield Trials Machine.

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*Recording and Picturing the Activities of
The Enfield Cycle Company Limited*

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THE Earls Court Exhibition was opened by Mr. L. J. Callaghan, Parliamentary Secretary to the Ministry of Transport and he is seen here (right), on the Royal Enfield stand, with Major F.W. Smith C.B.E., J.P. (Managing Director) and Mr. C. Douglas Terry, the President of the Cycle and Motorcycle Manufacturers Union (extreme left).

Mr. C. D. Terry is of course, Sales Director of Herbert Terry and Sons Ltd.

The Stand at the Show was visited by dealers from all parts of the world, and by many distinguished personalities, including Mr. Douglas Jay, the Economic Adviser to the Treasury.

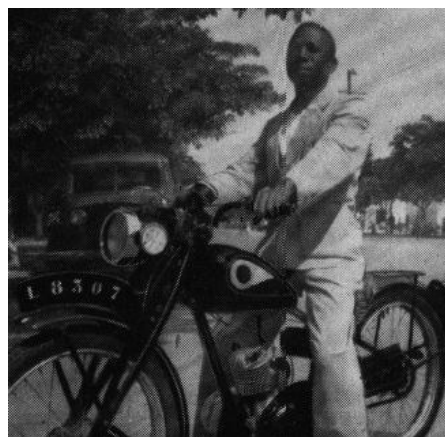


SOUTH AFRICA
Missionaries Awheel

Here is a picture of Father A. Newman, who is a member of the White Fathers Mission, mounted on his Model J2 Royal Enfield motor cycle. Father Newman carries out his good work at Makere, Kasulu, Tangayika Territory, and is seen here explaining the merits of his mount to a local friend.

WEST AFRICA
A Fair Exchange

Mr. Joaquim Antonio, of Lobita, Angola, West Africa, is an industrious and thrifty individual, who has been employed as an Office Boy by a British Company in Africa for 21 years. His ambition was to own a Royal Enfield Model R.E.; his reason: "There are many about, so they must be good." He saved for many years from his small wages and at last sold six oxen, which provided him with enough cash to visit our agents in that part of the globe and make his dreams come true.





INDIA

Mr. Sankaran, Managing Director of the Madras Motors Ltd. About to take off with seven friends on an Ex W.D. Royal Enfield 350 c.c. at a picnic at Sholinghur, conducted by the South Indian Cycle Association.



MALAY STATES

A Johore police dispatch rider pushes his machine through knee deep floodwater. The Royal Enfield motor cycle is one of a number supplied to the Federation Police.



SINGAPORE

Our Representative in Singapore has sent us this photograph, showing a group of five cyclists who took part in cycle racing held there last Autumn.

Mr. E. Peters, who is seen on the extreme right, was the winner of the ten mile event, mounted on a Royal Enfield Bullet -3.

PARIS

Like the famous "Mounties" the Paris Police are noted for getting their man, and to this end a considerable number of them are now astride Royal Enfield motorcycles, a quantity of which we had the pleasure of supplying through our Distributor. Here we see a potential "victim" having his papers examined; looking somewhat apprehensive about it, too!





VISIT TO EIRE

During last summer, our General Sales Manager, Major V.T. Mountford, paid a visit to Eire-with camera!

The top picture was taken outside the Limerick Sports Store, and shows the proprietress, Mrs. J.M. Neiland with her colleagues, Mr. D.J. Carney and Mr. K. Hartigan. On the extreme right is Mr. Desmond Burney, our Irish representative. Next we see Mr. Burney with Mr. O'Leary, of Cork, while the lower photograph is of Mr. McElligott, of Castleisland.





These pictures show one of the parties of Swiss dealers and journalists who visited the Enfield Cycle Company for a week's course of instruction recently. See opposite page



Swiss Dealers visit Royal Enfields

On January 9th, Mr. Lucien Jan, of Messrs. Jan S/A, Lausanne, brought over a party of dealers, journalists and other for a week's course of instruction on the servicing of Royal Enfield motor cycles. A few of the party travelled by sea and rail, but the majority came by air. The visitors stayed in Birmingham, travelling to the Enfield Works each day by special coach. The lectures and demonstrations were conducted by Mr. R. A. Wilson-Jones and Mr. J. J. Booker, assisted by Messrs. C. N. Rogers. G. Hay and H. Watton. Acting as interpreters were Mr. Jan, Mr. C. Perret and our Export Manager, Mr. R. Baker. These French and German speaking dealers evinced the greatest interest in workshop methods and servicing

as practised at the Enfield Work. A second party of dealers arrived for the course of instruction and servicing on 29th January, and a third party on 13th February.

Lighter moments were catered for by rifle shooting matches at the Works 25 yards range and dinners at the Foxlydiate Hotel, when Major F. W. Smith, C.B.E., was the host.

Other social events consisted of an evening at the Hippodrome Theatre in Birmingham, where the dealers saw "Annie Get Your Gun" and a television show, the latter being a completely new experience for all but one or two of our Swiss friends. At the conclusion of the periods of instruction, certificates were presented by Major Smith.

THE BRUSSELS SHOW 1950

Our Export Manager, Mr. R. Baker, was present at the 1950 Brussels Show, Which was held in January, where an attractive range of our motor cycles was on exhibition on the stand of our Antwerp Distributor, M. F. Duval-Tefrere. This gentleman is responsible for the

sale of our machines in the Provinces of Antwerp, Limbourg and East and West Flanders.

The display was, as usual, very much admired and but for the unfortunate import restrictions, very good business would be forthcoming.

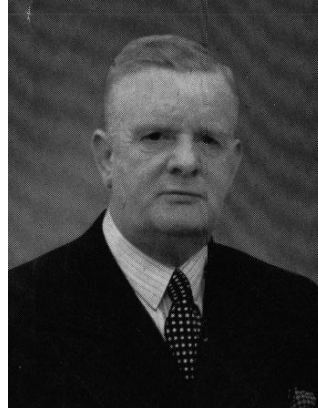
ENFIELDPERSONALITIES

MR. O. WYTHES

MR. OLIVER WYTHES, the Works Superintendent of the Enfield Cycle Co. Ltd., commenced work with the Cost and Wages Dept. 44 years ago. His original plan was to become an Auctioneer, but as he was unfortunately orphaned. at the age of 13 he entered Industry. From the Cost Office, he was moved to Buying, Accounts, Hire Purchase and to the position of head of the Wages and Sanction Office. He then took charge of Time and Motion Study and rate fixing and after a time in charge of Personnel was promoted to Works Superintendent.

He is a member of the Worcestershire County Special Constabulary and holds a medal and bar for 20 year's service. During the recent war he was a Lieutenant in the 8th Worcs. Home Guard.

Mr. Wythes is a keen sports enthusiast, having however a definite preference for football. He has been a referee, having held a Worcestershire and Birmingham F.A. appointment, and later became a scout for Blackpool and Derby County. His love of sport has been of great value



both to the Enfield Athletic Club, of which he is a Founder Member, but also to the district as a whole, for Mr. Wythes has generously given Cups and Trophies to local Fire Brigade competitions, Redditch Schoolboys football competitions and many others, including the Worcestershire Home Guard Football Association; as a result of competitions organised by this latter body, over £500 was collected for the Smallwood Hospital.

As regards hobbies Mr. Wythes goes to the life of the countryside. He is an expert horticulturalist and has a collection of trophies won at Midland Shows. The livestock side of farming also occupies much of his interest, as he breeds thoroughbred horses for hunting and racing and also pedigree cattle. Mr. Wythes comes of very old Worcestershire farming stock and tells us that his ancestors were the last local users of oxen for ploughing purposes.

A Holiday In Brittany

By MARTIN LINDSAY *D.S.O., M.P.*

There is no country like France for a cheap as well as an excellent holiday. That many people now realise this I was reminded last summer by my fellow travellers on the cross Channel boat. At least half were hikers, campers or cyclist, together with many young people on exchange visits to their "penpals".

One scared glance at the enormous rucksacks carried by hikers had always deterred me from wishing to take that kind of holiday. But there is nothing like cycling, as my fourteen year old daughter and I confirmed for ourselves during the first two week of August. We stayed in hotels, inns and little cafe, but it can be done far cheaper by taking a light tent and Primus stove. The expenses of such a holiday are within reach of almost everybody and I should be glad to advise or suggest an itinerary to any reader of "Revs" who might ever be seriously considering such an adventure.

Brittany is the north-west corner of France, a large peninsula jutting out into the Atlantic for about 200 miles. It has an extraordinary variety of scenery. There are mountains moors and sheltered dales. where sub-tropical plant and flowers flourish. There are rocky shores, strange

islands, deep forests, old world villages, modern seaside resort, ancient walled towns-in fact, something for everybody !

The inhabitants are like the Welsh, of Celtic stock, and therefore a different type to the Latins of most of the rest of the country.

They are descended from the Britons (hence the names "Bretons" and "Brittany") who fled before the Anglo-Saxon invaders of the Sixth and Seventh Centuries. And, in addition to French, they still speak the old Breton dialect.

We crossed in the night from Southampton to St. Malo, a tiny fortified town, unfortunately largely blown up by the Germans before they surrendered in 1944. From there we bicycled westwards along the coast, stopping the first night at a small place romantically named Golden-Sands-and-Pines. The next night found us sixty miles from St. Malo, and there I had to lie up three days with a swollen and extremely painful leg caused, of all things, by excessive sunburn in the blistering heat of those first two days. My worst moment of the whole trip was next morning on the beach. I looked up from my book to see that my girl, who only learnt to swim indifferently last summer,

*Col. Martin Lindsay
with his fourteen year
old daughter taken on
their Royal Enfield
cycling tour of
Brittany.*



encouraged by an older girl, was swimming out to an island at least a mile off the coast!

To make up for lost time we now put the bikes on a train and travelled thus to Quimper, a town near the south-west corner of Brittany. It has a most beautiful Gothic cathedral, an old Episcopal palace, many ancient houses and most picturesque quays .. We put up at the Hotel of-the-Sword where the chambermaids wore the equally picturesque old Breton dress of black with an elaborate white lace head-dress; ours was very ancient, and we named her Queen Victoria.

Staying at the same hotel was a party of fifteen American college girls "doing" England, France and Italy in sill weeks. And doing in style, for they had flown the Atlantic as well as the Channel and were now touring the Continent with their own motor coach and guides.

From Quimper we followed the coast south-eastwards along tracks unsuitable for cars, and crossed the numerous estuaries by rowing boat. The little fishing ports we passed through were fascinating, for they contain many varieties of boats with most attractively coloured hulls and sails.

It being the height of the holiday season we were twice unable to find accommodation on the coast, which meant turning inland.

Once, after biking through pouring rain and in the dark, we ended up sleeping above an ironmonger's shop. As usual we found that the smaller and more humble our abode, the most interesting, with the opportunities of talking to the local people that one does not get in smart hotels. Needless to say, our Royal Enfield cycles were everywhere much admired.

Wherever you go in France you are assured of a warm and friendly welcome. It will be long before the British part in the liberation of their country will be forgotten.

So much for Brittany. Another memorable holiday alas, is over. For the next twelve months we must live on its memory. That and the joy of studying maps and planning a similar expedition for next year-to Sweden perhaps, or Spain?

Round the World on a Royal Enfield

A Former U.S. Air Force Lieutenant, Mr. Hubert Tibbetts, found himself so bored after the war ended that he decided to make a lone trip around the world.

He chose for his means of transport, a Royal Enfield Model R.E., and left New York in August last. He estimated that his ride will last approximately one year and planned a route through Mexico, Central America, Africa, The Middle East, India, Tibet, Burma, Siam, French Indo-China, China and so back to the U.S.A.

His expenses are scheduled to two dollars a day and he hopes to keep down to this by hunting and fishing for food en route. No doubt many of us will envy Mr. Tibbetts his courage and initiative in undertaking such an arduous, if supremely interesting, trip.



DEALERS AT HOME



Provincial Show

We reproduce here a picture of the Stand organized by Messrs. Boston Motors at the Heckington Agricultural Show. They tell us that it provoked a great deal of interest among the patrons.

It is noteworthy that Royal Enfield Motor Cycles have a prominent place on the stand, publicity which has an immediate appeal to the important agricultural market.



A Weighty Customer

Mr. T.E. Stone, our Cannock dealer, sends us this photograph of one of his customers mounted on his newly acquired Model R.E. He is Mr. J.R. Pritchard, and turns the scale at just twenty stones, which is just about double the weight of his little machine. He has had no trouble with it and is very satisfied, using it for daily journeys to and from his work.



A Veteran And Son

Here is Mr. T. Hughson, who is a director of Messrs. J.R. Alexander and Co. of Edinburgh, mounted on his 1914 3h.p. Royal Enfield motor cycle. He recently purchased this machine for the princely sum of £3 and tells us that it is now in perfect condition, even starting at the first "kick" He rode it in the Scottish A.C.U. Rally in 1947, where it won the veteran's prize, being the oldest machine to complete the course.

Mr. Hughson's son, who is seen in the smaller picture, is mascot of Edinburgh Monarchs Speedway team and is mounted on his miniature motor cycle.



*Reprinted by
courtesy of
"Yachting
Monthly"*

The 8-ton cutter
Meg II



ENFIELD·AIR-COOLED AUXILIARY

Prejudice dies by degrees where internal combustion engines are concerned, but it would seem that the air-cooled type of marine engine will be more and more generally accepted as its advantages

become better known in the marine world. Although in motor-cycles, a few cars, and various industrial units the small air-cooled engine has proved it worth over many years, its advantages for use in

boats have not been so easily recognised. It has usually been thought that as there is unlimited water outside the boat it might as well be used for cooling, while any air-cooled engine would become so overheated in the confined engine space usually found in a



With steps in place Meg II's engine is scarcely noticeable. The grating can be seen above the lower step.

The Engine is easy to get at. Note the exhaust pipe, silencer, and air duct of the starboard cylinder.



small yacht that there would always be a risk of fire.

Before we show how faulty such reasoning can be, let us note the troubles that are associated with water-cooled marine engines and which cannot happen in the case of air-cooled units:

- (i) Overheating, resulting perhaps in a run big end or complete seizure, through a choked water intake or omission to open the sea cock.
- (ii) Accumulated mud or sludge in cylinder water jackets causing cracked cylinders.
- (iii) Circulation pump failure.
- (iv) Leaking gasket causing stoppage of the engine, or even a cracked cylinder head.
- (v) Flooding of hot cylinders perhaps causing cracked heads by cooling water sucked back from exhaust pipe after engine has stopped running.
- (vi) Excessive cylinder wear and low performance through water circulation being run too cool
- (vii) Cracked pump, pipes or cylinder block during frost.

Being independent of water for cooling, the air-cooled unit avoid these troubles and it can be started up and run when the boat is aground or even hauled out. Indeed this type of propelling power has this advantage in ship's lifeboats for engine can be

tested at any time while the boats are in davits.

The various possibilities of the air-cooled installation for yachts and small craft were noted recently when we attended trial of an air-cooled Diesel under service conditions in the 8 - ton cutter Meg II

The engine in question was an Enfield air-cooled 15 b.h.p. diesel marine unit having two opposed cylinders. An identical model was on view on the University Marine Ltd. stand at Earls Court together with one of the Enfield single (upright) cylinder marine diesel units of 6 b.h.p. Meg II, a sturdy transom sterned gaff cutter of 7 tons T. M. built at Whitstable in 1923, is a good test for an air-cooled installation, for she has no more space for the engine than most auxiliary yachts of her size.

This 15 h.p. flat twin Diesel, measuring some 41 in. fore and aft and 35 in. overall width, is fitted under the original bridge deck and doesn't in any

intrude into the cabin. The installation was carried out at Camper & Nicholsons' Gosport yard. It was thought at first that it was essential only to lead fresh air to the fan for cooling, but first trials showed that the stagnant air around the engine became progressively warmer until the after part of the ship was filled with hot, engine-smelling air. It was then discovered that it is far more important to fit an *easy path for the hot air to be extracted from the engine space* and to leave the fresh air to find its own way into the fan. Fully lagged air ducts were fitted, of the type normally used for the ventilation of ships' cabins, joined together just below deck and led to a simple cowl on the after deck.

A small wire mesh grating in the fore side of the engine steps is all the provision made for the entry of fresh air. The engine can be started easily by getting a continuous swing on the starting handle and then snapping in the compression valve, or by the self starter. With the casing and steps replaced the whole installation is quite unobtrusive and its control by throttle and reverse gear lever in the cockpit could scarcely be simpler.

We were unable to give the engine a prolonged trial, but we ran it at full speed, giving the ship some 6 knots, for 1¼ hours.

On a cruise from Portsmouth to the Dutch coast and back this summer, the engine's longest run, we were told, was 50 hours and it has been run just over 100 hour in all since being installed in Meg II.

From our own trial run on a warm September day the following

observations were made:

(1) Noise was no more than one would expect from a water-cooled Diesel of similar design, while vibration was less than that of a two cylinder Diesel of orthodox upright cylinders type.

(2) No hot air whatever found its way into the cabin or the bilges; it was all exhausted in a steady flow through the cowl in the after deck-a welcome effect for the hands in cold weather.

(3) At no time did the engine show signs of overheating. One could touch the cylinder covers with the bare hand and the temperature seemed to be roughly the same as that of a water-cooled jacket run at proper temperature.

(4) Instead of warm air smelling of engine- permeating the ship, it was noted that a complete system of ventilation operated; the air in fact drawn from the cabin resulting in excellent ventilation below.

The possibilities in this ventilation of the air below are fully realized. When fully battened down in bad weather at sea, the foul air could be extracted in a very short time by running the engine; fresh air would find its way in through deck ventilators or door crevices. In reverse, in very cold weather the warm air exhausting through the air ducts could, by means of a two-way duct, be led below again to clothes lockers or cabin for heating. This installation demonstrated in no uncertain term that far from overheating a boat the air-cooled engine ventilates as it runs and lends itself to air extraction or warm air circulation below decks as need arises.



THE MILK MARKETING BOARD

During the past few years we have had the privilege of supplying a large quantity of Model J motor cycle Combinations to the Milk Marketing Board. for the use of their Recorders. We recently had a visit from another group of Recorders, who will shortly be taking over their machines and they were given a course of driving and maintenance instruction by Mr. R. A. Wilson-Jones and Mr, J. J. Booker. They are here seen at the conclusion of their visit.

“Just the Job, Bill”



We are wondering whether in the near future we shall hear over our radio sets at 6-45 each evening, the well-known purr of a Model R.E. motor cycle, taking the place of the planes, fast cars, helicopters and whatnot in which Dick Barton and the members of his staff are wont to make their escapes,

Mr. Alex McCrindle, who plays the part of Jock, certainly showed a great deal of enthusiasm for the machine which appeared at the Earls Court Show and indeed carried his interest much farther by paying a visit to our London Showrooms to inspect one closer.

He is seen here discussing points with Mr. W.F. Moore, our London manager.



Here is a general view of the proceedings showing members of the management, with some of the recipients and their wives.

Enfield

Long Service Presentations

Our Chairman and Managing Director, Major F. W. Smith, C.B.E., presided at the annual presentations on Wednesday, 30th November, 1949, in the Canteen Hall, to employees who had completed 25 years' service and upwards.

The following received gold watches to mark the completion of 50 years' service with the Company:

Mr. S. Aston
Mr. A.W. Hodges
Mr. A.J. Hopcroft
Mr. E.F. Hollier

Framed illuminated addresses and National Savings Certificates were presented to the following for 25 years' service:

Mr. H.G. Apperley
Mr. C.E. Butts
Mr. A.E. Chambers
Mr. A.H. Coombes
Mr. J.L. Day
Mr. G.H. Heaton
Mr. A. Jones
Mr. A.W. Keyte
Mr. W.G. King
Mr. A.E. Lewis
Mr. E.H. Lewis
Mr. W.P. Lewis

Mr. D. Parsons
Mr. J.W. Rice
Mr. A. Russell
Mr. W. Shipman

Mr. G.H. Styler also qualified for a gold watch, but was unfortunately unable to attend owing to illness, and received his award privately at a later date. The recipients and their wives were entertained to tea provided by the Canteen Staff under Mrs. Wilcox.

Major Smith congratulated the employees on their achievement and said how pleased the Directors

were that they were able to invite their wives on such an occasion as this.

After the presentations had been made, Mr. E.F. Hollier thanked Major Smith on behalf of his colleagues and stated how happy had been his long association with the Company.

This is the fourth annual occasion on which presentations have been made and since the commencement of the scheme in 1946, 39 gold watches, and 250 addresses, together with Saving Certificates have been awarded.



Mr. E.F. Hollier, who received a gold watch, is here seen thanking the Directors on behalf of the recipients. On the left are Mr. and Mrs. H.T. Guise.



Mr. Sydney Jarvis, our Factory Representative for the Dominion of Canada, on his last trip completed his hundredth passage across the Atlantic. He is shown here aboard ship on his homeward route. At the time of writing, he is yet again on his way across. He tells the story of his notable voyage below.

One Hundred Trans-Atlantic Crossings

I commenced my last journey to Canada by calling at Newfoundland, until last year Britain's oldest colony, and today Canada's youngest Province.

Here to visit, for the first time, our Agents, Nightingale Motors Ltd., who gave me a very hearty welcome and did everything with great success to make my visit a most happy one. Mr. Nightingale hopes that when I next visit them I can spare a couple of days to catch some of the Salmon for which Newfoundland is noted.

On the sea once more bound for Halifax, Nova Scotia, almost a full two days' trip, and then rail to Minto, New Brunswick, to call on our Agent Mr. Di Carlo, who is putting quite a

number of Enfields on the roads of that Province.

To Quebec, with the world famed Chateau Frontenac—a Canadian Pacific hotel—high up overlooking the St. Lawrence river and the social centre of this charming old world city, meeting here Enfield's newest Agent, W.H. Arthur who with his wife and two children, has recently come here from the Eastern Counties of England. All good wishes to them in their new home. From Quebec a night's journey takes me to Montreal where, as in Quebec, the French language predominates. Montreal is a delightful city, beautifully situated on the St. Lawrence and visited by huge numbers of tourists, especially from

the United States-getting hotel accommodation between May and September is quite a problem. Our old friends, Bentley & Co., do a very good job here and are always pleased to see me. Motorcycling, owing to severe winter conditions, has an eight months limit, but some of the French Canadians really make the most of these months.

The next centre to visit is Toronto, situated on Lake Ontario, one of the five great lakes, and a city of many storied, new buildings, and having the largest hotel in the British Empire. This hotel, The Royal York, is the business centre of a very busy city. Enfield Agent in this Province is Mr. Percy McBride and our oldest distributor, his name is known in connection with motorcycles from the Atlantic to the Pacific.

One must travel across Canada to realise the size of the country. Leaving Toronto for Saskatchewan to visit Nicholson Brothers of Saskatoon, takes two full days in the train, travelling for quite a few hours on the North Shore of the greatest of the five lakes-Superior. Then one comes to the wheat Provinces of Manitoba and Saskatchewan. In Saskatoon, a thriving city of wide streets and very up-to-date new buildings, Nicholsons have a most attractive showroom and store. Books on Motor Cycling which they have published have a large sale both in Canada and the United States. Leaving this city, another night in the train takes me to Edmonton, Alberta, a city very much in the news today owing to the tremendous

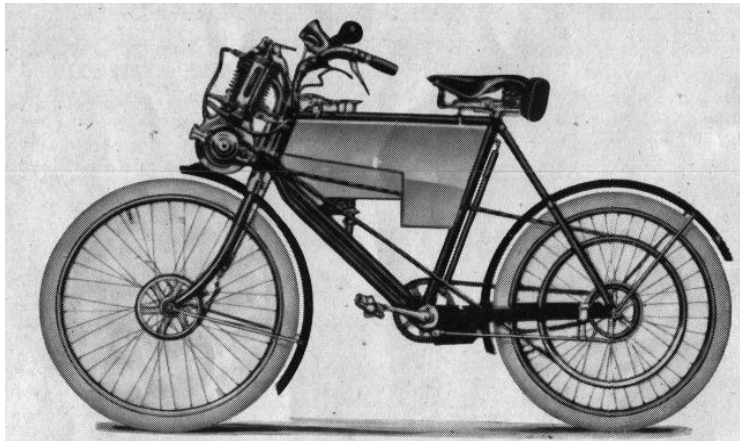
oil fields that have been opened up and adding another big asset to the many Canada already holds. Motorcycling here is much on the increase and Mr. Green, of the Alberta Cycle & Motor Co., is taking full advantage of this upward demand. He has started a club here and I have met several of the members who are most enthusiastic.

The visitor to Canada gets his biggest thrill after leaving Edmonton for Vancouver, a journey of 600 miles and travelling through the Rocky Mountains. Although I have done this trip many times, there is always something of interest to see; one often sees bears and occasionally a moose, a wonderful trip winding through the mountain usually snow covered, seeing rivers and lakes that have probably been seldom fished.

Vancouver is a lovely city on the shores of the Pacific having a climate like ours. All kinds of sport are available, fishing and shooting being especially popular. Our Agent here, Mr. W. Ablitt, of Motor Cycle Sales, has a big advantage over those farther east, as motorcycling is possible twelve months in the year. Mr. Ablitt is putting quite a number of Enfields about the Province, and is keen and most enthusiastic.

After Vancouver, I turn back and start for Montreal 3,000 miles away, four nights and three day in the train, then a boat down the St. Lawrence for England and particularly Redditch.

Technical Topics
By R.A. Wilson-Jones
A.C.G.I., B.sc., M.I.Mech.E



1901 ROYAL ENFIELD

172 c.c. engine with automatic inlet valve, battery ignition, surface carburettor. Direct belt drive. Band brakes, rear operated by back pedalling. The lower "down tube" is the exhaust pipe. The "water gauge" on the side of the cylinder is a hand oil pump.

1900 -1950

The pundits seem uncertain whether this year is the first of the second half of the century or the last of the first half. In either case it is not a bad time to pause and look back to see what has been achieved in motorcycle design during the past fifty years. Not that I can claim personal acquaintance with the products of the first ten years of the twentieth century-my grey hairs are due to worry rather than extreme old age! Machines made in nineteen or something and even earlier are however, to be seen by all who care to attend a Pioneer Run from London to Brighton and a study of them lined up in chronological order at the end of the run can be extremely interesting.

What are the fundamental differences between these old veteran and the gleaming thoroughbreds now coming off the assembly line to be shipped to the ends of the earth? In my estimation the really basic

improvements are surprisingly few, and perhaps my list even at that might include some items which would not occur to everyone, and might omit other points which some people would consider essential. For what it is worth here is my idea of the really basic steps in the development of the modern motorcycle.

(1) The Jet Carburettor. This originated very early in the century and was continuously improved until the early twenties when AMAC and B.&B. both produced the easily tuned, nearly automatic instrument known today as the Amal needle type. The replacement of surface and wick type carburettors by the jet type has had far-reaching effects because it has enabled less easily vaporised fuels to be used efficiently. I can say without hesitation that the motor industry could never have reached its present importance if it had been dependant on the highly volatile fuel

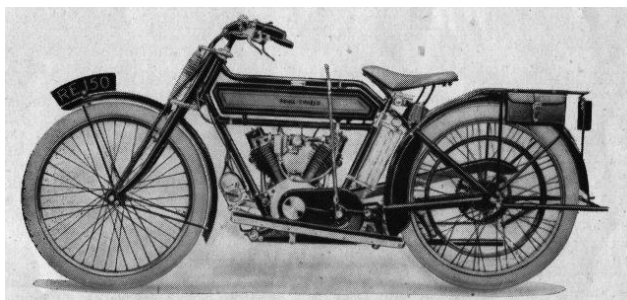
required by wick and surface carburettors.

(2) The Mechanically Operated Inlet Valve. This I consider to have been the first step forward in the search for increased power from engines of a moderate size. I am indebted to IXION of "The Motor Cycle" for the date which he gives as 1904. Before that all engines had automatic inlet valves. For the benefit of those who have never heard of them, I should perhaps explain that an automatic inlet valve is just an ordinary poppet valve with a very light spring and *no cam or tappet*. It is just sucked open by the descending piston and pushed shut by the gases as the piston comes up on the compression stroke. Delightfully simple, isn't it? When we come to work it out, however, we find that we must choose between a large valve with a weak spring which gives good "breathing" but will not operate at high speeds, and a small valve with a stiff spring which will work at high speeds but gives very restricted breathing. With a mechanically operated valve we can have a large valve with a good lift and a stiff spring to ensure ability to operate at high speeds. This was therefore the first step towards the high powered, high speed engines with which we are familiar to-day.

(3). High Tension Ignition. If the mechanical inlet valve was the first step towards increased power, the high tension magneto was the first stage towards reliability. Prior to its introduction (dated

by IXION as about 1906) engines were fired either by a red hot platinum tube, a sparking plug operated by a coil or a low tension magneto and sparking plug. The latter was, in effect, a contact breaker inside the cylinder, operated of course from outside. The mechanical difficulties were tremendous, and as the alternative coil type depended on accumulators, more frail than the types used today in portable wireless sets, with no means of charging except the service station. It will be readily appreciated that reliability took on a new meaning with the introduction of the h.t. magneto. The platinum tube was, I believe, even less reliable than the early forms of electric ignition as it was always liable to get too hot, causing pre-ignition or too cold, causing no ignition.

(4). The Cush Drive. If this seems an unimportant detail to include in my list, my reason is that the cush drive made chain drive reliable and so paved the way to the use of the countershaft gearbox. Chain drive had existed from the earliest days but without an adequate cush drive. It was extremely unreliable, so that breakages of chain and even frames were common. The alternative to the chain was, of course belt drive which was just as liable to break and was almost certain to slip in wet weather. One of the first successful cush drives was the Enfield invented by the late Mr. R. W. Smith in 1910 or 1911, when it was first



1913-14 3 h.p. TWIN A machine with many features ahead of its time—cradle frame 427 c.c. twin engine with enclosed overhead inlet valves, all chain drive with Enfield 2-speed; dry sump lubrication.

standardised, with all chain drive, on Royal Enfield machines. It remains unchanged today.

(5) The Countershaft Gearbox. As I have said, I consider the development of a reliable chain drive, due to the cush drive, made the countershaft gearbox possible. True the earliest countershaft boxes were used with a final belt drive, but the pull on the belt in bottom gear was too much even with the engines of the period (which was that of World War I) and, after the countershaft box became accepted, all chain drive soon ousted the belt completely. Prior to the introduction of the countershaft box, variable speed gears were of three types: (a) infinitely variable belt drives such as the Rudge Multi or Zenith Gradua; (b) rear hub gears and (c) various two-speed countershaft systems of which the Enfield is one of the best remembered. Of these, the first type was limited in range and subject to all the weaknesses of belt drive. Hub gears were never reliable on a motorcycle because of their low speed of rotation and consequent high stresses on the pinions. The Enfield type of two-speed gear was very good but was hardly feasible when more than two ratios were needed.

Three and four-speed countershaft boxes have had a profound influence on design, enabling small high speed engines to produce sufficient torque at the rear wheel to rob mere gradient of its former terrors. Strangely enough this firm was one of the last to adopt the counter shaft gearbox, this not being done until the 1925 season. The reason for this is the fact that prior to that date we had concentrated on the big twin and the 225 c.c. two-stroke, both types for which the two-speed Enfield gear was very suitable.

Associated with the countershaft gearbox, but actually ante-dating it by several years are the handlebar operated clutch and the kick starter. These are important because between them they eliminated the run and jump start and so made motorcycling possible for both sexes and all ages.

(6) The Development of Reliable Brakes. Internal expanding brakes came into general use early in the 1920's. They enabled motorcycles to be driven with safety at the high speeds of which they had by then become capable. Previously the usual rear brake was a wedge-shaped block operating in a belt rim, real or dummy as the case might be. This was reasonably effective but was, of course, affected by the weather. Front brakes were either the dummy belt rim type or pull up cycle type stirrups. They were almost universally useless.

(7) The Development of Reliable Lubrication systems. Mechanical lubrication of engines came into general use in the early 1920's followed by dry sump in the early 30's. Previously the rider had to remember to operate a hand pump every so often.

Under this heading one could include also the enclosure and lubrication of the valve gear and primary drives which has almost enabled us to forget these items instead of having to adjust them every few hundred miles as used to be the case.

(8) Electric Lighting. Electric lighting was not standardised on British motor cycles until the early 30's. Its use has made long night ride a reasonable proposition, not to speak of being able to ride home from work without having to "wait for the smell" which used to be so long arriving on the second or third night after refilling the acetylene generator.

(9) Improved suspension. The suspension system has improved out of all knowledge, in fact the very early machines had none at all, if we except their tiny pneumatic tyre. Unlike the other items I have listed, however, the suspension system has developed spasmodically throughout the half century, and it has not been a case of an improvement immediately, or even gradually displacing earlier designs. The first stage was a kind of rocking tip on the front fork ends. Then followed all sorts of spring forks, including a telescopic version

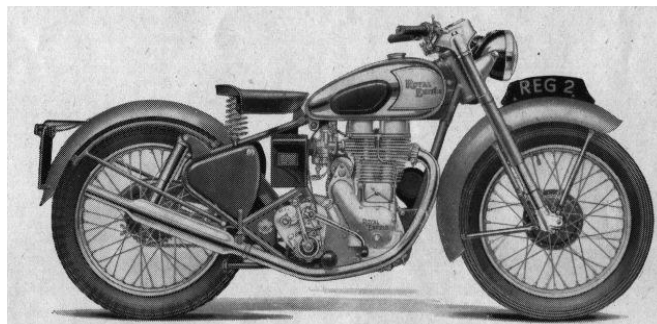
on the Scott. I am not sure when rear springing first made its appearance—quite early in the century I suspect. In the early 20's there was a whole crop of rear suspension systems such as the ABC, Beardmore, Precision and Coulson B, all of which had vanished by the early 30's. BMW re-introduced the telescopic front fork, with the addition of hydraulic damping, shortly before the last war, and now it has been taken up by nearly every manufacturer throughout the world. The improvement in front suspension has drawn attention to the rear, and I think that before long rear springing will be as common as, say the counter shaft gearbox. That completes my list of real fundamental improvements in the last fifty years. Only nine. But someone is sure to ask: what about overhead valves, multi-cylinders, higher compression ratios, larger carburettors, larger tyres, improved materials and methods of construction, foot gear change, saddle tanks, spring seat saddles, chromium plating, alloy heads, and a dozen other features of modern motorcycles.

Well some of these I consider are only further steps along a path which was originated by one of the improvements which I have mentioned. Alloy heads, overhead valves and all the things making

for increased power would be of little value without the fundamental first step which was the mechanically-operated inlet valve. Overhead valves, too, are made possible on utility models by the introduction of an adequate lubrication system and enclosure of the valve gear.

Others of the improvements not included in my list are, in my opinion, only improvements in manufacturing detail, and are not fundamental. Larger tyres, improved materials and chromium plating I would class under this heading. Other features of modern motorcycles, such as multi-cylinders, are not new at all, but have been with us from the earliest days, while yet others in the list I do not consider to be improvements at all!

It is worth noting that every one of my nine fundamental improvements has added some degree of complication and, in most cases, weight to the machine. In every case, too, the improved design must originally have cost more than the one it supplanted. Whilst the virtues of simplicity, lightness and low first cost are indisputable there is food for thought as to what would have happened to the motorcycle industry if designer had turned aside from my nine improvements because they added to the number of parts, weight or cost of their machines.



1950 "350 BULLET"

A typical up-to-date. High efficiency O.H.V. engine, with fully enclosed valve gear, light alloy head, dry sump lubrication, telescopic fork, swinging arm rear suspension, powerful brakes, etc., etc.

Redditch Carnival, 1950



The Royal Enfield Tableau which appeared in the 1949 Redditch Carnival took as its centre piece the 500 c.c. Twin.



In fact, the whole accent was upon Twins and Four Sets of attractive youngsters decorated the vehicle. They were Linton and Drinda Yorke, Peter and David Clayton, Robert and Tommy Prewitt and Barbara and Gillian Hales.

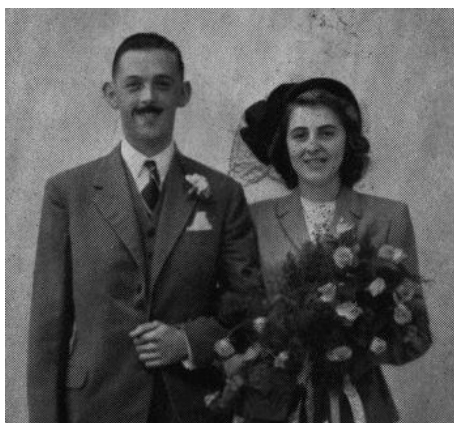


Weddings

Miss Betty Bishop, who has been a member of the G.P. Dept. for the past five years, was married on Saturday, Feb. 11th. to Mr. Denis Reynolds at St. Luke's Church. A colleague and friend, Miss Winifred Higgins, was her bridesmaid and the Enfield Organisation was further represented in that the Organist was Mr. C. G. Lee of the Wages Dept.

A handsome present of a canteen of cutlery was received from colleagues at the Works. and the couple were the recipients of many more gifts.

After the ceremony, Mr. and Mrs. Reynolds left by train for their honeymoon which was spent at Windsor.



At St. George's Church, Redditch, Miss Audrey Yoxall, of the Progress Office, was recently married to Mr. Graham Peel. Various handsome presents were received from fellow-employees. After the ceremony Mr. And Mrs. Peel left to spend a honeymoon in Llandudno.

THE 1949 CHILDREN'S CHRISTMAS PARTY



Once again the Canteen Hall was filled to capacity, when, on Saturday, December 17th, 1949, over 300 children enjoyed an afternoon of fun and frolic organized by the Entertainments Committee.

The proceedings were opened by Mrs. F. W. Smith and this very pleasant little ceremony was followed by a first-rate Punch and Judy Show.

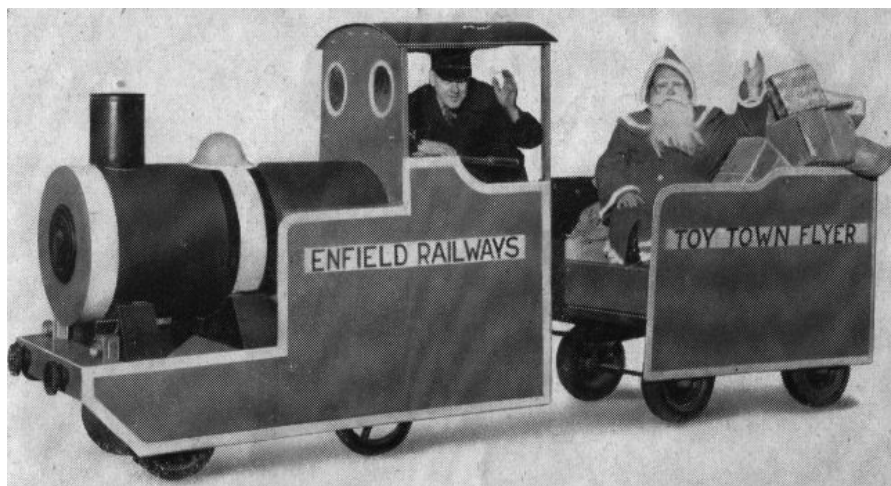
Tea, provided by the Canteen Staff under the direction of Mrs. Wilcox, the manageress, was, as usual, a very popular event and in both quality and arrangement compared very favourably with that of previous years.

Master Michael Roche, playing an accordion almost as large as himself, next entertained the guests and afterward came a conjuring display by "Fabian."

Ices were distributed to enthusiastic cheering.

Carols were then sung, while awaiting the event of the day, the entry of Father Christmas. This role was, as usual, played by Mr. Frank Lewis and he made his appearance this time in a beautifully-made train, depicted below, a product of Mr. Eddie Wright and Mr. Vic Bott. The uniformed driver was Mr. Howard Hughes.

Presents were distributed and, on leaving, each small guest was given a balloon.





ROYAL ENFIELD

BICYCLES
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INDUSTRIAL ENGINES

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