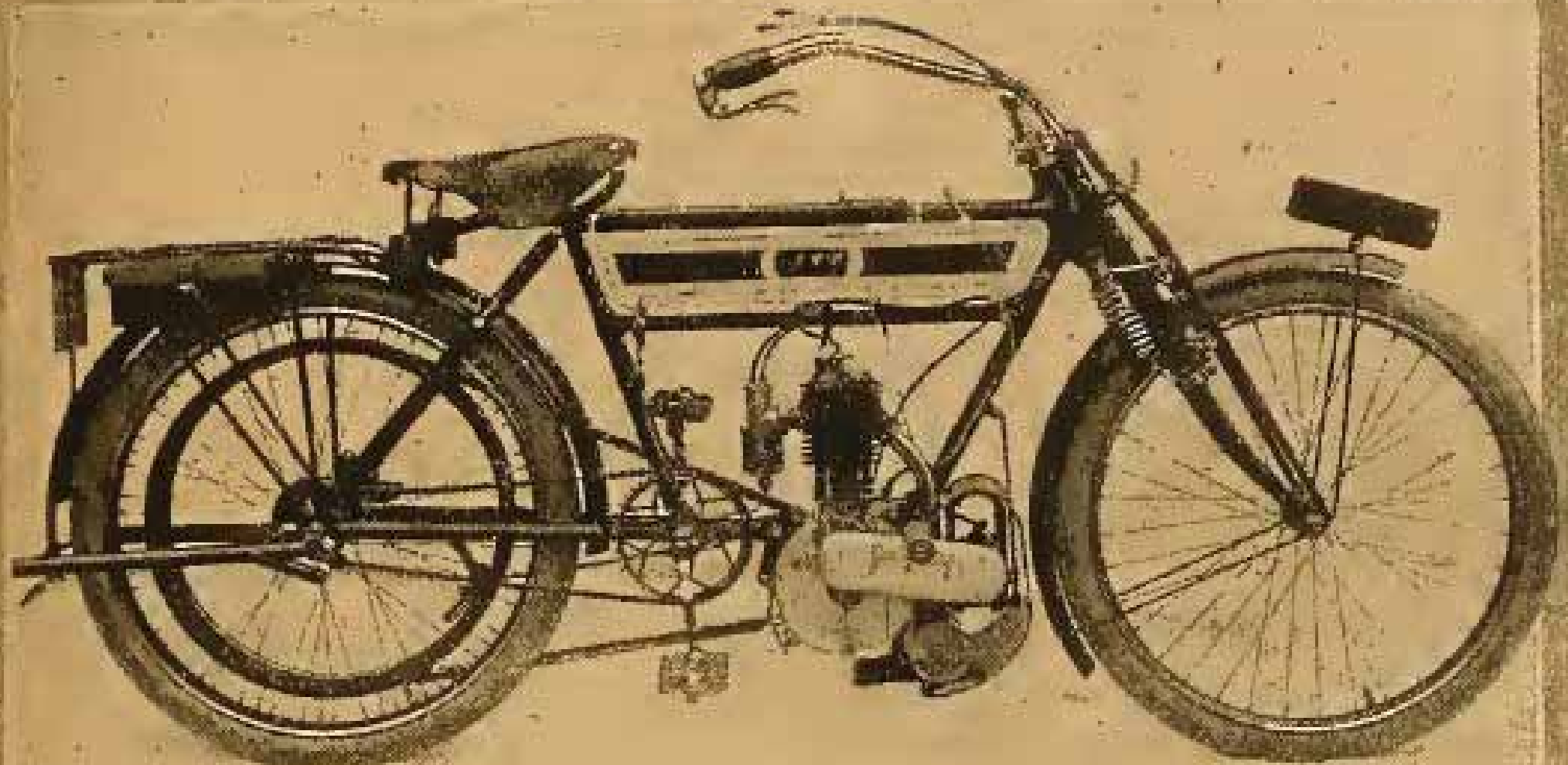


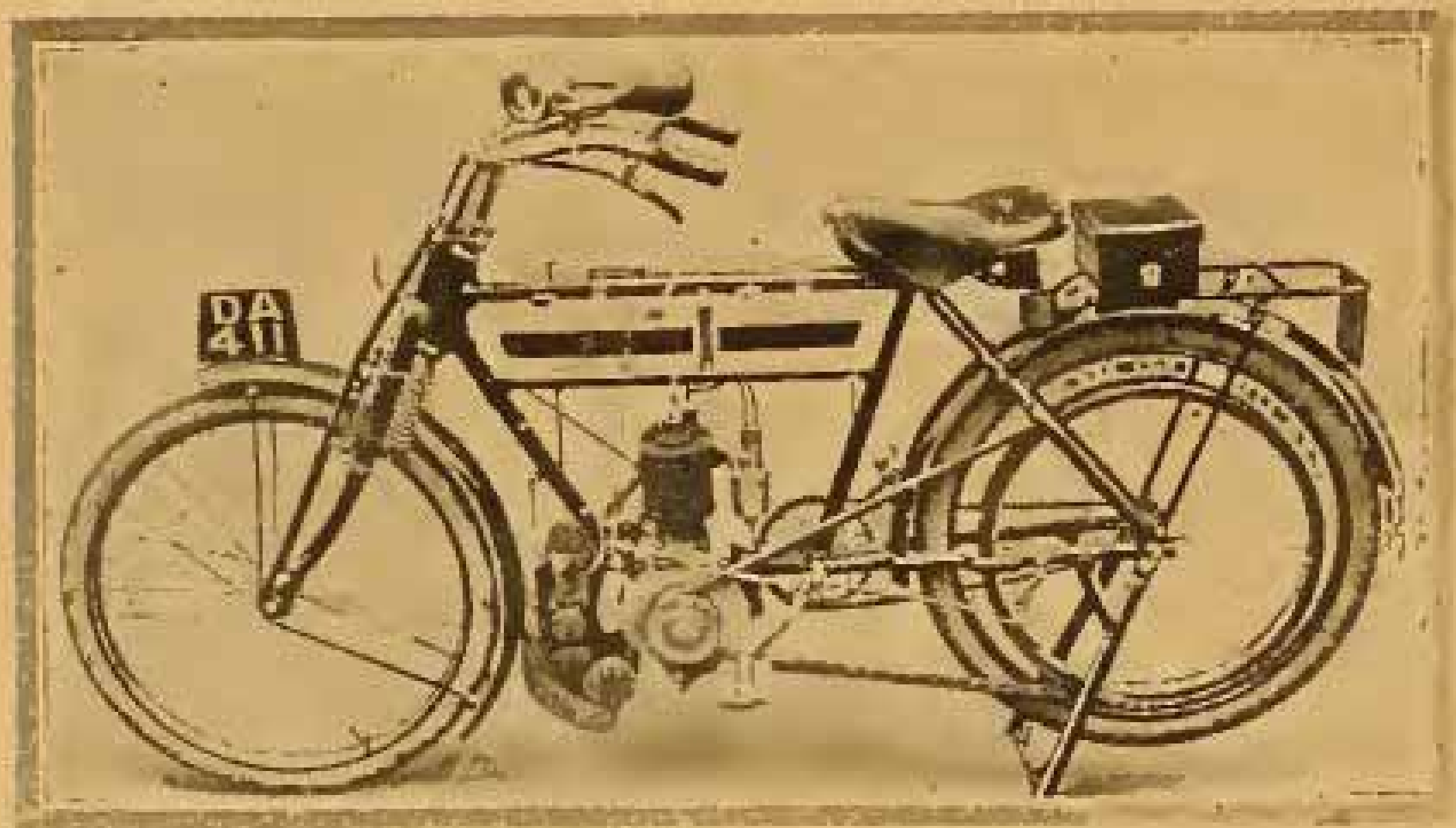
NOVEMBER 24th, 1910.

MOTOR CYCLE

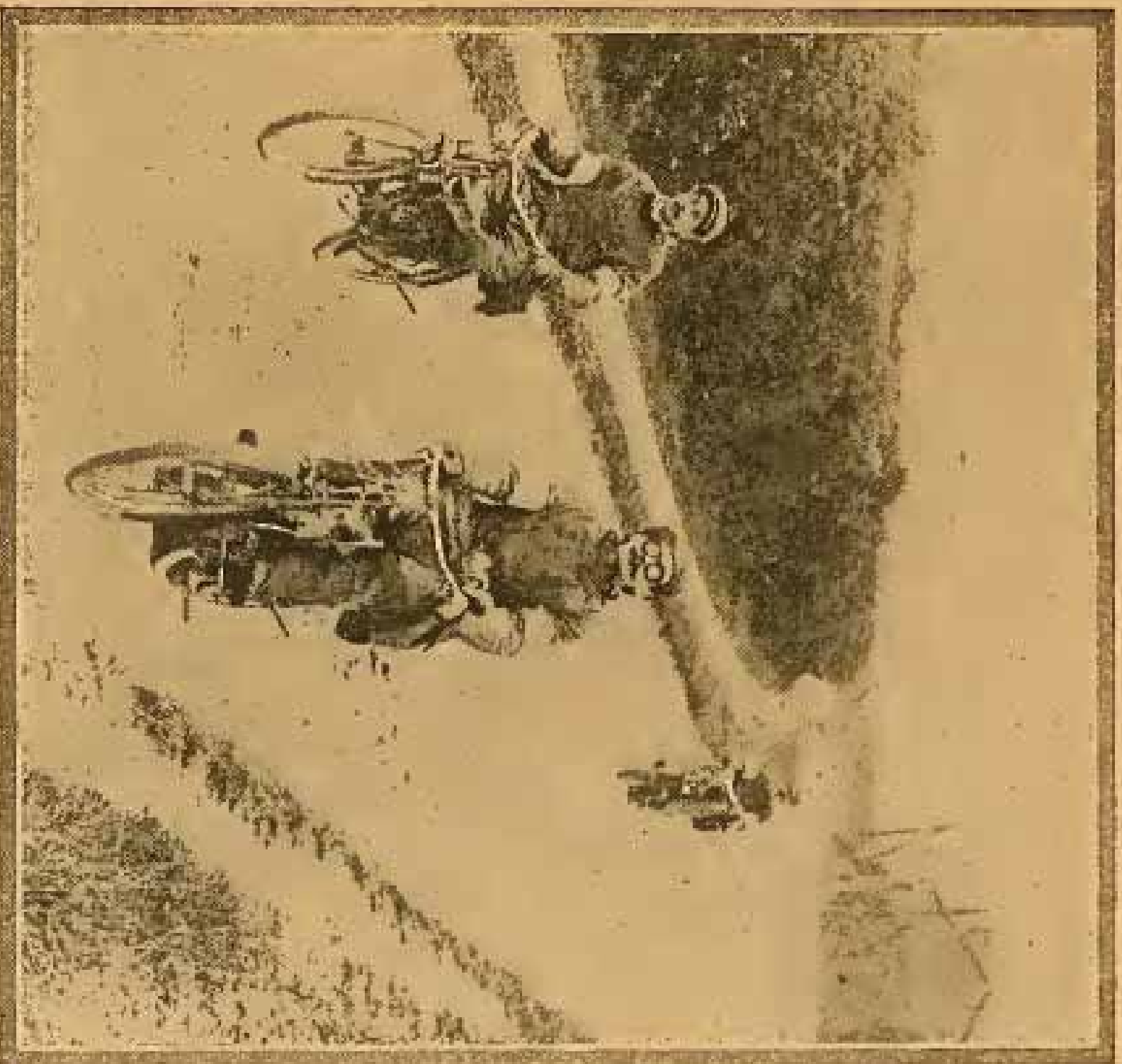
Olympia Show.—



2½ h.p. single cylinder A.J.S.—a serviceable machine, bordering on the dividing line of the lightweight and medium weight.



The A. J. S., a new model which was ridden in the Quarterly Trial. It is made by A. J. Stevens and Co., Wolverhampton.



JULY QUARTERLY TRIALS. F. Smith (Singer Moto-Velo) left, and A. J. Stevens (2 $\frac{1}{2}$ h.p. A.J.S.) humming merrily along.

A. J. S.

2 $\frac{3}{4}$ h.p.

Motor Cycles

PRICED CATALOGUE

OF

SPARE PARTS

2 $\frac{3}{4}$ h.p. 1921-1923 MODELS.

A. J. STEVENS & Co. (1914) Ltd.,

Head Offices: GRAISELEY HOUSE. Works: GRAISELEY HILL.

WOLVERHAMPTON,
ENGLAND.

TELEPHONE:
1166 (3 lines.)

TELEGRAMS:
"Hopt, Wolverhampton"

Code:
A.R.C. 5th Edn.

Price 3d. each.

IT IS THE ROUGH WEATHER

that finds out the weak
spots in a Motor Cycle.
Look out for the judges'
report on the

A. J. S.

in the October Quarterly
Trials.

A. J. STEVENS & CO., LTD.,
RETREAT ST., WOLVERHAMPTON.

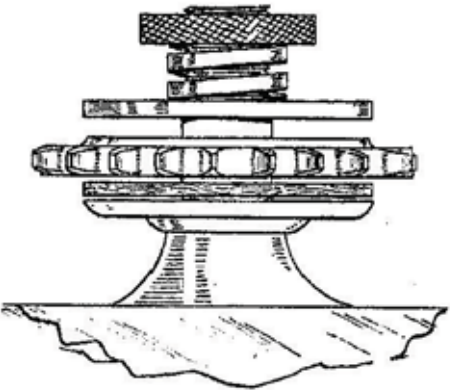
London Agents:

H. TAYLOR & CO., 21a, Store St., Tottenham
Court Road.

Advance Details of 1911 Models.

safeguard, so that if the machine be left standing there is no chance of leakage.

Two pannier toolbags with snap fastenings are supplied, one of which contains a splendid equipment of tools of the very best quality. It is one of the most com-



Shipping sprocket on engine-shaft of the A.J.S. The inner plate is of fibre.

plete outfits we have seen, and includes even a sparking plug gauge. Behind the saddle tube a triangular metal case for spacers is fitted, with an open slot, and wing nut fastening, while the former has a lip turned on it which prevents the lid from coming unfastened even if the wing nut be loose. It will be seen from the above that the exhibit of this well-known lightweight firm will be well worthy of a visit.

1911 Pattern A.J.S. Machines.

The first of the 1911 pattern A.J.S. two-speed machines was completed last week, and we are enabled to illustrate it here with. Although only two different powered machines are to be made, four types will be obtainable, i.e., the 2½ h.p. single-cylinder machine will be sold as a single-gear belt-driven machine, or with two-speed gear and chain drive. Likewise the 3½ h.p. twin-cylinder machine can be ordered with or without a two-speed gear. As regards the single-cylinder machine, this is the same pattern which has done so well in reliability trials this year, and some personal experiences with it appeared in our issue of the 13th ult. The engine, which measures 70×76 mm., has a mechanically operated inlet valve, and is very efficient for its size. The machine throughout is modelled on the lines of 3½ h.p. single-cylinders, and presents a neat and symmetrical appearance. Dealing now with the twin, this is a new model intended for those who prefer the more even pull afforded by a V-type engine to the more common 3½ h.p. single-cylinder. The cylinders, which are set at an angle of 25° from the vertical, measure 2½ in. by 2½ in., and have automatic inlet valves. The timing gear is of the simplest kind, and the wheels are enclosed in a separate casing on the side of the crank case, and holes are formed in the partition to admit the necessary supply of oil. The method of raising the exhaust valves by means of the handle-bar lever is quite novel. The lifter is over the timing gear casing, and at the other end two points are formed, so that when the lifter is turned it operates direct on the rockers

and raises the valves. The arrangement will be better understood by a close study of the sketch. Other features include an inch and a half pump, B. and B. carburetter, Best and Lloyd petrol gauge and strainer, and Druid spring forks. The two-speed 3½ h.p. twin is primarily designed for side-car work, a purpose for which it appears to be eminently suitable. The gear is of the sliding dog clutch type, and occupies the space under the bottom bracket. On the extremity of the main driving shaft, of the gear the friction clutch and two chain wheels of unequal size are mounted. The larger chain wheel receives the drive from the engine, and it is free to revolve on the shaft. Around its centre cork inserts are cemented, the cork projecting ⅜ in. on both sides. On either side of this chain wheel there are steel plates, the inner one being on a taper and keyed solid with the gearshaft; the outer one is on a square. Thus it will be gathered that when the two outer plates are forced together by the action of a spring, the centre chain wheel is sandwiched in between, the cork inserts permitting a gradual engagement when starting the machine from rest. Further to reduce the harsh pull of the chain drive, a slipping clutch on a smaller scale, but on the same principle, is

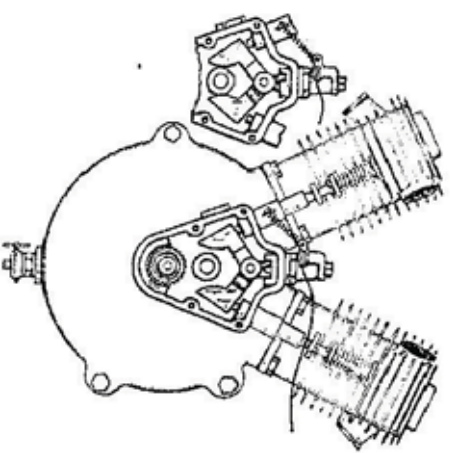


Cork inserts in the large chain wheel of the two-speed-model A.J.S. The pressure of the side plates transmits the drive.

arranged on the engine-shaft. In this case the inner ring is of fibre. The gear is operated by a conveniently placed lever on the tank. On the two-speed models a dummy belt rim is fitted to the right-hand side of the driving wheel to provide for a powerful rear brake. The pedal for operating this is wisely mounted independently of the footrest.

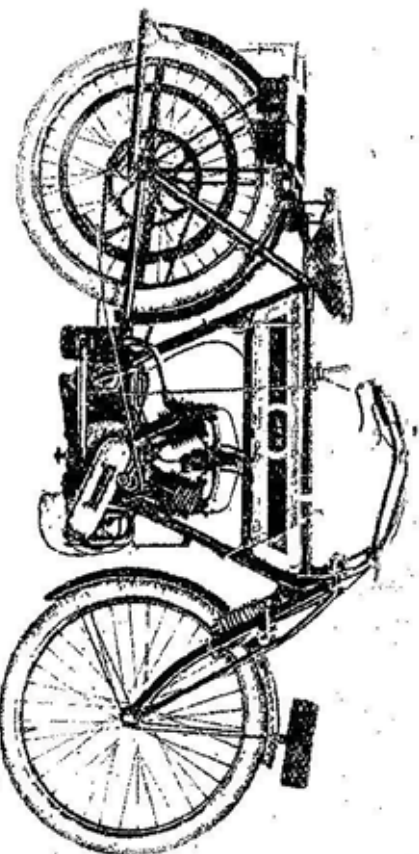
New Hudson Motor Cycles.

We feel convinced that, modelled as it is on standard tourist lines, the New Hudson 2½ h.p. three-speed Lightweight de Luxe will make a strong appeal to that



New exhaust valve filter mechanism of the A.J.S.

numerous class of riders who want a handy machine capable of climbing anything and pegging steadily away in all conditions of road and weather. The design of the machine is more or less standard, as the accompanying photograph shows, the 2½ h.p. J.A.P. engine being carried at the bottom bracket of a robust frame, which with its girder Druid spring fork should make no bones about carrying the most portly rider. The engine drives, through a gin, rubber belt, an Armstrong Triplex three-speed gear in the back hub. The latter has been so recently described and illustrated in *The Motor Cycle* as to call for no special attention now, except to say that the normal gear is 7 to 1, the indirect high gear 5 to 1, and the low gear 10 to 1. These gears are thrown in and out by a small ratchet lever attached to the petrol tank slightly forward of the saddle. The hub embodies also a plate clutch running in oil, and this is actuated by a self-locking rocking pedal mounted on the right footrest. At the left-hand side is a brake pedal which applies a belt rim brake to a second belt rim permanently spoked to the rear wheel on the off side. So as to allow the standard gears to be altered in value between small limits, a neat adjustable pulley of New Hudson design is



The new two-speed twin-cylinder A.J.S. It is rated at 3½ h.p. and intended for sidecar work.

JUDGES ON 6 DAYS' TRIAL

"The Judges are of opinion that the spread of motor cycling depends on silence, comfort, ease of starting, and ability to climb hills under all conditions"; vide report.

The ROC and only the ROC supplies these wants.

When you see a rider, or a rider and passenger, start on a gradient from rest and glide away without concern, you wonder there are left any who are content to go on using the old way.

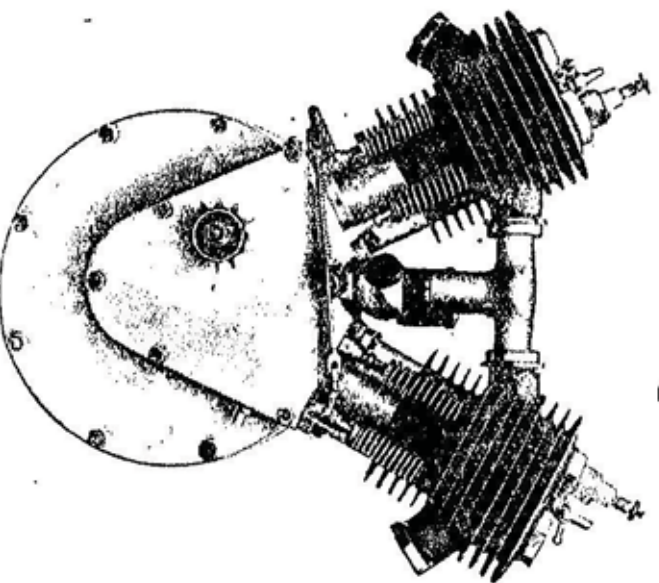
You know that for starting, for stopping, for climbing, for traffic, the ROC live axle way is the best way of all. You know it is at least the most popular, and the other firms now using it 'by license is proof of its worth.

But you may not know how easily this invention can be added to YOUR machine. The ROC gear box is now improved by its mounting on ball bearings, giving remarkable smoothness in running and long life. The complete conversion occupies but three or four days. Deliveries of sets for well known machines from stock. Send your machine **NOW** and get the benefit for autumn and winter use. The inclusive charge is twelve guineas. It doubles your pleasure.

Get particulars also of the famous ROC Military models. 4 h.p. single and 5/6 h.p. twin.

A. W. WALL, LTD., Roc Motor Cycle Works, Aston Road, and Dartmouth Street, **BIRMINGHAM.**

Stevens 5-6 h.p. Twin.

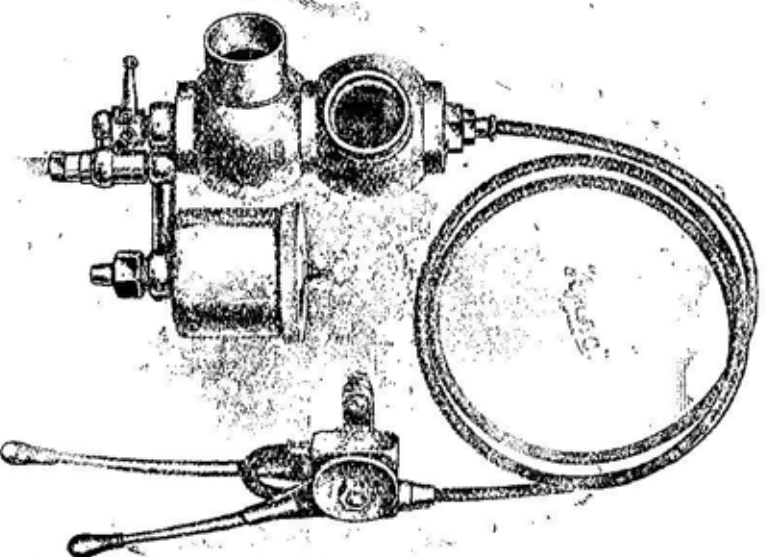


M.O.V. Ball Bearings. 76 x 82.

CYLINDERS INTERCHANGEABLE.
PERFECT LUBRICATING SYSTEM.

Stevens Motor Manufacturing Co., Ltd.,
Pelham Street, Wolverhampton.

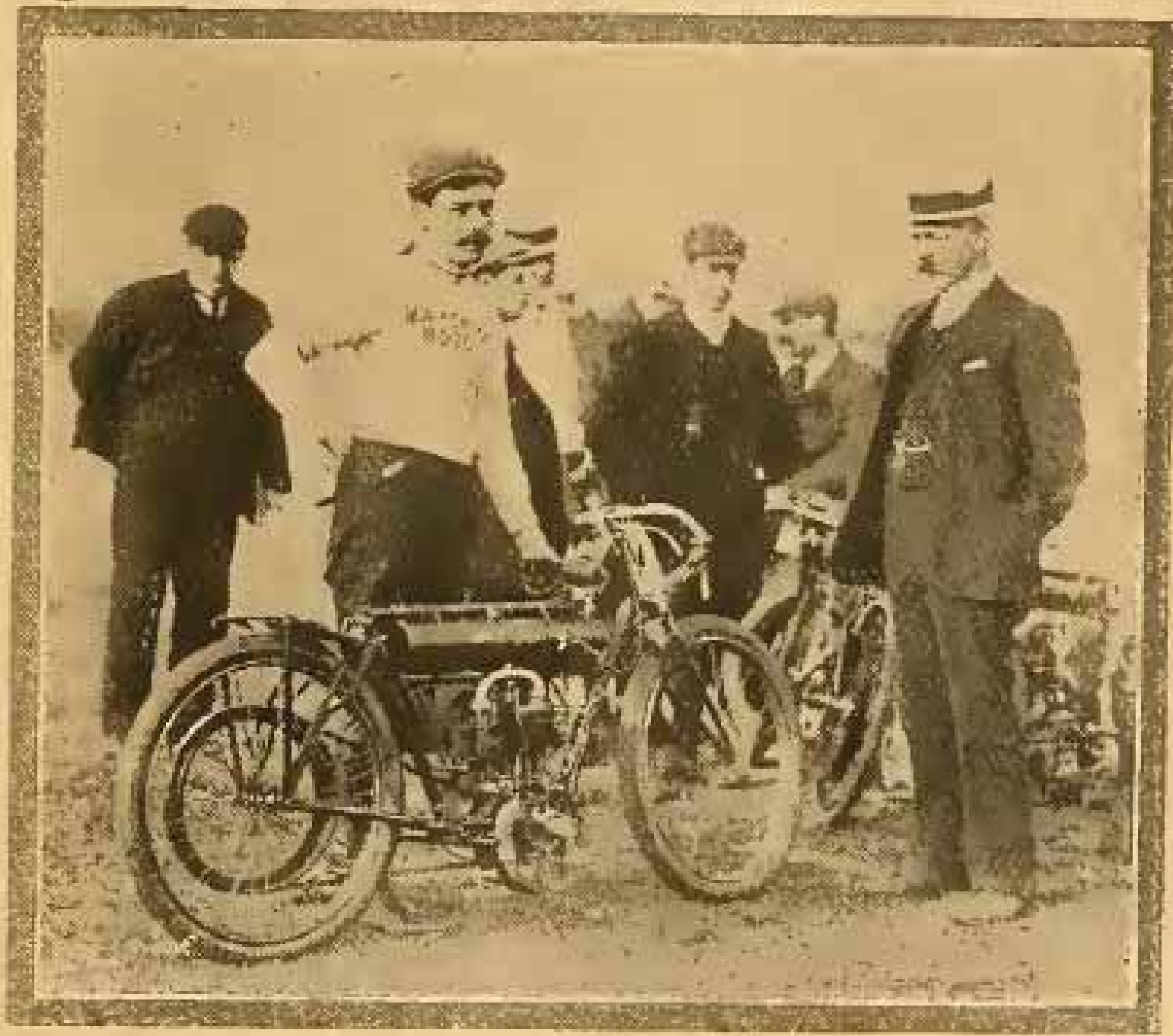
1910 NEW AMAC.



Powerful. Flexible. Economical. Easy to Start. Adjustable nozzle removed and replaced in five seconds. One cable, two levers, handle-bar controlled, Bowden Licence.

AMAC Motor Accessories Co., Ltd.,
Taiford Street, BIRMINGHAM.

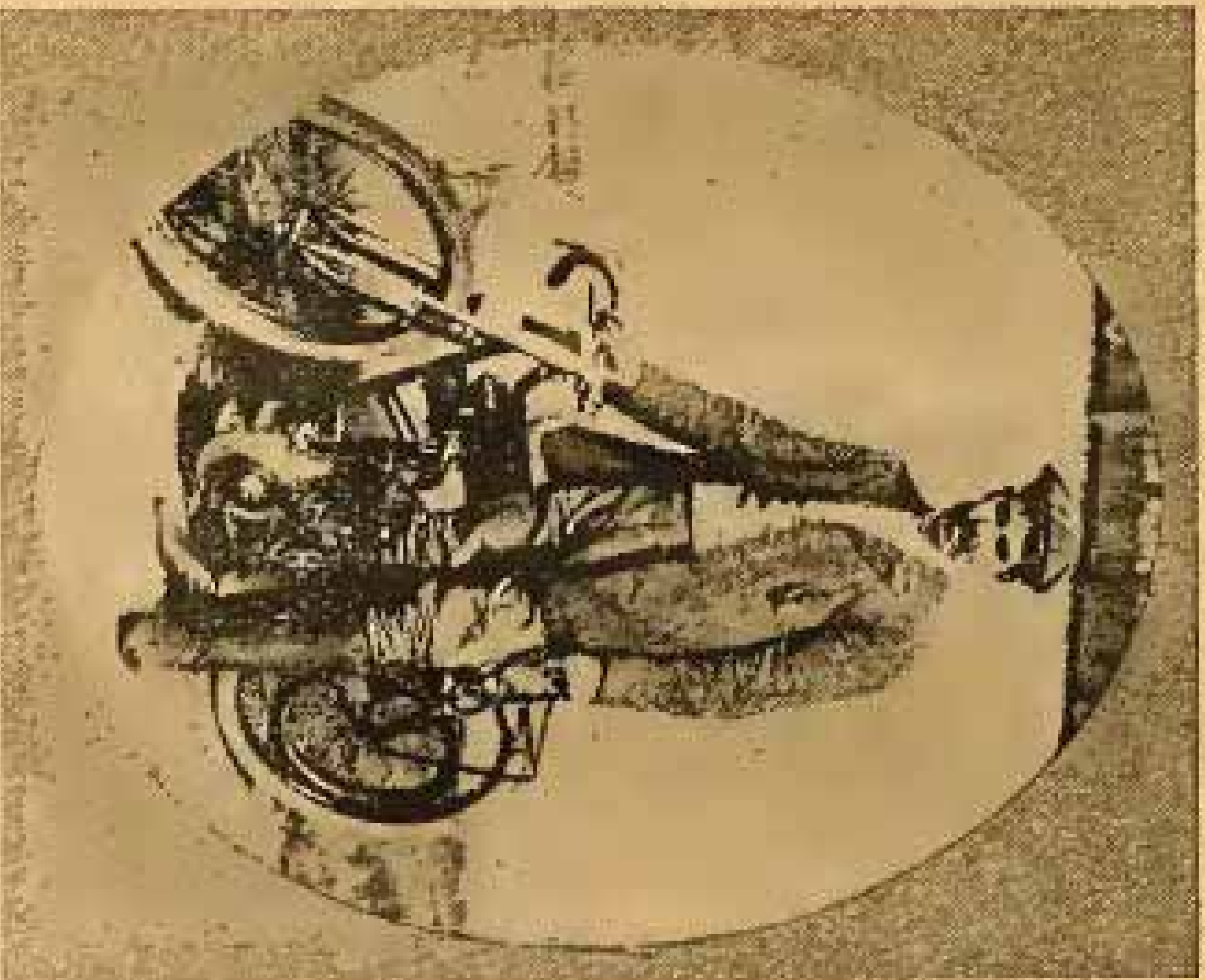
In answering these advertisements it is desirable to mention "The Motor Cycle."



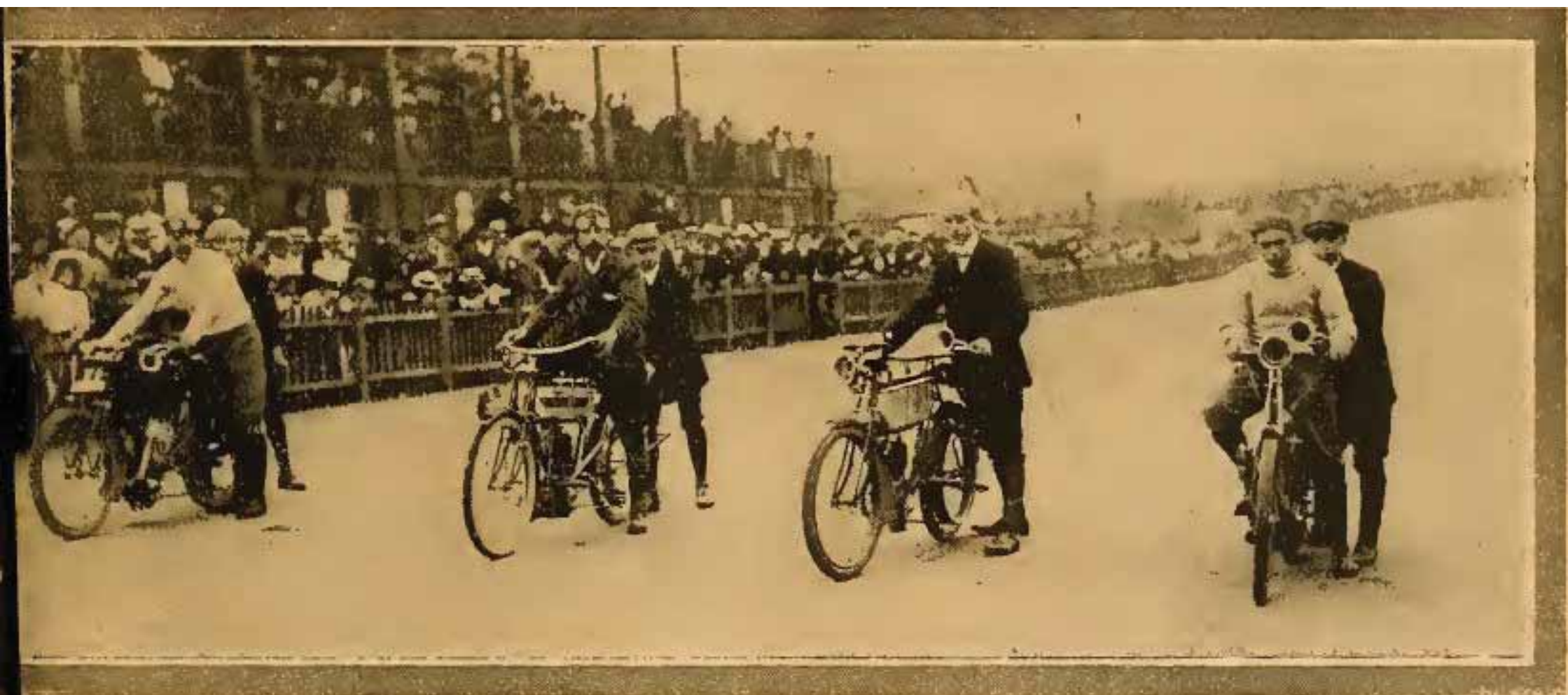
H. V. Colver, who covered 51 miles 146 yards on his 2½ h.p. Matchless-Giraudan
in the hour race for *The Motor Cycle Challenge Cup*.



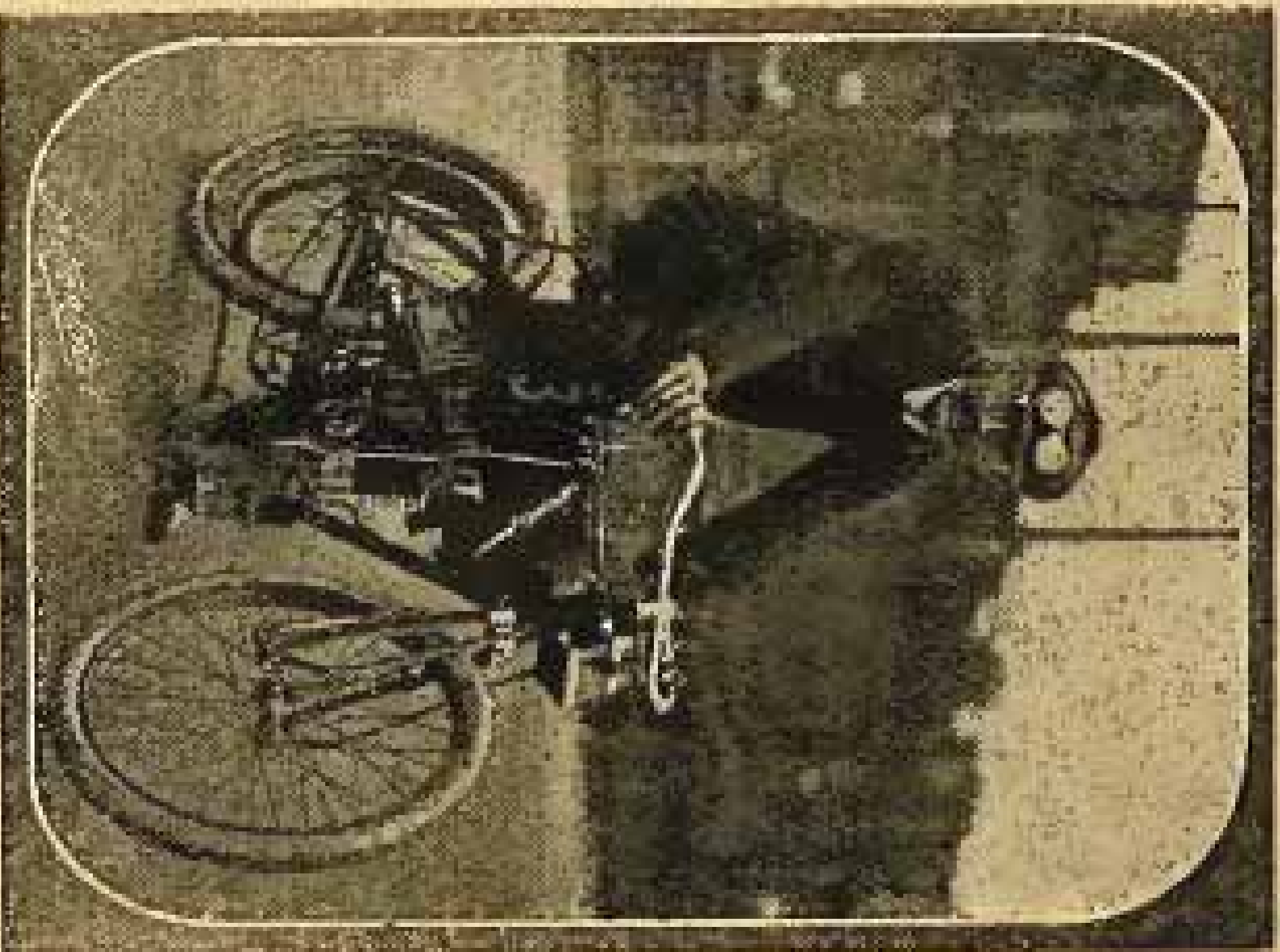
Off! The four competitors in the special Tourist Trophy match at the A.C.C. sixth annual race meeting. Reading from left to right the riders are H. Collier (Matchless), C. R. Collier (Matchless), F. Hulbert (Triumph), and J. Marshall (Triumph). Unfortunately this exciting race was marred by a collision between H. Collier and F. Hulbert when travelling at over fifty miles an hour.



C. R. Collier and the 21 h.p. path racing machine on which he covered a mile in 1 min. 2 secs., at the A.C.C. meeting, beating record by 1 sec.



Part of the three miles handicap for tourist motor bicycles at the Essex Beagles August Bank Holiday Meeting. C. R. Collier (on the left) proved the victor.



H. A. Collier, a Brooklands competitor, on the 81 h.p. Matchless used by Harry Martin in creating new records last week.

1911 Matchless Motor Cycles.

COLLIER AND SONS, LTD., Herbert Collier, Plumstead, S.E. (Stand 43).—Messrs. Collier and Sons have been associated with the motor cycle industry from its very inception, and from the first year of their existence up to the present time have obtained successes unexcelled both numerically and as regards importance. The chief improvements for 1911 are the following: New metal magneto shield with rolled over edge, rear mudguard halved and fastened to carrier, the whole being secured by stays, the ends of which are forked and attached to a bolt running across the back forks beneath the saddle pillar, a fitting which allows of easy detachment and permits of nearly the whole of the tyre being exposed in case of a puncture; Amac tank stoppers, which fasten after a quarter turn, and a Best and Lloyd lubricating oil pump, which affords a semi-automatic lubrication system are supplied. For 1911 the Matchless machines will be enamelled a distinctive colour, and will be better finished than ever. The really silent Matchless silencer has been further improved, and a new cut-out has been fitted, provided with two operating studs; pressure of the foot on one of these opens the shutter and pressure on the other closes it. An improved foot-rest, which forms one of the crank-case bolts, and a new kick-up stand are now fitted. Hutchinson tyres, Bosch magnetos, Amac carburetters, and J.A.P. engines are fitted as standard. Eight machines in all will be exhibited at Olympia, including the special sidecar model, Tourist Trophy models (single and twin), and standard touring models. Messrs. Collier and Son are giving the

ball rolling until England at last organised an annual motor cycle race of its own. Simultaneously other nations dropped motor cycle racing, and England began to forge

flat belt. None were completed until a day or two before the race—a fault of which we were not infrequently guilty in days to come.



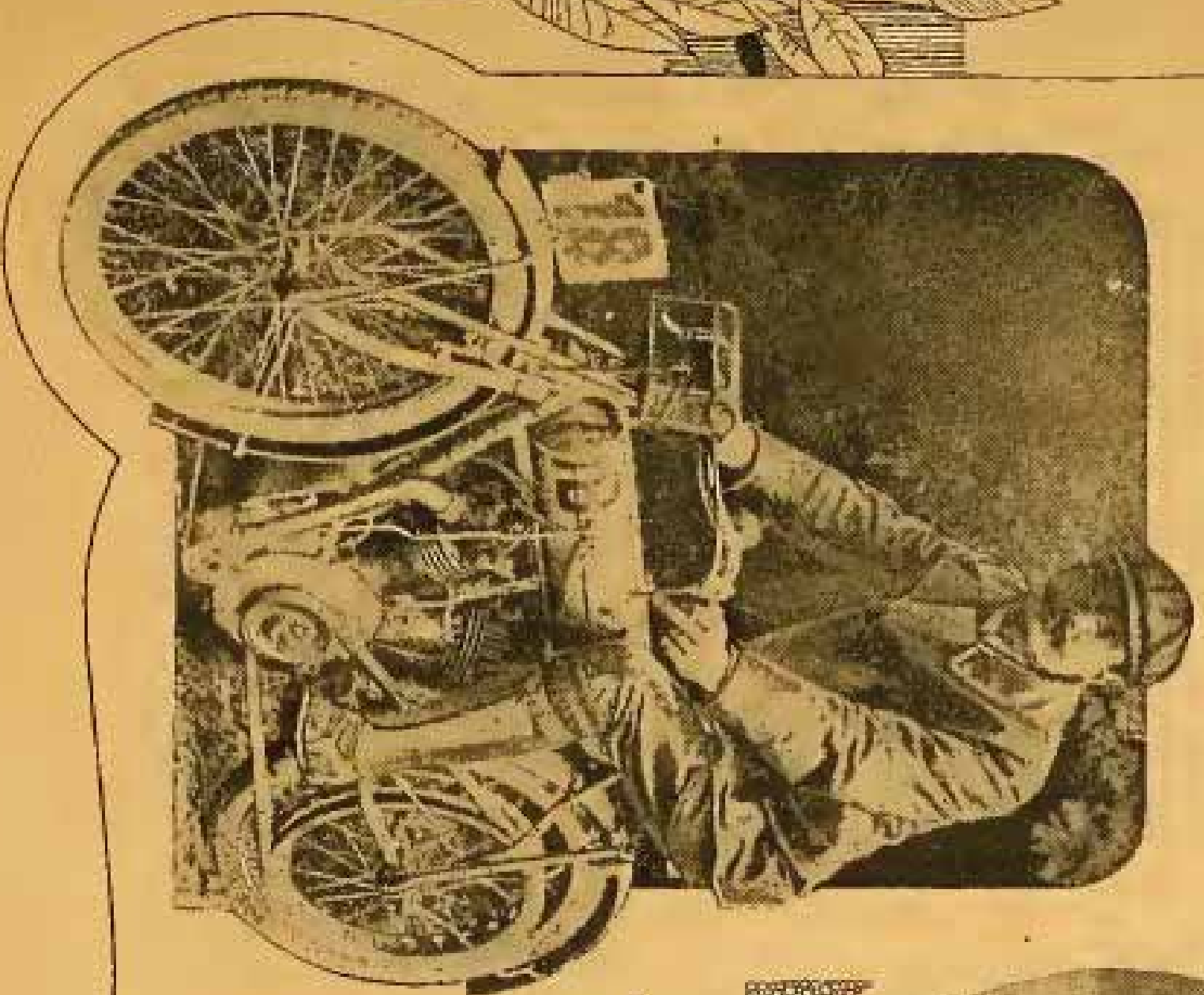
J. S. Campbell (6 h.p. Ariel), winner of the British Selection Trials of 1905, in the Isle of Man.



H. A. Collier (6 h.p. Matchless), second in the British Eliminating Trials. C. B. Franklin was the third member of the team.

Wondrick (Austrian Laurin & Klement), who wrested the cup from France in 1905, averaging 54½ m.p.h.

... were placed, which meant the fastest single



H. A. Collier (5 h.p. Matchless-J.A.P.), winner of the Tourist Trophy in 1909.

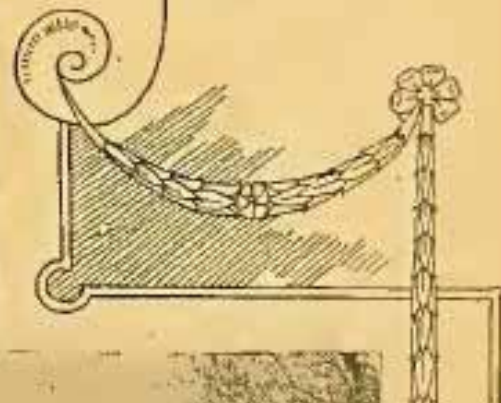
THE VICTORIOUS COMPETITORS





TOURIST TROPHY RACE.

C. R. Collier passing
the finishing post
a winner in 3 hours
7 mins. 24 sec.—
average speed 50.7
m.p.h.





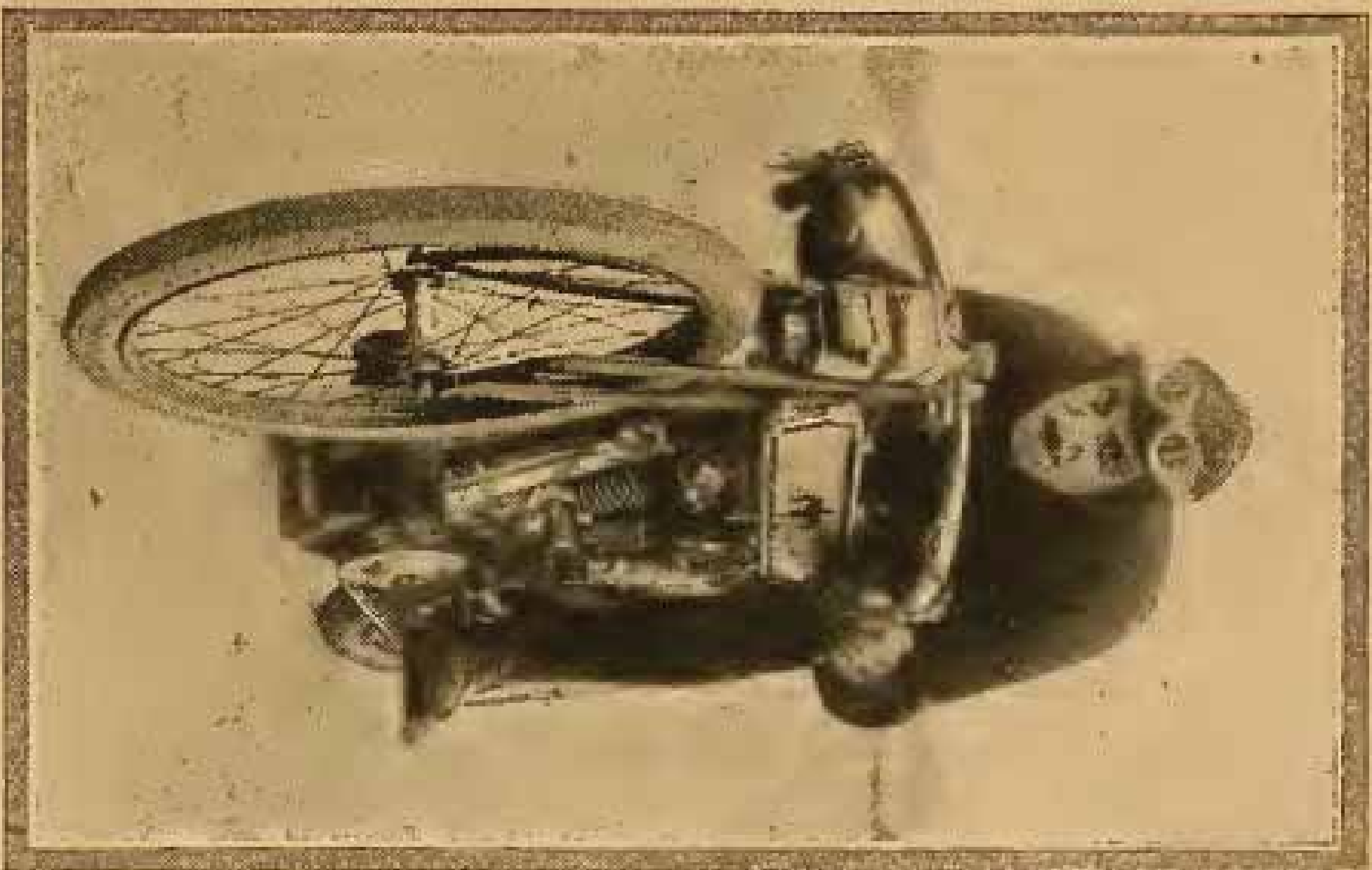
H. A. Collier and
H. V. Colver
(Matchless
J. A. P.'s), and
D. R. Clarke
(Indian), starting
in the June
Handicap at
Brooklands. Col-
ver and Collier
finished second
and fourth res-
pectively in this
event.



C. R. Collier and H. Martin starting on one of their series of matches at the N.C.U. Canning Town Meeting, in which Martin reversed his defeat of the previous week. (See page 736).



The Relay Race.
F. A. McNab
restarting after
receiving the
bracelet from
C. R. Collier.



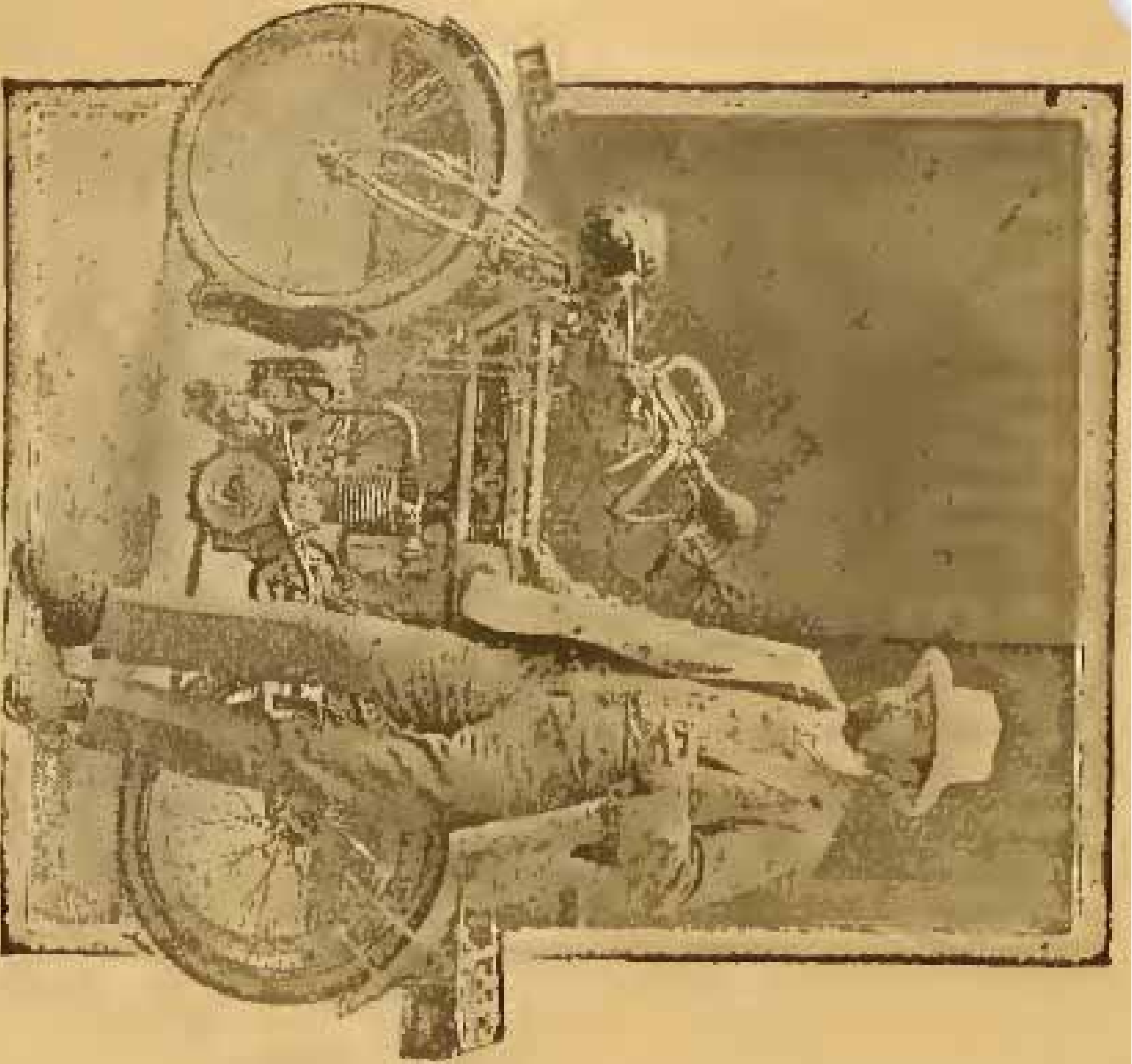
C. R. Collier (7 h.p. Matchless-J.A.P.) who won the Open Scratch Race at Brooklands on the 24th ult. covering four laps at an average speed of 71.62 miles per hour.



On the left, the winner of the Tourist Trophy, C. R. Collier, and his 8 1/2 h.p. Matchless-Jap, photographed immediately after the race. On the right, H. Rem Fowler, 5 h.p. Norton-Peugeot, first in the twin-cylinder class.



G. R. Collier (3 1/2 h.p. Matchless-Jap), last year's winner, nearing Peel.
In 1907 J. Marshall was second, but the positions were reversed
in Tuesday's race.



Percy Tollree (3½ h.p. Matchless - J.A.P.), hon. sec. of the Edinburgh M.C.C., who has competed with success in several competitions this year, including the London-Edinburgh run, Bradford open hill-climb, and Garrowby hill-climb.

Racing in France.

Twenty-two miles on the road in 1h. 15m. is a very respectable speed for a bicycle fitted with a cylinder not exceeding 375 cubic centimetres capacity. Fournier (not the hero of the s-Bordeaux and Paris-Berlin, who, he way, is returning to the wheel racing car) accomplished the above road race on the 12th inst., near May, to the north-east of Paris, on machines were second and third in 28m. and 1h. 31m. respectively.

Paced Race at Tonypandy.

A large crowd watched the motor-race of five miles on the Rhondda track, Tony-y, between George Flint, the known Croydton professional, and Tom Churchill, recognised paced champion of the district. The contest was for £25 and the men had been giving an opportunity to meet a long time. Churchill took the lead immediately after the start, and lapped his opponent in the fourth round, eventually winning by one and a half laps—the 730 yards. The winner completed the five miles in 9m. 40s. Paris lost.

H. A. Fowler, 11, Den Road, Lee, informs us that when Lee and Croydton, about a week ago, he had the misfortune to lose all his tools and a motor cycle spare parts, of the exhaust valves bore owner's name and address. Lee would be grateful if the owner of one or more of these parts would return them to him at the above address.

Halifax motor cyclists are anxious to communicate with Mr. George Betty, of 4, Rhodes Street, Halifax, who is desirous of forming a club at town and district.

Programme of Tar Spreading Tests.

The tests in connection with the competitions for (a) the best tar spreading machine, and (b) the best preparation of tar for road purposes, will be carried out, weather and state of roads permitting, during this week. They will commence to-day (Wednesday), and be continued on Thursday and Friday. All the tar spreading machines will be tested on three classes of roads, viz., (a) macadam, (b) flint, and (c) gravel. The preparations of tar will be tested on the macadam only unless more extended trials are found to be necessary.

FUTURE EVENTS.

- May 25—Newcastle Motor Cycle Club Open Hill Climb.
- 28—International Auto Cycle Tourist Trophy Race.
- 30—Tourist Trophy Car Race, and Heavy Touring Car Races in the Isle of Man.
- 30—Auto Cycle Club Peasely Run (Varnmouth Centre)
- June 1—M.C.C. Members' Hill-climbing Competition.
- 8—Coventry M.C. Open Gymkhana.
- 15—A.C.C. Open Hill Climb at Fernhurst (provisionally).
- 22—A.C.C. Annual Race Meeting.
- 22—Essex M.C. Open 200 Miles Non-stop Run for Motor Cycles and Small Cars.
- 29—M.C.C. 100 Miles Trial for Private Owners and Rovers Cup Competition (concurrently).
- 29—Motor Cycle Union of Ireland Inter-centre Contest for the Triumph Cup.
- July 13—M.C.C. Open Hill Climb and Competition for Variable-gear Machines.
- 13—Essex M.C. Motor Cycle Race Meeting at Canaling Town.
- 20—M.C.C. Inter-Team Competition for The Motor Cycle Challenge Cup.
- 20—Coventry M.C. Open Hill Climb for Motor Cycles and Cars.
- 26—A.C.C. 24 Hours Ride to Plymouth and back.

The particular roads upon which the tests will be made are: (a) The Houns low and Staines macadam road, between Baber Bridge and Staines boundary.

under the control of the Middlesex County Council. Length four miles. (b) The flint road between Twickenham and Kempton Park, under the control of the Staines Rural District Council. Length two miles. (c) The gravel road between Virginia Water and Reading at Ascot, under the control of the Berkshire County Council. Length three miles. The Roads Improvement Association are to be commended for their enterprise in promoting these tests.

Bicycle!

The Cardiganshire County Council have just decided to refuse to place danger indicators on their roads for the guidance of motor cyclists and motor car owners. In such a hilly county their action is quite inexplicable.

Gas House Hill, Norwich, Surmounted.

We read in a local paper that Gas House Hill, Norwich, has been successfully climbed on a 5 h.p. twin-cylinder motor bicycle by a Mr. Scott, of Christchurch, New Zealand, who has been taking a prolonged holiday in England. Mr. Scott occupied 25s., timed from a standing start. The *Norwich Evening News* described the performance as "one of the finest feats of hill-climbing ever accomplished in this district on a motor cycle."

New Italian Regulations.

Motor cyclists visiting Italy, under the new custom house regulations, will be free from import duties provided they do not stay more than three months. After that the annual tax is charged, and after six months the import duties also. What a strange experience it must be for the average foreigner when he lands on our shores with a motor. All free except the license to drive and registration.



Brothers Collier, C. R. and H. A., who will ride 31 h.p. Matchless machines with J.A.P. engines in the Tourist Trophy Motor Cycle Race on Tuesday. With their racing experience they should make a particularly good show in the single-cylinder class. They will both pin their faith to accumulator ignition.

the Stanley Show Exhibits.—

boards. The four side ones is hinged, and if lifted up releases a crank connected with the rear hub by means of a chain. When pressed down this gives the engine a smart impulse, with the result that the engine is easily started. No redalling gear is provided. The foot brake is arranged so as to be worked by the hand as well if required, a Bowden wire control by a lever on the handle-bar being attached to the operating pedal. This brake also simultaneously applies two hoses to the rear belt rim. The cut-out is provided with a foot serrated quadrant which is easily operated by means of the toe. It is also interesting to note that in addition to a lever on the handle-bar. Machines are shown on this stand fitted with 1909 and 1910 engines, and one is shown fitted with a sidecar. Such well-known points as the universally ointed connecting rod and the well-known magneto drive are still retained. It is interesting to note that the Lloyd re engine device can also be fitted to other makes of machines.

M.A.E., No. 305.

23 h.p. Model: 85 x 60 mm.; m.o.i.v.; coil and accumulator; Amac carburetter, h.b.c.; adjustable pulley; ROA tyres; belt transmission.

A. G. FENN AND CO., Tottenham Court Road, W.C.—The principal exhibit of this stand is a 23 h.p. Mab. This machine presents a very neat appearance, devoid of any complications. A special point of the frame is the webbed head, which is extremely strong. The valves of the J.A.P. engine are both overhead, and worked by rockers from half-line gears on the side of the engine. The silencer is forward of the cylinder head, whilst behind it is the Amac carburetter, which is fed from the rectangular tank between the two top bars of the frame through a special flexible petrol line. This is practically a Bowden wire cable covering, enclosed in a special composition which petrol does not attack. Lubrication is automatic through a drip feed placed at the forward end of the tank, which also is provided with a petrol gauge. Two brakes are fitted—one a hand brake acting on the front wheel, the other a belt rim brake actuated by the foot, the pedal for this purpose being placed adjacent to the left footrest. There is also shown on this stand a 15 h.p. Peugeot engine with twin cylinders, 65 mm. by 70 mm. This engine is fitted with a Bosch gear-driven magneto, in contrast to the motor bicycle above described, which is ignited by coil and accumulator only. There are also shown in this stand spare petrol tanks, repair kits, various other tools for motor cycles, and the Reliance plug.

MATCHLESS, No. 104.

24 h.p. Model (Ladies): 70 x 76 mm.; a.o.i.v.; Rat-hard magneto; B. and B. carburetter, h.b.c.; 54 to 1 gear; 2in. Hutchinson tyres; V-belt transmission.

H. COLLIER AND SONS, LTD., Plumstead, S.E.—The fine range of Matchless models for 1910 will surely suit the



The 23 h.p. Matchless motor bicycle for the gentler sex.

most fastidious motor cyclist. H. Collier and Sons have evidently satisfied themselves that no one type of machine will ever appeal to the average motor cyclist, and consequently they list seven or eight different models, and all of them are of excellent design and really substantial construction.

tion. Matchless motors are by no means new to our readers, their consistent performances in competition during the last few years having brought them into great prominence. One of the few ladies' machines in the show is on the Matchless stand, and it is a nicely-designed machine deserving of inspection by reason of the neat arrangement of the engine and its fundamental parts. Footrests as well as pedals are provided, and this same model is also made for the male sex with the ordinary diamond frame.

34 h.p. Model: 85 x 85 mm.; m.o.i.v.; Bosch b.b. magneto; B. and B. carburetter, h.b.c.; 44 to 1 gear; 24in. Hutchinson tyres; V-belt transmission.

This machine is made in two models—one the ordinary tourist machine with pedalling gear, and the other a T.T. model with ball bearing engine, but minus pedals. The design does not differ from the accepted lines of up-to-date motor bicycles, consequently no more than this brief reference is necessary.

6 h.p. Twin Model: 70 mm. x 95 mm.; a.o.i.v.; Bosch b.b. magneto; J.A.P. carburetter, h.b.c.; 4 to 1 gears; 24in. Hutchinson tyres; V-belt transmission.

This machine should appeal to speed lovers. It is fitted with spring forks, hog skin padded top saddle, gracefully shaped handle-bars, stand and carrier, at the rear of which latter the toolbag is located, but be it noted on the underneath side, leaving the whole of the top of the carrier free for a large touring bag.

7 h.p. Model: 76 mm. x 95 mm.; a.o.i.v.; Bosch b.b. magneto; J.A.P. carburetter, h.b.c.; 4 and 8 to 1 gears; 24in. Hutchinson tyres; V-belt transmission. This model is, of course, intended for passenger work, and a really excellent sidecar mount it makes. The gear is the new Matchless of the epicyclic type, giving a fifty per cent. reduction on the low gear. It is shown fitted with a Lowen two-wheeled sidecar, and is undoubtedly one of the finest passenger combinations in the whole show.

8 h.p. Twin Model: 85 mm. x 85 mm.; m.o.i.v.; Bosch b.b. magneto; J.A.P. carburetter, h.b.c.; 4 to 1 gear; 24in. Hutchinson tyres; V-belt transmission.

This machine possesses an ample reserve of power, and is particularly suitable for those who desire to use a sidecar attachment on occasion. The J.A.P. engine has the ordinary type side-by-side mechanical valves and single gear. It is shown fitted with a rigid pattern sidecar. The actual machine on which H. A. Collier won the Tourist Trophy Race is exhibited on the stand, and by reason of its success it has naturally been decided to place this model on the market.

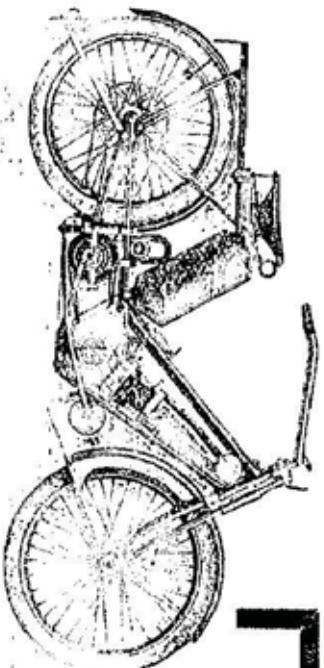
MIDGET BICARS, No. 106.

34 h.p. Model: 80 x 80 mm.; m.o.i.v.; Simms b.b. magneto; carburetter to order; patent variable pulley gear; 24in. Kempshall tyres; V-belt transmission.

J. T. BROWN AND SONS, Reading.—The Midget Bicar for 1910 possesses some interesting features, chief among which is a patent variable gear, obtainable by expanding and contracting the engine pulley by means of a suitable lever extended easily within the rider's reach. To take up the slack of the belt the wheel is movable, and when the pulley is giving a low gear, by pressing down the footboards the back wheel is extended, thus taking up the slack of the belt. The axle slides in suitable guides at the extremity of the special sheet-steel frame, which is a feature peculiar to the Brown Midget Bicar. The magneto is gear driven, and carried in an accessible position at the rear of the crank case. Druid spring forks are fitted, as well as large tank filler caps and a very neat type of stand which automatically springs out of action. Another good idea is a leg fastened out of the way to the gear-operating lever by a rubber band, which supports the front wheel clear of the ground. This is a point many riders ask for, and shows the attention Mr. Brown pays to the detail work of his machine. A hand starting device is also incorporated in the design, this being by means of a small chain wheel driving on to a sprocket on the rear axle. Thus the turning movement is geared up, enabling an easy start.

MILFORD, No. 67.

MUS AND FULFORD, Coventry.—This firm has brought the sidecar to the last stage of luxury. The sidecar wheel is suspended on spiral springs carried in vertical tubes. On each sidecar frame is a special carrier, on which a two-gallon petrol tin may be carried. Underneath the seat there is a



SCOTT

"THE ALL WEATHER MACHINE."

Accessibility of the "Scott" is a great feature and one of its many advances upon previous design is the unique method of accessibility to the crank cases by the simple removal of a wing nut, which enables the rider to see at a glance—(1) The quantity of oil held in the crank cases, (2) The condition of the oil, (3) Engine bearings and connecting rods.

This feature offers the additional advantage of the rider being able to see how his lubrication is going on, and is also designed so the connecting rods can be easily detached from the engine without disturbing the crank case. Further—The design gives perfect lubrication.

Get to know all about the "Scott" which is being ordered by the leading motor cyclists of the day.

THE SCOTT ENGINEERING CO., LTD.,

Mornington Works, BRADFORD.

London Agents:

Service Co., Ltd., High Holborn.

TWO-STROKE ENGINE
WATER-COOLED
TWO CYLINDERS
STARTS FROM SEAT
TWO-SPEED GEAR . .
FREE ENGINE
IMPROVED SPRING . .
FORKS & FOOTBOARDS
LOW CENTRE OF
GRAVITY

3½ h.p.—PRICE 55 GUINEAS.

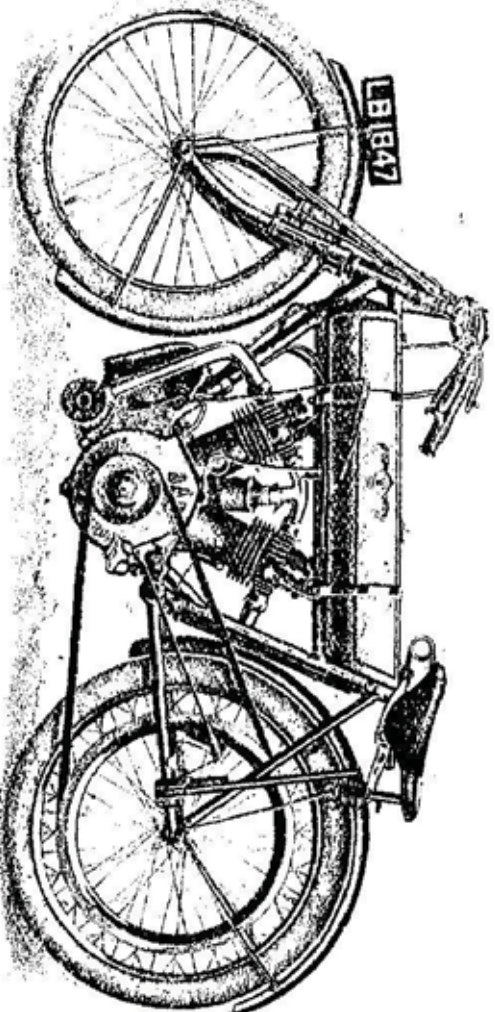
The "MATCHLESS" Motors

FAR AHEAD OF ALL OTHERS.

International Tourist Trophy

1st in 1907
2nd in 1908
1st in 1909

Against all comers.



Gold Medals for Reliability—End to End—London to Edinburgh.
Hill Climbs—Snaefell, I. of M. 15 sec. faster than all others.
Amurree Hill Climb, 4 firsts, 1 second.
Etc., etc.

Hold more recognised World's Records than all others combined.

Models from 2½ h.p. to 9 h.p.

May we send you our latest catalogue of Britain's Best Motor Cycle.

H. COLLIER & SONS, LTD., Herbert Road, Plumstead, S.E.

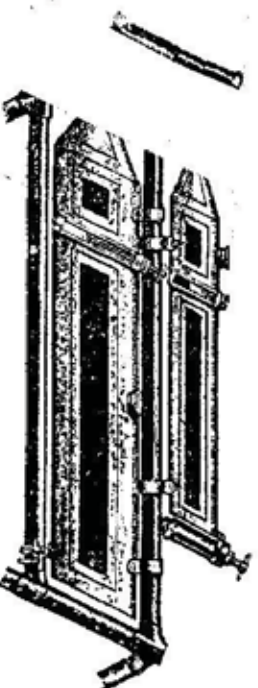
Telephone—232 Woolwich.

Telegrams—"Matchless, Woolwich."

In answering these advertisements it is desirable to mention "The Motor Cycle."

**You have never seen a smarter
pair of tanks than the**

DAVISON 1909 TORPEDO.



SELF PRAISE IS LESS RECOMMENDATION THAN IT

Folds Motor and Engine Co.

"We have received the tank safely, and are extremely pleased to have ever seen, and we shall have much pleasure in recommending it."

HERS, SO PLEASE READ THE FOLLOWING:
Bolton, May 10th, 1909.
It is by far the finest and best equipped tank we have ever seen, and we shall have much pleasure in recommending it to our goods wherever possible."

C. Tapless Pump, and other Davison adjuncts.

A. C. DAVISON, 12a, Pleasant Row, High St., Camden Town, London, N.

"MATCHLESS" Motors

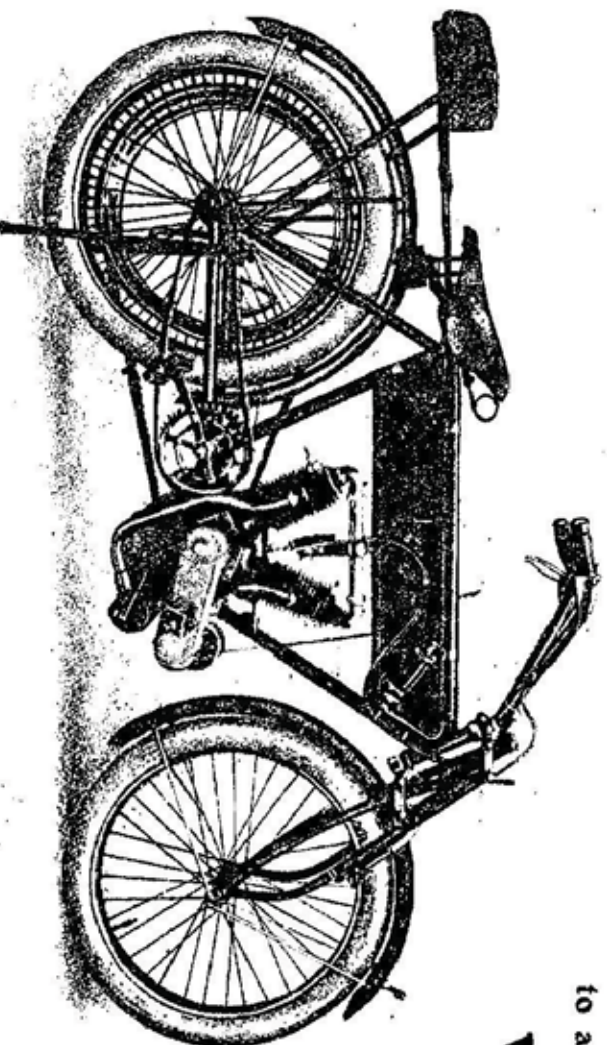
concede a start in competitions
to all others.

WHY?

Because they hold an unequalled record for speed and absolute reliability.

SECOND TO
NONE.

"MATCHLESS"
FOR MERIT.



MODEL No. 4-6 h.p. TWIN.

Eight Models from which to choose, ranging from 2½ h.p. lightweight to 9 h.p. Twin.

CATALOGUES OF THESE FAMOUS MACHINES POST FREE ON APPLICATION TO

H. COLLIER & SONS, LTD., Herbert Road, Plumstead.

Telegrams: "Matchless," Woolwich.

NEAREST STATION: WOOLWICH ARSENAL.

Telephone: 292 Woolwich.

The only stand

operated entirely by
the rider's foot.

The back wheel can
be removed.

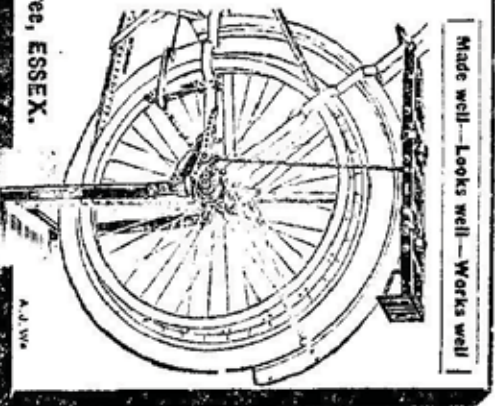
Millennium

Express Stand—No. 3.

LAKE & ELLIOT,

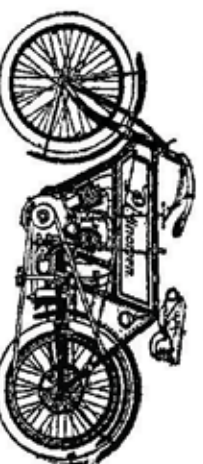
Makers of the "Millennium"
Accessories for Motor Cars
and Cycles.

Albion Works, Braintree, ESSEX.



Made well—Looks well—Works well

PROMPT DELIVERIES OF
PHANOMENS, PREMIERS, ROCS, TRIUMPHS,
N.S.U.'s, MINERVAS, WOLFS, HUMBERS,
MOTO-REVES, and MOTOSACOCHEs.

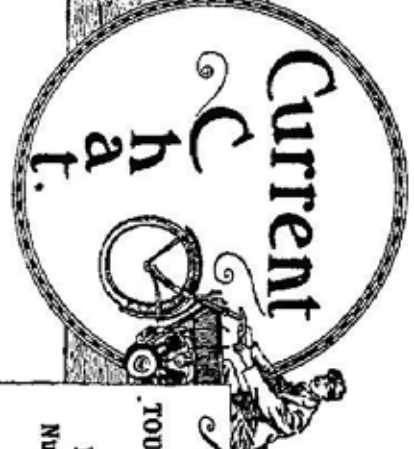


EXCHANGES ARRANGED.

ACCESSORIES OF EVERY DESCRIPTION PER RETURN.

ROBERT BEVAN, 31, 33, 35, CASTLE STREET, CARDIFF.

In ensuring these advertisements it is desirable to mention "The Motor Cycle."



PERMANENT
TOURIST TROPHY RACE.
Detailed Report and
Numerous Illustrations.

Tram Extensions.

The Maidstone Road from Lewisham to Lee Green, which has been closed for six months owing to tram laying and road widening, is now open to traffic again, the road paving being a great improvement.

Motor Cycles in Japan.

A correspondent, Mr. H. A. Mosley, of Tokyo, in sending us a description of the first motor club run of any length held in Japan, mentions that motor bicycles fit about the country in every direction.

The Kaiser Prize Race.

On the occasion of the race for the "Kaiserpreis" over the Tannus Circuit this month, the German Motor Cyclists' Association will place 150 of its members at the disposal of the Imperial Motor Club for patrol and other services.

Low Registration Numbers.

Readers desirous of registering new machines with a low registration number should apply to the Clerk of the Smethwick Council, near Birmingham, as this town has only lately become a borough. A motor cycle registered last week was allotted HA 20.

Speed Trials at Redcar.

The Yorkshire Automobile Club's speed trials will be held on the sands between Saltburn and Redcar on Saturday, June 22nd, commencing at 3 p.m. Although all the events are for cars, no doubt many motor cyclists will be interested in witnessing the trials.

International Contest for Motor Cycles at Stuttgart.

The Stuttgart branch of the German Motor Cyclists' Association is organising an international meeting for motor cycles and small cars on July 7th. The former are divided into three classes. The races will take place over the Stuttgart-Sohlde Road, which is officially recognised as a trial stretch for automobiles. Some £150 are offered in prizes.

To Benefit a Hospital Fund.

The Mayfair Motor Co., Ltd., has generously placed at the disposal of the Chairman of the East London Hospital for Children (which hospital is solely in need of funds) a 6 h.p. Mayfair car fitted with a De Dion engine, which is to be raffled for the sum of £200 in 400 tickets of 10s. each. We are asked to state that tickets may be had either from the secretary of the hospital, Shadwell, E.C., or from the secretary of the Mayfair Motor Co., Ltd., 22, Mortimer Street, W.

"Never Prophesy unless ye know."

It must have been a rude awakening for the Isle of Man correspondent of a contemporary who wrote early last week "that the Auto Cycle T.T. is shaping to be like the G.B. trials—a failure," to see twenty-five starters out of twenty-six entrants.

Kindaers Appreciated.

Mr. B. H. Davies desires to offer his most sincere thanks to the unknown Ariel rider who fetched him a spare part from a town ten miles away when he was stranded at Lampport on May 25th; he regrets he did not see the rider in person on his return, and that the proffered tea was refused.

Tea Tablets.

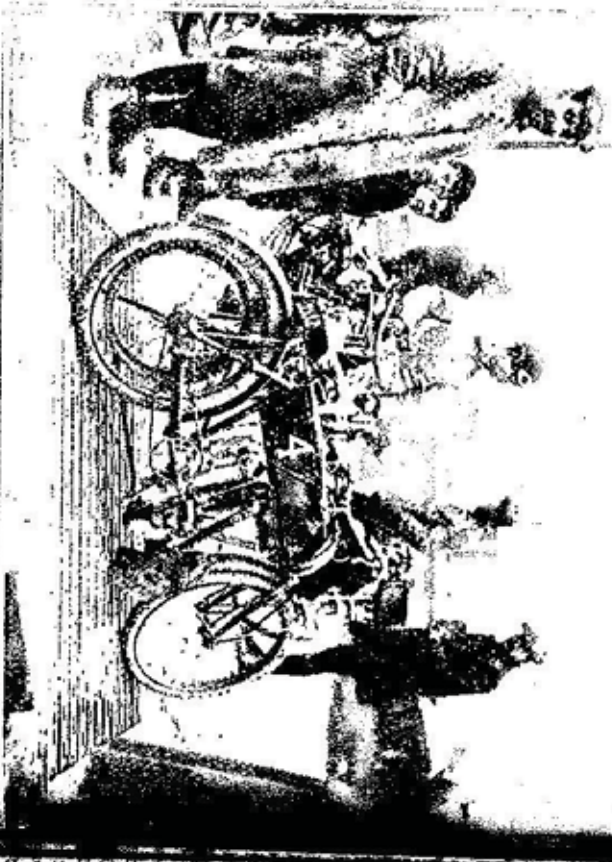
Riders of passenger-carrying motor cycles may be interested to hear that Messrs. Burroughs and Wellcome are now selling small packets of labloid tea. Where space is a consideration the above may be appreciated, as very little room is taken up by them in the tea basket. Two of the pellets are sufficient to make one cup of tea.

The Winner of Dr. Hede-Shaw's Prize.

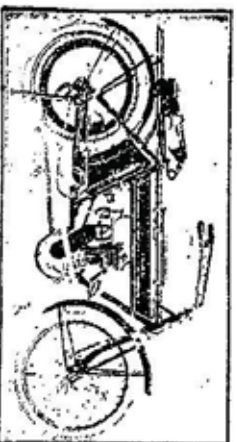
H. Rem Fowler, who rode winning twin-cylinder machine Motor Cycle Tourist Trophy Race, vice-captain of the Birmingham A and a genuine amateur rider. It was his first race, and he covered second lap at the rate of 43½ mi. hour, to accomplish which speed necessary to travel at well over miles per hour on the straight set. His stoppages were caused by his sparking plug troubles.

Tourist Trophy Average Speeds.

In the 1905 car Tourist Trophy the winner, J. S. Napier, at 35.88 miles per hour. Last year Hon. C. S. Rolls averaged 39.6 per hour. This year E. Courtney averaged 27½ miles per hour in pouring and on muddy roads. As a comparison, the average speed of Collier in the Auto Cycle Trophy equalled 38½ miles per hour, which compares very favourably with the 1906 car time made under conditions.



C. R. Collier's winning machine on the weighing scales.



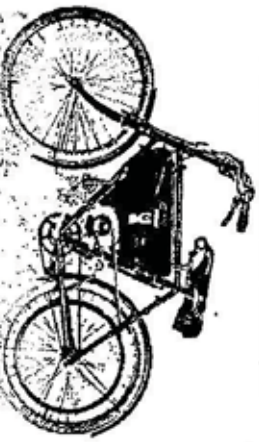
1908 QUADRANTS, A.V. 545. M.O.V. 547 10s. You can get them at Wauchop's. Exchanges arranged.



1908 VANDEOS, Model P, 6 h.p. £38. Model P, with two-speed gear, £68. Model G, light touring, 5 h.p. £33. Model H, 3½ h.p. £48 10s. You can get them at Wauchop's. Liberal allowance for second hand machines.



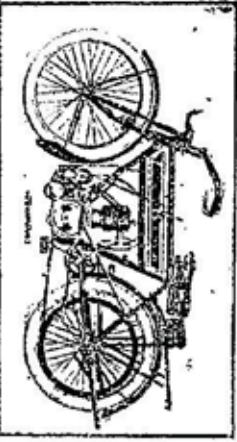
2½ h.p. MINERVA, £28. 3½ h.p. Minerva, £32. 4½ h.p. Twin, £38. 7-8 h.p. Twin, £45. You can get them at Wauchop's. Exchanges.



1908 MOTOSACOCHE. You can get them at Wauchop's. Exchanges arranged.



1908 ARIELS. You can get them at Wauchop's. Second-hand motor cycles taken in part payment.



1907 and 1908 TRIUMPH Motor Cycles, £41 and £48 each.

WAUCHOPE'S,

9, Shoe Lane, Fleet Street,
LONDON.

4777 Holborn.

In answering any advertisement on this page it is desirable that you mention "The Motor Cycle."

CARS FOR SALE.

CHASSIS 9 h.p. De Dion pattern. Reo, three speeds, reverse, tyres, mudguards, tanks, etc.; £27 quick sale. Whittle, Letchford, Warrington.

8 h.p. M.M.O. Car, two-seater, three speeds, reverse, good running order; take motor cycle or tricar part payment.—Wale, 26, Edward Street, Nuneaton.

HOTELS AND APARTMENTS.

WHEN visiting London stay at Waverley Temperance Hotel, 17, Bus-ton Square. Bed, breakfast, attendance from 3s.

TOURING.

WANTED, companion (about 20), for inexpensive summer tour (fortnight); date and route mutually arranged.—Steeves, 39, Birch Grove, Kaling Common, W.

LOST AND FOUND.

FOUND on Hog's Back, front lens of acetylene headlight.—Apply, H. F. Knight, Barnfield, Farnham.

FOUND, near Stockton-on-Tees, a motor cycle pulley and belt.—Apply, Barker, veterinary surgeon, Stockton.

GARAGES.

BRIGHTON—Black Lion Garage, back of Sea View Hotel, Black Lion Street, fifth turning from Aquarium on right, along front; specially for motor cyclists; repairs on Sunday.

BASHAM and Co., Engineers, Middle Street, Brighton, opposite Hippodrome, just off sea front, have accommodation for over 100 motor cycles; special terms to clubs; petrol, oils, accessories.

INSURANCE.

INSURANCE.—Please write for particulars of 30s. inclusive motor cycle policy.—Bass, Ugar.

FIRE.—Insure your motor cycle with Hugh J. Boswell, Insurance Broker, Norwich; premium only 2s. 6d. for £25, or 3s. 6d. for £35. Write for particulars.

HUGH J. BOSWELL, Insurance Broker, Norwich issues all classes of policies for motor cycles at lowest possible rates; third party, burglary, accidents to cycle and owner, etc. Write for particulars.

CONSULTING ENGINEERS.

MARKHAM and Prance—R. O. L. Markham, M.I.MeCh.E., M.I.A.E.; H. Waymouth Prance, A.I.E.E., A.M.I.A.E.; expert examinations, tests, selections; Colonial commissions executed. — 14, Strand, 3439 Gerrard. Telegrams, Motoneers, London.

TYRES.

FARRAR.—New inner tubes, fully guaranteed, not porous rubbish; 2s. by 2, 7s. by 2, 7s. 6d.; 2s. by 2, 7s. 6d.

FARRAR.—Tyres, fully guaranteed; 2s. by 2, 16s. 6d.; 2s. by 2, 17s. 6d.; 2s. by 2, 16s. 6d.; 24in. same price.

FARRAR.—Tremendous stock Continental tyres; your old tyre accepted in exchange; list free.—Farrar, Square Road, Halloway.

FOR Sale, Peter-Union covers, £1; new studded, 32s. 6d.—Woodman's, Peterborough.

10s. Allowed for your old cover, any condition, in exchange for new Goodrich, or Shamrock-Exelstor, all-rubber non-skids.—Below.

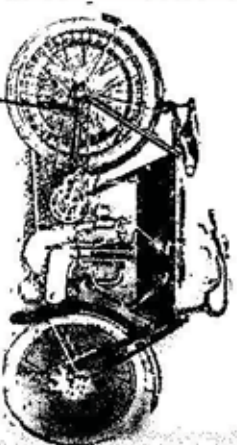
5s. Allowed for your old cover, any condition, in exchange for new one of any of the best makes. — Continental Motor Co., 32, Rosebery Avenue, E.C. Tel., Holborn, 1533.

26IN. by 24in. Moseley Cover, practically new, perfect.—Hall, 2, Sudell Cross, Blackburn.

PAIR Dunlop Motor Cycle Covers, beaded, 2s. by 2, excellent condition, 9s. 6d. each; also tubes, 4s. 6d. each; owner abroad.—Glencairn, Stables, Old Ton Road, Wimbledon.

THE LEWISHAM HILL CLIMB.

THE INVINCIBLE "MATCHLESS" AGAIN FIRST! The "The Motor Cycle" April 8th, 1908. "Le Grand," whose little 2½ h.p. Matchless made a wonderful performance. Its bore is only 70 mm., and the average bore to Class I. was 80 mm.

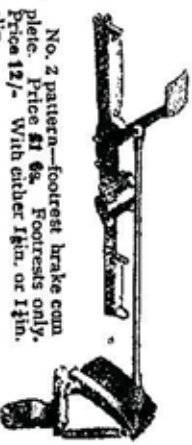


Free trials by appointment. These are the machines that cannot be beaten 3½-4 h.p. single cylinder; 5-6 h.p., 7 & 9 h.p. twins



"CHASE" DRIVING RIM BRAKE.

The first, and still the best driving rim brake. The only really satisfactory motor brake on the market. Made to suit any machine. Absolutely reliable. No. 1 pattern—back pedalling brake. Machine can be wiped backwards. Extremely powerful. Price 16/6.



No. 2 pattern—footrest brake complete. Price £1 6s. Footrests only, Price 12/- With either 14in. or 1½in. clip.



No. 3 pattern—foot brake with pedal fitted on stud provided, which fixes in place of one of crank case bolts. Price complete 16/6.

"MATCHLESS" SILENCER.

"COLLIER'S" machine created great interest owing to the extraordinary silence of the exhaust.—Vide "The Motor Cycle."



A silencer which really does silence the exhaust with absolutely no back pressure—certified by A.C.C. Silence trials—at moderate price. Up to 3½ h.p. 10/-; from 3½ to 5 h.p. 12/-; Cut out 5/- extra. Two connections for twins with separate exhaust pipes, 4/- extra. Connected in side or end, as ordered.

Catalogues of "Matchless" Motor Cycles and Accessories on application to

H. COLLIER and SONS, LTD., Motor Experts and General Engineers.

Offices and Showrooms: 18, HERBERT ROAD, PLUMSTEAD. (Nearest Station: Woolwich Arsenal.)

Telephone: 232 Woolwich.

SIDE CARS AND FORECARS.

BAT Sidecar, suit Bat machines, rigid type, excellent condition: £4 10s.—157, St. Giles' Road, Derby.

MILLS-FULFORD Forecarriage. Attached, frame sprung, with long slugs, cane chair, late pattern, 26 wheels, in splendid condition, been little used: £7 10s.—Dene Cycle Co., St. Thomas Street, Newcastle-on-Tyne.

MONTGOMERY Sidecar (highest grade), 26in. wheel, art cane, with extra lunch basket, upholstered dark green, plated springs, can be adjusted to rigid or cushioned joints, hardly soiled.—W. H. Dewar, 30, Kenilworth Road, Roman Road, London, E.

STAMFORD HILL—Our famous sidecars speak for themselves; approval anywhere; at any machine, left or right, any size wheel: £4 18s. 6d.; none better, whatever you pay; they are never sent back. That talks.—126, High Road, Tottenham.

OAKLEIGH World-renowned Sidecars are the best value of any. Points worth remembering. Lowest hull, thereby ensuring perfect safety; guarantee against side-slip; attached in two minutes; many other good points which no other sidecar possesses: £5.—Oakleigh Motors, Ltd., West Dulwich.

MOTOR TRICYCLES.

GENUINE De Dion 3 h.p. Tricycle, Gonin-ental motor tyres, nearly new, good condition, fast; photo sent: £15 cost £85.—Wilson, 2, York Terrace, Ramsgate.

23 h.p. Minerva-Abingdon Tricycle, Palmer 24 tyres, belt drive, with detachable rear seat, all first-class condition: £12, guaranteed perfect.—Howe, 25, Frederick Road, Custom House, E.

SINGER Motor Tricycle, in perfect condition, cost 80 guineas, sell £14; also splendidly upholstered coach-bull trailer for two; cost £25, sell £5; both genuine bargains.—Boyd, Hillcrest, Palewell Park, East Sheen.

QUADRICYCLES.

4 h.p. Aster, w.c., two speeds, bucket seat, Longuemare, excellent condition: £25, or exchange tricar.—Ridley, Marliffe Road, Sharncliffe.

8 h.p. Phoenix Quadricar, Stimms-Bosch motor, latest type, fast and luxurious, perfect through 1, £65, or would accept reasonable offer for quick sale.—9, 858, The Motor Cycle Offices, Coventry. Exchange arranged.

TANDEMS.

3½ h.p. Minerva Tandem, in perfect condition, highest honours Essex 80 miles non-pedal non-stop reliability trials: £25, genuine bargain.—Wright, E. B. Hills, 220, Acacia Villas, Plumstead Common, Kent.

TRAILERS.

TRAILER, Mills-Fulford, 2in. Clinchers, nearly new.—A. A. Half Moon, Balcombe, Sussex.

TRAILER, good condition, and upholstered, exchange level for lady's high-straide cycle.—F. Moss, Station Road, Diketon.

MOTOR Trailer, in good condition, upholstered green; a bargain, £2 15s.—forney, Leighton Holmes, Frimley Green, Surrey.

MILLSFORD Trailer, Clinchers, upholstered dark green leather, enamelled aluminium: £3, cost £11.—Pogson, Caythorpe, Grantham.

QUAD CARS.

QUADCAR, 4 h.p. w.c. De Dion, two speeds, bucket seats, wheel steering, £20; epicycle gear, two speeds and reverse, suit tricar: £3; 8 h.p. w.c. engine, new condition, £15 10s.—Crawley, Totall, Burton-on-Trent.

CARS FOR SALE.

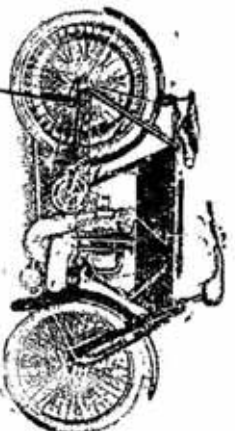
MUSWELL HILL—10 h.p. Automotor tonneau, mean car; bargain, £50.—At "The Garage."

NATIONAL, 10-15 h.p., tonneau, three cylinders, everything in good order: £100, must sell; no motor house; allow up to half for good single or four-cylinder cycle.—9, 852, The Motor Cycle Offices, Coventry.

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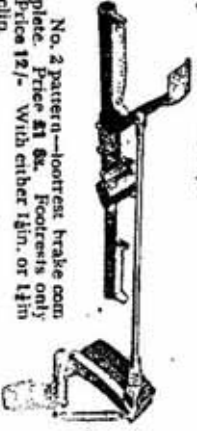
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—, Ltd., The Motor Cycle.



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(Nearest Station: Woolwich Arsenal.)
Telephone: 232 Woolwich.

CARS FOR SALE.

RENAULT Car, 5 h.p., three speeds, condition.—James, High Street, entry.

TWO-SEATED Car, nearly new: £55; cycle part exchange.—106, Church B. Willeston.

5 h.p. Alday, smart, two-seater, C hood, perfect condition; trial.—114, H bury Hill, N.

10-12 h.p. Four-seater Car, just overhauled; 450; tricar or motor cycle part.—T. Wolsingham, Co. Durham.

SUNBEAM-MABLEY, 3 h.p. De Dion, wa cooled, two-seater, splendid condition: £25.—Meadows, Station Street, Kewick.

4½ h.p. De Dion Progress Car, via-a-via, condition: £60, or exchange tricar cash.—Dalinger, Bury St. Edmunds.

15 h.p. British Duxey, 1906, three cylinder side entrance, Vandenau: cost £200, cost £65, or part exchange—98, Potterton Lane, Leeds.

6½ h.p. Hummerette, three speeds and reverse (direct drive on top), lamps, horn, grand condition: £32 10s.—Robb Engineer, 34, Clapham Road, S.W.

3½ h.p. Genuine De Dion Car, in perfect condition, needs no explanation very useful runabout for £25; trial pleasure.—Martin's Garage, Lewes.

EAGLE Runabout, water-cooled, 79 twin engine, single bucket seat, steering, two speeds, worth £50; cost £95.—The Motor Cycle Offices, Coventry

HALIFAX—9 h.p. Falmir, tonneau, 15 speeds and reverse, 810 by 15, cycle or tricar part payment: £57; 15-17 h.p. Motor Exchange, Westgate, Hather

6 h.p. Baby Peugeot, three speeds, new four new tyres, repaired and thoroughly overhauled, many spares, four lamps including Salisbury Place, separate gears pump, tools, etc.: £40; photo.—Below.

3½ h.p. De Dion Progress, water-cooled chain drive ball bearings, two-speed clutch and brake pedals, very light car, wheels, tyres perfect, long bonnet, in Ir photo: perfect order: £19 10s.—Below.

FOR Sale or exchange, M.M.C. char-a-10 h.p., carry nine, very reliable, gears, new tyres, no further use for exchange two-seater or tricar, or twin well worth £50, £22, or others.—30, 1 Street, Bridlington.

12 h.p. M.M.C. Jeas seven, two cylinder spray, solid tyres, De Nevers on splendid condition, three speeds, seven miles trial: price £50, or will exchange small two-seater—further particulars, ton, The Ness, Maldon Road, Southend

9 h.p. Riley Car, with hood, grooved D tyres, wind screen, expansions to guards, underscreens, lamps, horn, tools food running order, done about 2,200 in £150, will take 1907 h.p. Riley tricar as payment.—9, 857, The Motor Cycle Offices, entry.

8 h.p. Twin-cylinder Fairair Engine, green, lined white, two-seater, speeds and reverse, three Orient Dietz four new Continental tyres, etc., split going order; will take motor cycle or in part payment.—Joseph Hy. Jessop, W loo, Huddersfield.

ROVER Cars.—We have in stock for immediate delivery an 8 h.p. four-seater, swing front seat entrance, painted green, and upholstered in red leather model: price £235.—Louis Davis and Moseley, Birmingham.

ROVER Cars are acknowledged to be most reliable car made. For the fessional man, the business man, and man on pleasure bent it offers an ideal convenient means of travel. Read the following experiences on motor cycle and cars given in the motor cycle, and you realise exactly what we mean when we say you can make an appointment and re setting there.

THE Price of the two-seated 6 h.p. is £135, costs less in upkeep, is tricar of the same power, and is easier to drive. We are prepared to you a good allowance for your present machine in exchange, or supply on delivery.—Louis Davis and Son, Me Birmingham.

In answering any of these advertisements it is desirable that you mention "The Motor Cycle."

MOTOR BICYCLES FOR SALE.

5 h.p. Twin Rex, spring seat and handle-bars, new condition; £20, bargain.

5 h.p. Twin Hamilton, fast, racy machine, suit passenger work; £15 10s.

3½ h.p. Werner Twin, very light and fast machine; £16.

2 h.p. Rex Light Motor Cycle, smart machine; £8.

2½ h.p. Hummer Lightweight, climb almost any hill, splendid condition; £8 10s.

3 h.p. Trent, in excellent condition; £11, cash, bargain.

2½ h.p. Bradbury, fast, powerful machine; £10 15s.—128, High Road, Tottenham.

3 HEEFELD. — Do not delay: first cheque receives each bargain.

3 h.p. Hummer, free engine clutch, splendid condition; £9 10s.

2½ h.p. Hummer, nearly new Palmers, suit tall rider; a bargain, £8 10s.

3 h.p. Automotor, very long and low, top-pedo, footboards, a regular mover; £12.

3 h.p. Rex 50-guinea model, giving it away at £9 10s.

6 h.p. Rex Triette, magneto, 1½ new; lowest £30.

1 ET 10s. Have Your under-powered machine, we will fix you up with a good machine, no fancy prices with us.—Note the address, Millhouses, Motor Exchange, Sheffield.

5 h.p. Twin Rex, spring forks, long bars, low saddle; £18 18s.; liberal exchange, -16, Westgate, Halifax.

ROC 4 h.p. Military model, second-hand good order; £30. Roc 5-6 h.p. Twin, £45, subject to being still unsold.—A. W. Wall, Ltd., Roc Motor Cycle Works, Birmingham.

1 EEDS.—2 h.p. Minerva, stirder forks, good running order; £7.

1 EEDS.—4 h.p. Military Roc, magneto, free engine, two speeds, first-class order; £32, or exchange.

1 EEDS.—2½ h.p. Gohron-Minerva, girder forks, good running order; £11 10s.

1 EEDS.—6 h.p. Twin Rex, spring forks, 24 tyres, footboards; or exchange; £18.

1 EEDS.—2½ h.p. New Hudson, good order, Palmer tyres, 26in. wheels; £13.

THE Leeds Motor Exchange are open for all classes of repairs or replacements. Write or telephone (2280), giving your requirements. Exhaust valves, cast-iron heads, 2, 6d. Send old valve or drawing to the Leeds Motor Exchange, 28, Dock Street, Leeds.

3½ h.p. 1908 Brown, with £15 two-speed gear, Palmer Cord tyres, extra strong castor wheel sidecar; £43 or will exchange for tractor and cash.—Baker, builder, Hawley, Dartford, Kent.

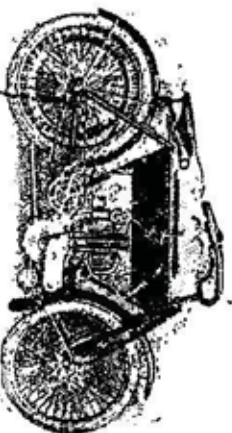
N.S.U. 5½ h.p. Twin, magneto, two-speed free engine; not scratched, hardly ridden, ideal for sidecar, 24in. wheels; £30 lowest; no offers, post £63. Upton, 24, Osborn Road, Sparkbrook, Birmingham.

1908 2½ h.p. Minerva, magneto, new May handle-bar control, all accessories; £27, or exchange cycle and cash; also, 3-10 h.p. Resette, two speeds, splendid order, tyre perfect, non-skids; £25 or exchange motor cycle lightweight.—61, Church Street, Leight, Lancashire.

3½ h.p. N.S.U. motor cycle, 20in. frame, 32 20in. wheels, magneto ignition, Express stand, horn, two-speed gear, and free engine, studded cover; forecar for N.S.U.; stand to fit triar, generator, headlights, Walsworth belt, Brooks bucket seat; £40.—155, The Motor Cycle Offices, Coventry.

2½ h.p. F.N. Longemare, Chatter-Lee, low, long 26-24 Clinchers (A.I.), extra, back, dermarine belt and spare, Price's stand and tools and spares; £15; also 3 h.p. Hummer, 29-A, Port, 51, Whitfield Street, Tottenham Court Road.

VINDEC 1908 5 h.p. Twin Tourist, Motor Cycle, never ridden, free engine, and second speed gear, magneto cover, carrier lamp and stand combined, and Lucas acetylene Motorist, Mrs. Fell, Norman Avenue, Fley, Yorkshire.

MATCHLESS MOTORS!!

LONDON TO EDINBURGH:

3 STARTED.

3 FINISHED.

No Trade riders—ridden by private owners only

"CHASE" DRIVING RIM BRAKE.



No. 1 pattern—back pedalling brake. Matchless can be wheeled backwards. Extremely powerful. Price 16/6, post 17/.



No. 2 pattern—footrest brake complete. Price £1 6s. Footrests only. Price 12/-. With either 14in. or 16in. c.r., post 15/6.



No. 3 pattern—foot brake with pedal fitted on stud provided, which fits in place of one of crank case bolts. Price complete 16/6, post 17/.



MATCHLESS PETROL FILTER.

No choked carburetters. 4/6, post 4/8.



MATCHLESS PETROL FILTER.

No choked carburetters. 4/6, post 4/8.

MATCHLESS SPRING FORK ATTACHMENTS.

Converts an old pattern motor cycle into an up-to-date luxurious motor. Thousands in use, giving every satisfaction!

15/6, post 16/.

THE MATCHLESS SILENCER.

3½ h.p., 19/-; from 3½ 5½ h.p., 19/-; Cut out 5/- extra. Two connections for twins with separate exhaust pipes, 4/- extra.

Catalogue of "Matchless" Motor Cycles and Accessories on application to

H. COLLIER & SONS, Ltd.,

Motor Experts and General Engineers,

Offices and Showrooms,

16, HERBERT ROAD, PLUMSTEAD

(Nearest Station: Woolwich Arsenal)

Telephone: 232 (Woolwich.)

MOTOR BICYCLES FOR SALE.

H AMPSTEAD.—3½ h.p. Bat, low and powerful, good tyres; bargain; guaranteed; £10 only.

H AMPSTEAD.—3½ h.p. White and Poppe, Chatter-Lee frame, very low, grand condition; £16.

H AMPSTEAD.—3½ h.p. Minerva, new November 1907, magnificent condition; £23, with all spares.

H AMPSTEAD.—3½ h.p. Minerva, late 1906, spring forks, splendid condition, new tyres; £17.

H AMPSTEAD.—1½ h.p. F.N. lightweight, only run few miles, grand condition; £20, bargain.

H AMPSTEAD.—3 h.p. Triumph, late 1906, spring forks, good tyres, new condition; £22.

H AMPSTEAD.—3½ h.p. late 1907 Triumph magneto, and spring forks, with all spares; £20.

H AMPSTEAD.—3½ h.p. 1908 brand new Triumph, magneto, and spring forks; £28, bargain.

H AMPSTEAD.—F.N. 1½ h.p., 1908, brand new, lightweight, magneto, and spring forks; £20.

H AMPSTEAD.—3 h.p. Triumph, genuine; £16: good tyres and condition; great bargain.

H AMPSTEAD.—Twin Griffin, late 1907, magneto, and spring forks, almost new; £23.

H AMPSTEAD.—3½ h.p. Griffin, with spring forks; £15, great bargain; guaranteed.

H AMPSTEAD.—Brand new 1½ h.p. lightweight, Griffin, with spring forks; £28, bargain.

H AMPSTEAD.—3 h.p. Rover, vertical M.O.V., splendid condition and going order; bargain, £12.

H AMPSTEAD for Bargains.—Sole agents for Griffons, Minervas, F.N.'s, Triumphs, etc.; liberal allowances on exchange.—Rex, 5 Heath Street Motor Works, Tel. 2684, P.O., Hampstead.

5-6 h.p. Twin Rex, spring forks, long bars, low saddle; £18 18s.; liberal exchange, -16, Westgate, Halifax.

2 h.p. Simms Engine and Magneto, £3; 4 h.p. w.c. machine, £7; wanted, 6 h.p. a.c.—6, Gibbins Road, Selly Oak.

1908 4 h.p. Royal Roc, two speeds, clutch, spring forks, magneto, Brooks non-skid back, Dunlop front, ridden about 200 miles, absolutely as new, guaranteed, Lucas lamp, spare valve, complete; lowest cash, £32 10s.; seen any time.—186, South Lambeth Road, S.W.

1908 Triumph, almost new, perfect, can climb anything, and do 5 to 60 per hour; owner driving four-cylinder Daimler car only reason selling; has ridden Triumphs four seasons; first £20 has it, no offers; seen 153, Clapham Road, S.W.—Address, Leonard Mortimer.

3½ h.p. Phonix Cob, open frame, new seat, magneto ignition, two-speed gear, accessories, etc.; £35; as new—Garaged at Wandsworth, where machine can be seen and tried; price £35; gears and parts are covered, and would suit lady or gent.—9, Shoe Lane, Fleet Street, London.

RIPLEY 2½ h.p. Lightweight, had very little wear, original tyres, as new, and uncut, no better looking machine anywhere, will guarantee the whole perfect and equal to new; can I sell it in Birmingham (you know the makers) for something over £10; wanted 1908 Triumph, new.—71, Oakfield Road, Birmingham.

MINERVA and Rex.—We carry the largest stock of spare parts in the provinces for these machines, can deliver new machines from stock at low prices; cash, exchange, or gradual payments; charged accessories for hire, 1s. per week.—Cookson Bros., 511, Chester Road, Old Trafford.

LONDON.—2½ h.p. Kerry, splendid condition, new Peter-Unions (25 by 2), new dermarine belt, trembler coil, accumulator, horn, lamps, generator, Main-Rilton stand, all new, long bars, Bowden brake and valve lifter, numerous spares and tools; only wants seeing; absolute bargain, £15 for quick sale.—Jackson, 179, Euston Road.

In answering any of these advertisements it is desirable that you mention "The Motor Cycle."

TRICARS FOR SALE.

REXETTE Tri-car, three-seater, 8 h.p., twin-cylinder, two-speeds, fitted with Dunlop tyres and Elastics fittings, complete with lamps, horn, and tools, in thorough order. Inspection invited: trial given: price £65.—Can be seen, Shanks' Garage, Chertsey.

ASHFORD 1907 Tri-car, 6 to 7 h.p. Stevens twin-cylinder, water-cooled engine, three speeds and reverse, coach-built seats, Charter-Lea fittings, Bowden control, wheel steering, 5 to 35 miles per hour; any trial: must sell: best cash offer over £30.—Senior, Holworthy, Devon.

1907 6 h.p. Twin Rex Triette, brand new condition, guaranteed absolutely perfect: expert examination welcomed: 23in. Dunlops, canvasover seat: accept £25 cash, or exchange with a good motor cycle for 1908 Triumph—"Tri-car," 86, Colvestone Dreeseon, Dalsdon, London.

6 h.p. De Dion-Bugle Tri-car, two speeds, wheel steering, three brakes, car tyres, 760 by 90, new, non-skid on back, spare petrol tank, many improvements, perfect condition and order: photo: bargain, £50, or exchange.—Address, Chifford, 51, Weaste Road, Weaste, Manchester.

BARGAIN.—4 h.p. Riley tri-car, water-cooled, first-class order throughout, coach-built forecar, free engine, large clutch, two-speed gear, chain drive, front tyres almost new, back new Palmer cord, front bler coil, spare Rick's tubes, accumulator, etc.: any trial: £36.—Henderson, 250, West Parade, Lincoln.

5 h.p. Barnes Coach-built Light Tri-car, Sarolet engine, fan cooled, p. and M. two-speed, Charter-Lea, shield, Bosch magneto and accumulator, Palmer cord, practically new, lamps, horn, tools, spares, including new Palmer tyre, with tube, excellent condition: any trial: £40.—Learmount, Gosforth, Newcastle.

1908 Practically Brand New 10 h.p. Twin-cylinder Rexette, two speeds and reverse, twin tyres on back wheel, seats two and child in front, climbs most hills on top gear, everything in absolutely perfect and new condition, not done 300 miles: accept £60 cash: any trial—Stanton, 86, Colveston Crescent, Dalsdon, London.

3 1/2 h.p. Water-cooled Rex Tri-car, three seats, two speeds, just thoroughly overhauled, re-plated, and re-painted crimson, black and white lines, new back tyre, runs any hill, and keeps absolutely cool, jump circulation: bought car: trial and expert's opinion invited: price £35.—W. Fletcher, 21, Pleydell Avenue, Aberley Lane, Upper Norwood.

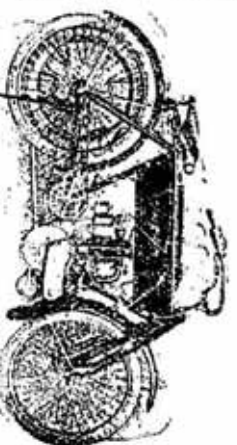
HANDSONE Tri-car, 8 h.p., twin air-cooled Buquet engine, 85 by 90, two-speed, Charter-Lea gear box, open frame, spring front axle, 650 by 65 Goodrich non-skid back tyre, Continentals front, Bowden wheel control, coach-built bucket seats, finished in automobile red, with black lines: photo: any trial: £55: take motor cycle in part payment.—Ireland, St. Neots, Hunts.

3-10 h.p. Rexette, both seats coach-built, wheel steering, water-cooled, seats three, heavy 700 by 85 car tyres, back one grand new non-skid, the machine thorough, run in almost new condition, can easily reach 40, and will take nearly all hills on top speed, absolutely the finest tri-car produced: will sacrifice, immediate cash, £35.—R. Elso, Leaewood, near Mallock.

9 h.p. Riley Tri-car, three speeds and reverse, coach-built, open frame and wheel steering, guaranteed as perfect as new, has several spares, non-skid on back wheel, lamps, horn, electric tail lamp: any severe trial can be given: it will do forty miles with a gallon of petrol: price £65: will take an up-to-date motor cycle in exchange.—Garred at Wandhope's, 9, Shoe Lane, Fleet Street, London.

STAMFORD HILL.—Must be sold. Twin Amalino, R.O.M., Mabou clutch, splendid machine, £30: twin Kerry, long bars, Millford front, very high and fast, R.O.M., grand gear, £28: 4 1/2 h.p. Phoenix, fit all two speeds, footboards, etc., £25: 3 1/2 h.p. Excelsior, two speed, starts like car, £15: 4 1/2 h.p. Kalam, plain drive, sound and fast machine, £17: 10 1/2, any offer, cash or exchange: trials: insist on trials.—128, High Road, Tottenham.

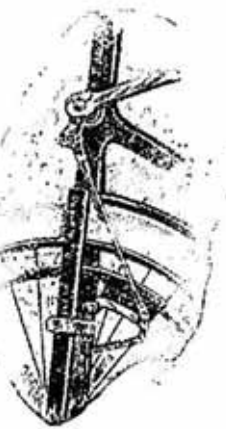
MATCHLESS MOTORS!



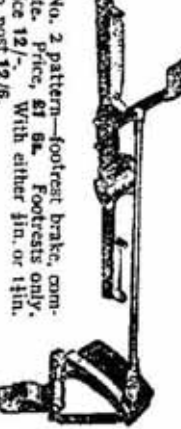
The Tourist Trophy Winners, 1907: Land's End to John-o'-Groat's, 1908: GOLD MEDAL, 200 Miles World's Record, 1908, also 4, 5, and 6 Hours' World's Record.

Artist Federation Sports, Herne Hill—scratch Race: MATCHLESS FIRST.
5 Mile Open Handicap: MATCHLESS FIRST.
5 Mile Road Handicap: MATCHLESS FIRST.
Auto Cycle Union Race Meeting.
Stadium 1 Hour Race: H. V. Colver on MATCHLESS FIRST, BEATING WORLD'S HOUR RECORD for MACHINES 75 x 76.
Cable Park Sports, Glasgow, August 8th, 1908: HARRY MARTIN BEAT SCOTTISH RECORDS.
1 Mile Flying: 46 seconds. 3 Miles: 3 mins. 24 sec.
6 Miles: 5 mins. 42 sec.
"Matches" Motors for Speed and Reliability.

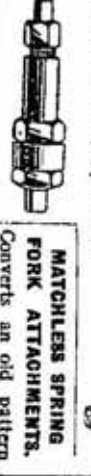
LONDON TO EDINBURGH:
3 STARTED. 3 FINISHED.
No Trade riders—ridden by private owners only.
"CHASE" DRIVING RIM BRAKE.



No. 1 pattern—32 x peeling brake. Machine can be wheeled backwards. Extremely powerful. Price 16/6, post 17/6.



No. 2 pattern—footrest brake, complete. Price, £1 8s. Footrests only, Price 12/6. With either fin. or thin. clip, post 12/6.



No. 3 pattern—foot brake with pedal fitted on stud provided, which fixes in place of one of crank case bolts. Price complete 16/6, post 17/6.

MATCHLESS PETROL FILTER.
Converts an old pattern motor cycle into an up-to-date luxurious motor. Thousands in use, giving every satisfaction!
4/6, p 2 1/2.
16/6, post 16/6.

Catalogues of "Matchless" Motor Cycles and Accessories on application to
H. COLLIER & SONS, Ltd.,
Motor Experts and General Engineers,
18, HERBERT ROAD, PLUMSTEAD
(Nearest Station: Woolwich Arsenal,
Telephone: 252 Woolwich.)

TRICARS FOR SALE.

h.p. Eagle Tri-car, Buquet engine, Longene-mate carburettor, Clincher tyres, very powerful and reliable, large gas lamp, pump, booter, etc.: £25, equal to new or exchange cycle and cash: private.—22, The Avenue, Bruce Grove, London.

SIDECARS AND FORECARS.

FORECAR, extra strong, one tyre, 26in. by 2 1/2in.; £5 5s., adjustable.—Ellis, 1, Oxford Road, Kilburn, N.W.

FORECAR Attachment, wicker body, Clincher A won tyre: 50s.—Spence, Durham Road, Spenny Moor.

GENUINE Charter-Lea Sidecar, fit any machine, two months' wear: £5 10s.—Clark, jun., Royston, Herts.

MONTGOMERY Sidecar, 24in. wheel, good side, Cladon, near Sunderland.

PHENIX Forecar, coach-built, splendid condition, 26 by 24 wheels: £6 10s.—G.W., 47, Montague Road, Dalsdon, London.

KERRY Forecar, 23 h.p., in new condition: a bargain, price £12.—Carry Bros., 10 and 12, Elephant Road, London, S.E.

STAMFORD HILL.—Two-wheeled coach-built sidecar, 26 by 24 Continentals, beautifully sprung: cost £18, price £7 10s.

STAMFORD HILL.—Famous rigid sidecar, instant delivery, none better, fit your machine, £4 18s. 6d.: sound second-hand sidecar, £3 5s.—128, High Road, Tottenham.

CHATER-LEA Sidecar (latest model, cost £11): sacrifice £5 15s., only ridden once, S.W. Jackson, Post Office, Larkhall Lane, S.W.

SIDECAR, fit any frame, perfect condition, 26in. motor tyre: sacrifice £4 5s., lowest price.—G. A. Edgar, 123, Holloway Road, London, N.

£12 12s.—Castor wheel Sidecar, 26in., upholstered green, apron, etc., been used six times on Triumph: accept £6 6s.—23, Arden Road, Handsworth.

FORECAR, cane, hand brakes, 26 by 24 tyres, good condition: £4, near offer: exchange gent's new cycle.—Bone, 38, Scotland Green, Tottenham.

SIDECAR, for light powered motor excellent condition, £2 10s.: Clincher, 26 by 23in., Bates cover, good condition, 8s.—9, Browning Road, Manor Park.

SIDECAR, wicker, 26in. by 24in. Dunlop, upholstered green, £3 10s.: also Open-mann free engine clutch, £1, or exchange forecarriage.—10, Thornhill Road, Leyton.

NEW Forecar Coach-built Body, 45s.: Longene-mate carburettor, 18s. 6d., suit 6 h.p.: new spring fork attachments, 8s. 6d., post paid.—Laylors Motor Works, Edmonton.

FORECAR Attachment, 26in. wheels, Peter-Union tyres, wicker seat, upholstered, footboards, hand brakes, good condition: £3 10s.—Stevens, 4, Goldhawk Mews, Shepherd's Bush.

BOOTH—Several Montgomery sidecars, cheap, shop-soiled. A few second-hand sidecars very cheap. A State requirements.—Booth's Motor Exchange, Wade Street, Halloway.

LIBERTY Art Cane Sidecar, new condition, adjustable, wheel 26in. or 28in., £5 10s.: new 26 by 2 Palmer tube, 7s. 6d.: 7 1/2, 6in. 3 1/2in. Wala-wala, 6s.: wanted, 6 h.p., or similar tri-car: no rubbish.—189, Bowes Road, New Southgate.

HAVE you seen the Oakleigh patent spring wheel sidecar, if not, come and have a ride in one. No more sudden shocks to the system: price £8, or your old present one converted for 50s. We are still building our 45 sidecars for those that prefer them. Remember £20 guarantee against sidekick. No other firm dare do this.—Oakleigh Motors, Ltd., inventors and originators of the sidecar, West Dulwich.

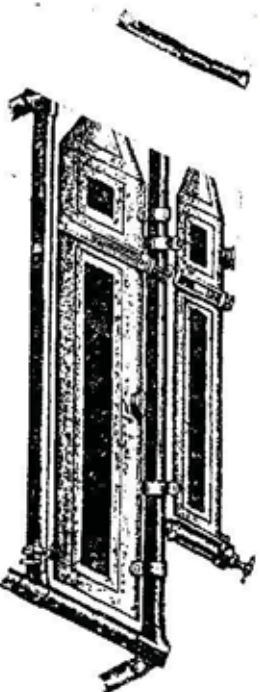
MOTOR TRICYCLES.

MOTOR Tricycle, genuine De Dion, fitted with large seat, tyres new last year, 1 1/2 h.p., will go up most hills without assistance: £5.—Apply, 6, Brownwood Park, South Horsey, N.

In answering any of these advertisements it is desirable that you mention "The Motor Cycle."

**You have never seen a smarter
pair of tanks than the**

DAVISON 1909 TORPEDO.



SELF PRAISE IS LESS RECOMMENDATION THAN TV
Folds Motor and Engine Co.

"We have received the tank safely, and are extremely pleased to have ever seen, and we shall have much pleasure in recommending it."

Send a postcard for particulars of the TV

HERS, SO PLEASE READ THE FOLLOWING:

Bolton, May 10th, 1907.
It is by far the finest and best equipped tank we have seen, and we shall have much pleasure in recommending it."

Tapless Pump, and other Davison adjuncts.

A. C. DAVISON, 12a, Pleasant Row, High St., Camden Town, London, N.

"MATCHLESS" Motors

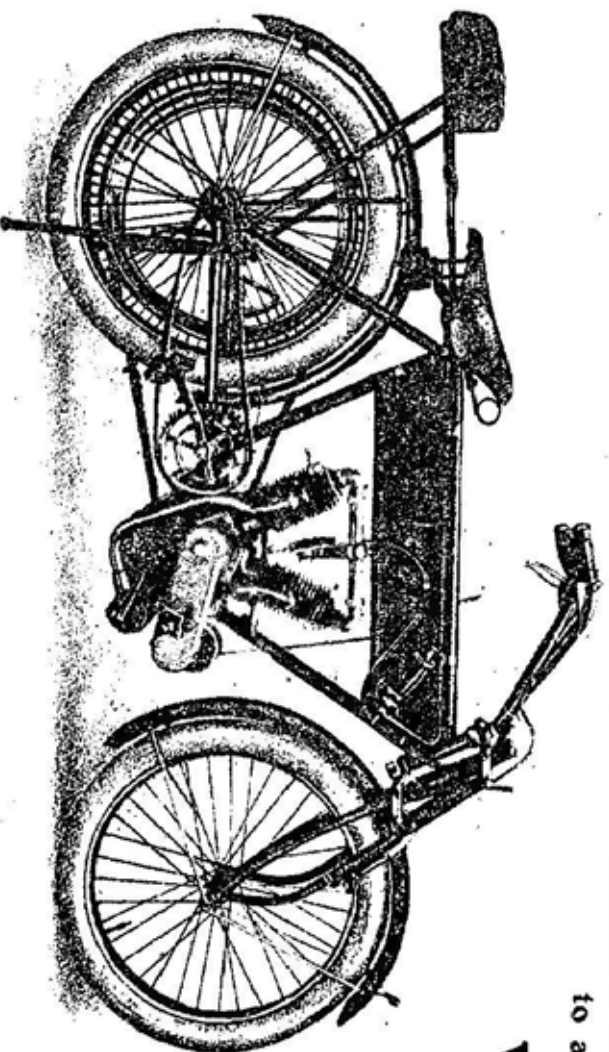
concede a start in competitions
to all others.

WHY?

Because they hold an unequalled record for speed and absolute reliability.

SECOND TO
NONE.

"MATCHLESS"
FOR MERIT.



MODEL No. 4-6 h.p. TWIN.

Eight Models from which to choose, ranging from 2 1/2 h.p. Lightweight to 9 h.p. Twin.

CATALOGUES OF THESE FAMOUS MACHINES POST FREE ON APPLICATION TO

H. COLLIER & SONS, LTD., Herbert Road, Plumstead.

Telegrams: "Matchless," Woolwich.

NEAREST STATION: WOOLWICH ARSENAL.

Telephone: 282 Woolwich.

Made well—Looks well—Works well!

The only stand
operated entirely by
the rider's foot.
The back wheel can
be removed.

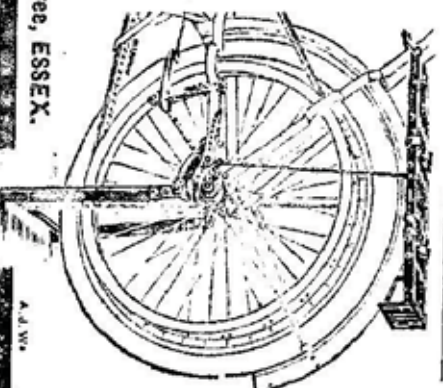
Millennium

Express Stand—No. 3.

LAKE & ELLIOT,

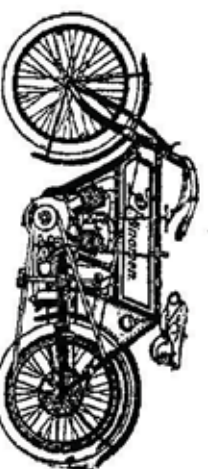
Makers of the "Millennium"
Accessories for Motor Cars
and Cycles.

Albion Works, Braintree, ESSEX.



PROMPT DELIVERIES OF

PHANOMENS, PREMIERS, ROCS, TRIUMPHS,
N.S.U.'s, MINERVAS, WOLFS, HUMBERS,
MOTO-REVES, and MOTOSACOGHES.



EXCHANGES ARRANGED.

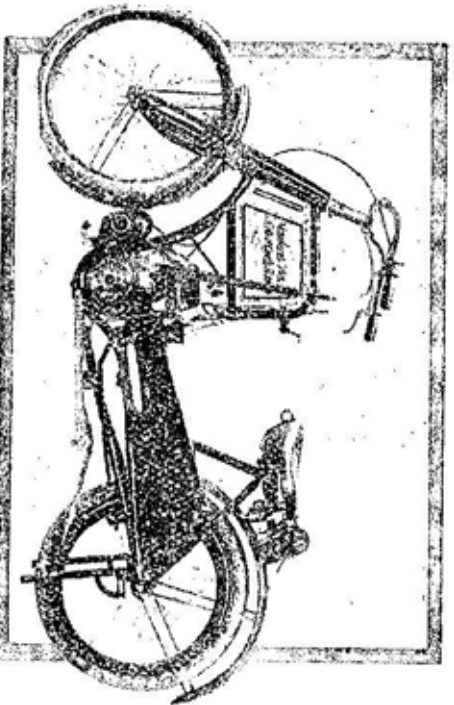
ACCESSORIES OF EVERY DESCRIPTION PER RETURN.

ROBERT BEVAN, 31, 33, 35, CASTLE STREET, CARDIFF.

In ensuring these advertisements it is desirable to mention "The Motor Cycle."

Stanley Show Cleanings—

the pinion G_2 on the counter-shaft being always in mesh with pinion C_2 on the left-hand propeller-shaft C_1 . C_3 is the bevel driving pinion fitted to all four-cylinder 2 N. motor bicycles. F is a sliding dog clutch on a square on shaft C, and dog teeth E, are formed on the faces of the pinions E and C_2 . When the clutch F is in the position shown in the sectional line drawing, the engine and the shaft C revolve without moving the road wheel. This is the free engine position. To engage the low speed, clutch F is moved to the right, and dog teeth on F and E being thus interlocked, pinion G and shaft G_1 and pinion G_2 revolve, also turning pinion 2 and shaft C_1 , but at a slower speed than shaft C. The low speed ratio is about 10 to 1, giving ample power for all hills even when a sidecar is used. We understand that the fitting of this gear does not necessitate any structural alterations to the frame, and it can be fitted to any four-cylinder F. N. in a few hours.



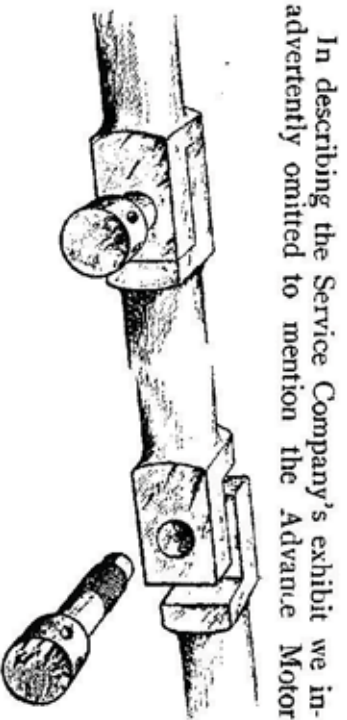
A new pattern motor cycle frame (Stanley's patent), suitable for a lady or a gentleman. It was described on page 921 last week.

A FOUR-WHEELED PASSENGER MOTOR CYCLE.

A PASSENGER motor cycle which attracted an unusual amount of attention at the Stanley Show was one exhibited by Messrs. Collier and Sons, Ltd. This was a twin-cylinder Matchless bicycle coupled to a two-wheeled Lowen sidecar, both specially built to the order of Mr. E. Körber, a Northern motor cyclist.

The combination is shown in the accompanying illustration. The engine is a 7 h.p. J.A.P., 76 x 95 mm., automatic inlet valves, Bosch magneto ignition, J.A.P. carburetter, handle-bar controlled, Dunlop tyres, 26in. x 3in. back and 26in. x 2½in. front wheels, 1½in. belt transmission, Nala gear giving ratios of 4 and 8 to 1, free engine, and new design Matchless spring forks. The whole bicycle and sidecar frame are enamelled French grey with green lines. The sidecar is 30in. wide inside, and the back 22in. high, coach-built, and finished dark green, and has two special luggage compartments and a Cape cart hood. Extra braking power is obtained by fitting a dummy belt rim on the right of the bicycle driving wheel, the usual foot brake acting on this. Before handing the machine over to Mr. Körber, Mr. C. R. Collier has promised to test it with passenger up a steep hill with a gradient not less severe than Birdlip.

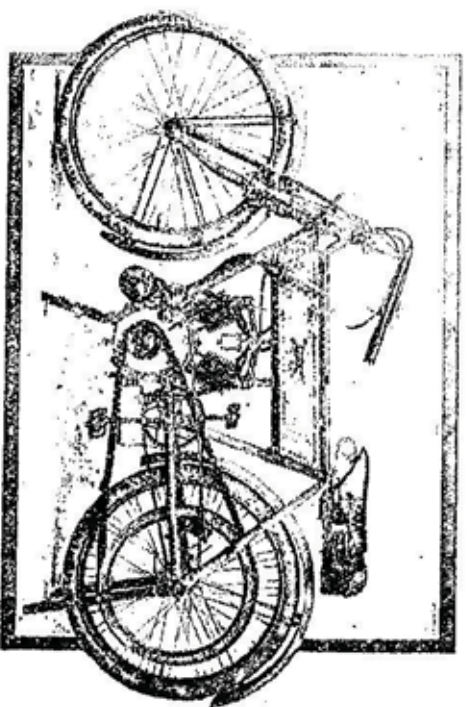
Mr. Körber tells us that he has already planned a 1,600 miles zig-zag tour through Scotland with his



The Chester Lea instantly detachable sidecar fittings, which will bring the rigid type of attachment more into prominence.

Company's extensible belt fastener, designed to work with adjustable pulleys, and a new lamp generator bracket forming part of the petrol tank clip.

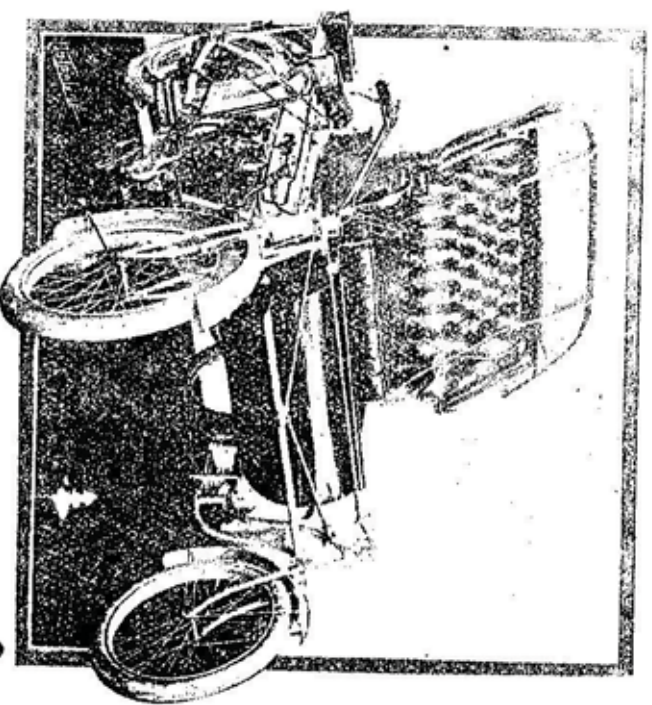
This company was practically the first to place this last named handy device on the market.



A Twin-cylinder Wolf Bicycle with Ruthardt magneto, exhibited at the Stanley Show. Two legs attached to the crank case cradle, support the front wheel clear of the ground.

A PASSENGER MOTOR CYCLE.

wife and child (five years), embracing all the most interesting places, next May and June. We hope to be able to record some of his experiences on the tour.



A 7 h.p. Matchless Bicycle and Lowen Sidecar exhibited on Messrs. Collier and Sons' stand at the Royal Agricultural Hall last week.

among the Heavy Brigade.—

like a pedal valve-lifter on twins, as one seldom needs save when descending long grades. I have used such a device with great satisfaction, adjusted to cut out the rear cylinder separately so long as the toe pressure is light, and this renders a racing twin capable of quite slow speeds in traffic. I think makers of twins might profitably employ this tip.

Fire-eating Twins.

Amongst fire-eaters, the Rex twins with sporting lubmen up have nearly always provided the ascent of the day at every big hill-climb. The sight of these speedy machines hurtling their riders up our most trying hills at over fifty miles an hour is a spectacle ever to be forgotten. The Rex improvements have mostly been described in previous issues, but its lubrication system deserves fresh mention. The grey Speeding twins will be amongst the most popular speed mounts of the year, and there is scarcely a detail on any of the models which has not received ingenious attention. In particular the spring fork fitted to the heavier standard touring models is a long way better than former patterns, and I was pleased to see the comfortable rear springing had been retained. The practical sidecar attachment bolts will be greatly appreciated by those who intend to use a Rex twin for assenger work, and the makers are to be congratulated in their enterprise in making a sidecar to suit their own machine. Judging by my examination of the Rex wins, I predict that a far larger number of these machines will be seen on the roads than ever before.

The new Brown looks a mover, and we may expect to see Bruce showing us its climbing and other qualities at the big events next year. The Clyno is notable for three good points—an excellent first appearance for a new make—viz. smart telescopic two-legged standard, fire brake connection to both rim shoe, and an excellent magneto position.

Suburban Sportsmen with a Thirst for Speed.

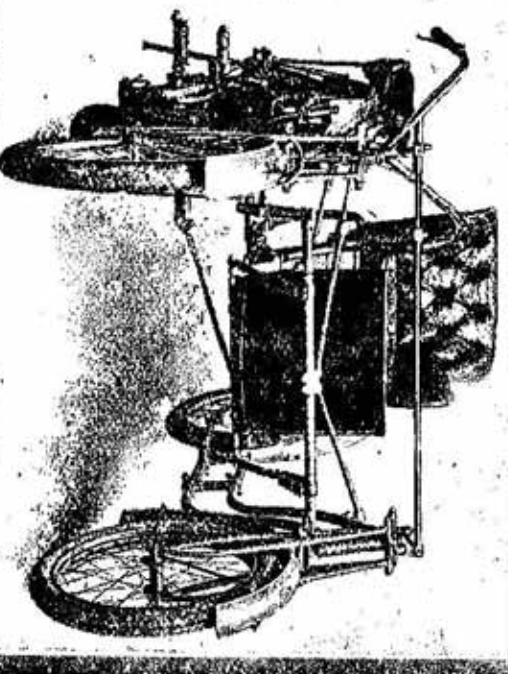
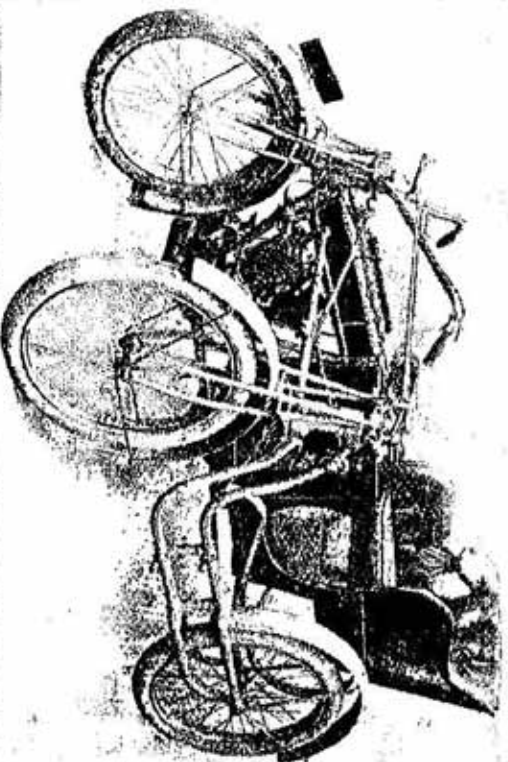
The N.I.C. twins are imposing semi-racing mounts—just the firm to satisfy a suburban sportsman with a thirst of his own and a thirst for speed; this firm ranks among the half-dozen who really know how to tune an

engine. The Premier twin may prove to be the sole prophet of future practice; it has already, perhaps, been belauded more than is good for the young, but not as much as it deserves to be. The N.S.U. twins retain their old design, with an almost horizontal front cylinder, admitting the maximum of cooling draught to the rear cylinder. In particular they cater efficiently for all types of passenger work, and they staged one of the few medium-powered twin cylinder tourists in the Show. The Norton is supposed to be a twin with engine secrets, and I should like to see it out in next year's T.T. Race; it is a genuine goer. One or two other twins figure on the smaller stands, among which the A.S.L. with its spring frame is a notable and original type.

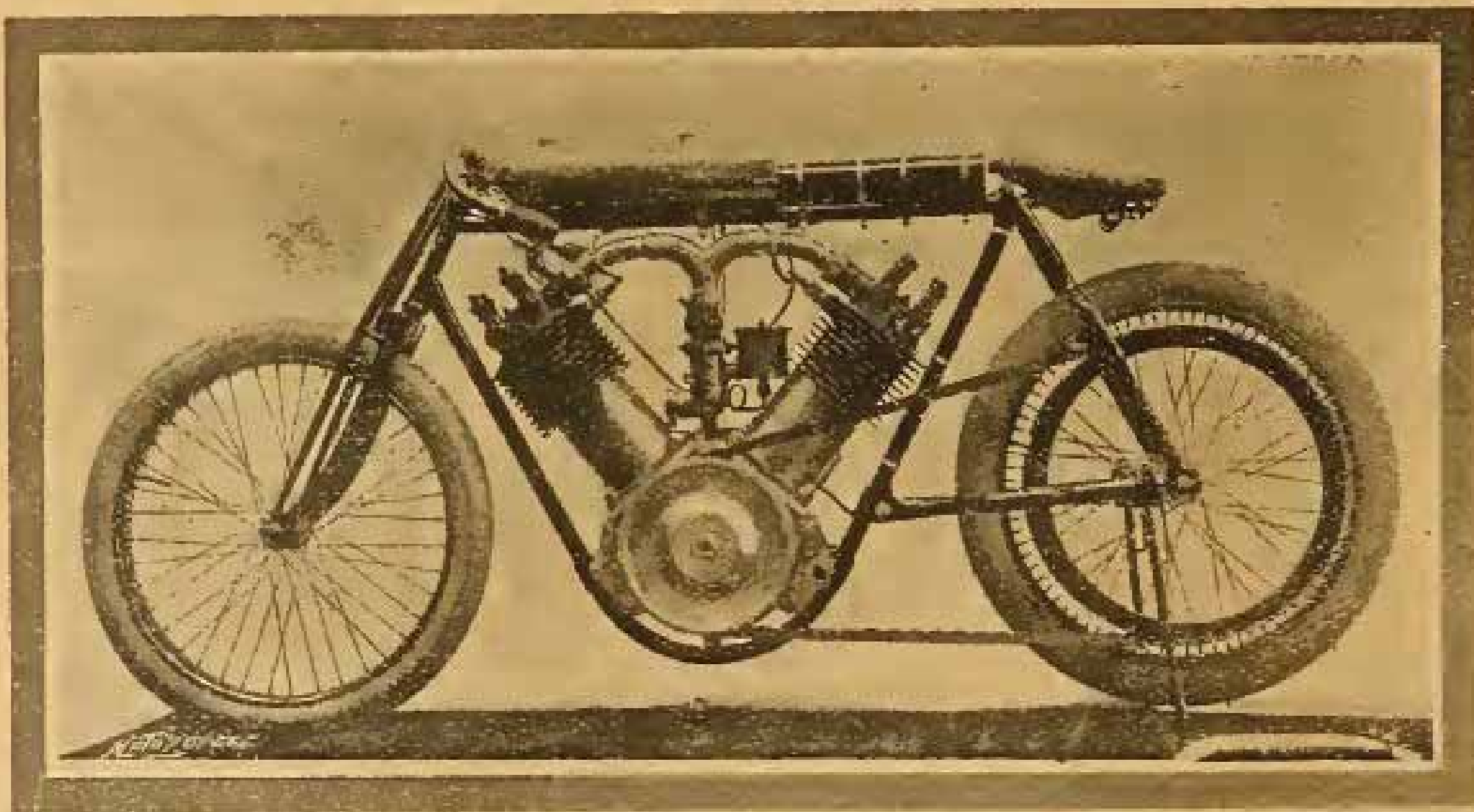
The Four-cylinder Models.

The P.N. has managed to exorcise the few remaining sources of trouble; the lubrication is further improved, and the plugs are now set in the side of the cylinder heads, out of oil's way. The carburetter is probably the best attempt at a truly variable choke tube which was to be found at either show.

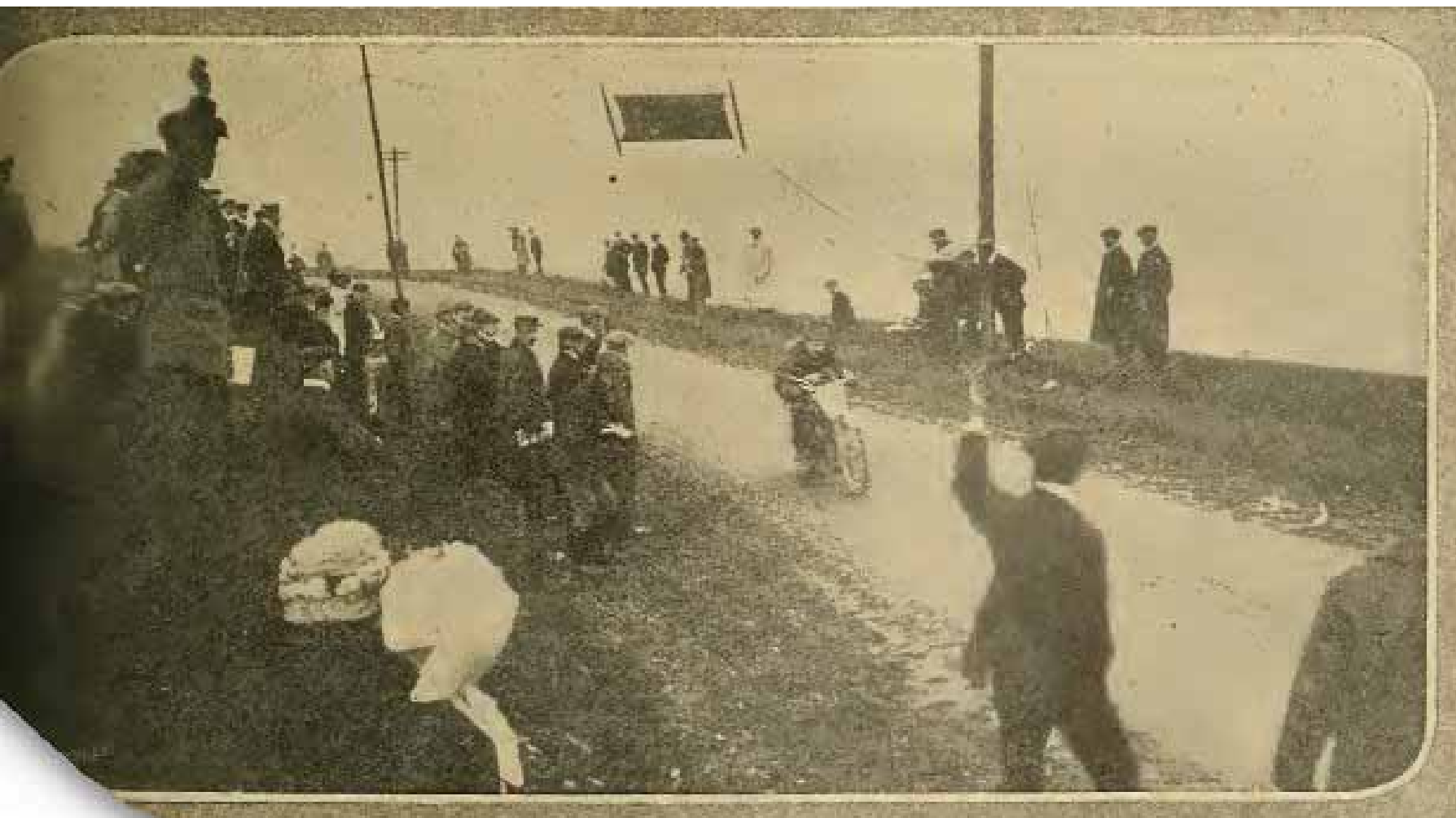
This brings me to a class of machine which is intrinsically novel, comprising such catlike exhibits as the Touring Auto Cycle and the Rex four-cylinder (the latter, I regret, was not complete). I have no real right to speak of types like these, as I consider they make a distinct appeal to sidecar enthusiasts, but that for solo work they can never enjoy such a future as their makers seem to expect. If a man wants a sidecar machine *de luce*, he will certainly consider such mounts as these very seriously. They will haul a sidecar absolutely anywhere, quietly and smoothly and quickly and, if my judgment of their design and construction be accurate, without *jaunter*. The rigid transmission is certainly ideal for a passenger combination, and in this sphere they are formidable rivals of such machines as the powerful gear-boxed Chater Lea twins, and twins with belt drive and epicyclic hubs. A sidecar enthusiast may also be well content to employ them for occasional solo work. Outside the sidecar class of rider, I have certainly met here and there an occasional enthusiast or two who will be satisfied with nothing less than a complete two-wheeled automobile.



One of the most attractive passenger combinations at the recent Show was the above 7 h.p. two-cylinder Matchless-J.A.P. with Lowen two-wheeled sidecar. In addition to the body being suspended on long C springs, it will be noted that spring forks are fitted to each steering wheel. We are told that the steering has now been rendered quite easy.



The 18-20 h.p. Matchless-Jap Racer. This had the biggest engine exhibited at the Stanley.



C. R. Collier
(5 h.p. Matchless-
J.A.P.) finishing
the Snaefell hill-
climb. The finish-
ing post was about
300 yards from
the Bungalow
nearer to Ramsey.
Collier's speed
was equal to 44.8
miles per hour
for the whole
distance—a little
over six miles.

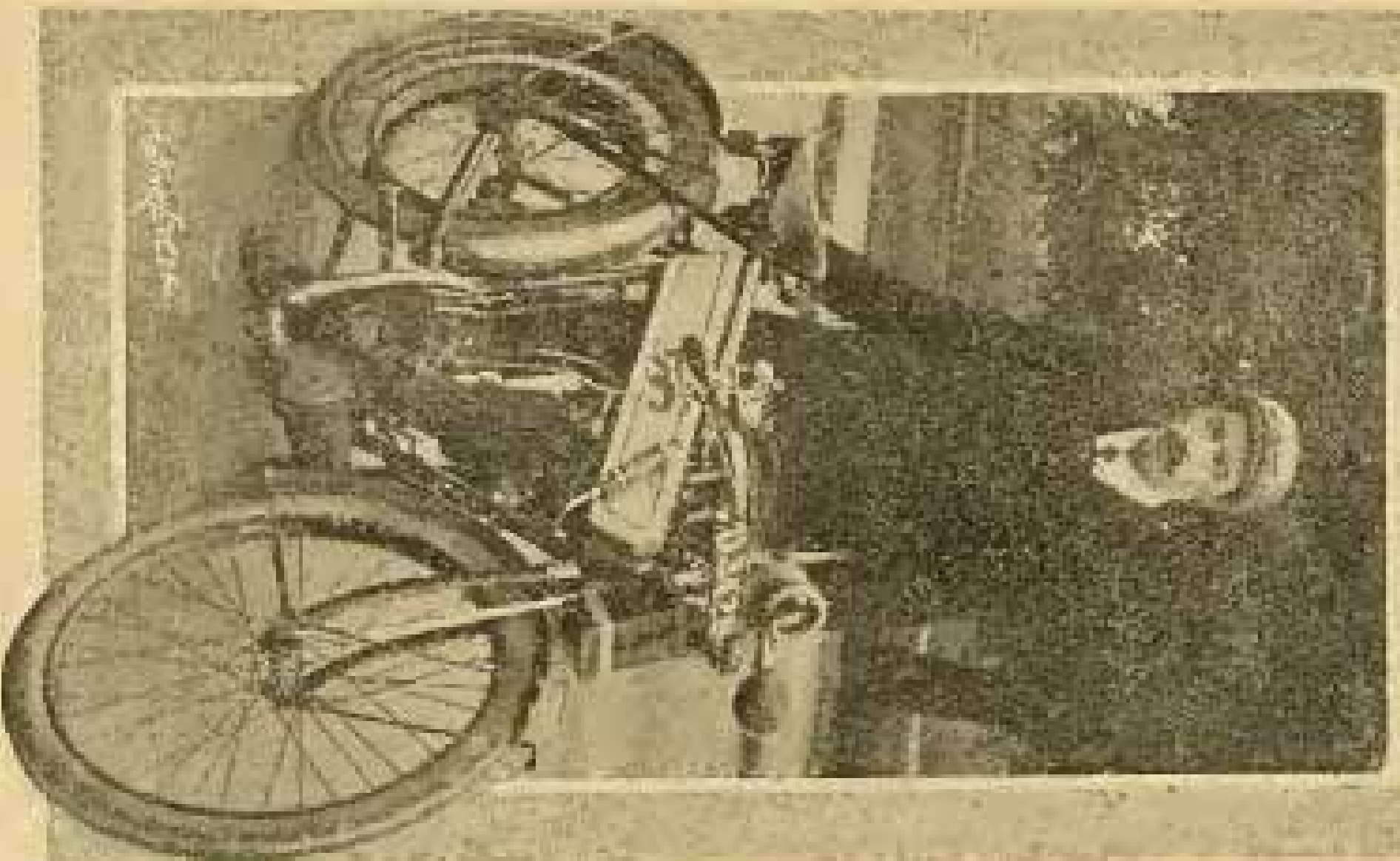


The winner of
the 1909 Inter-
national Tourist
Trophy Race.

H. A. Collier
(5 h.p. Matchless-
J. A. P.) passing
the finishing post
at St. John's.

Collier finished
3 min. 58½ secs.

in front of
G. Lee Evans
(5 h.p. Indian),
completing the
distance—158
miles 220 yards—
at an average
speed of 49.002
miles per hour.



H. V. Colver, who rode one of the three most powerful machines in the T.T. Race, viz., a 7 h.p. Matchless-Jap. He ran out of petrol near the finish.



J. A. Collier (Plumstead), 5 h.p. Twin Matchless J.A.P., a.o.i.v., Bosch magneto, Longuemare carburetter, Dunlop tyres.

low. Each or all would account for

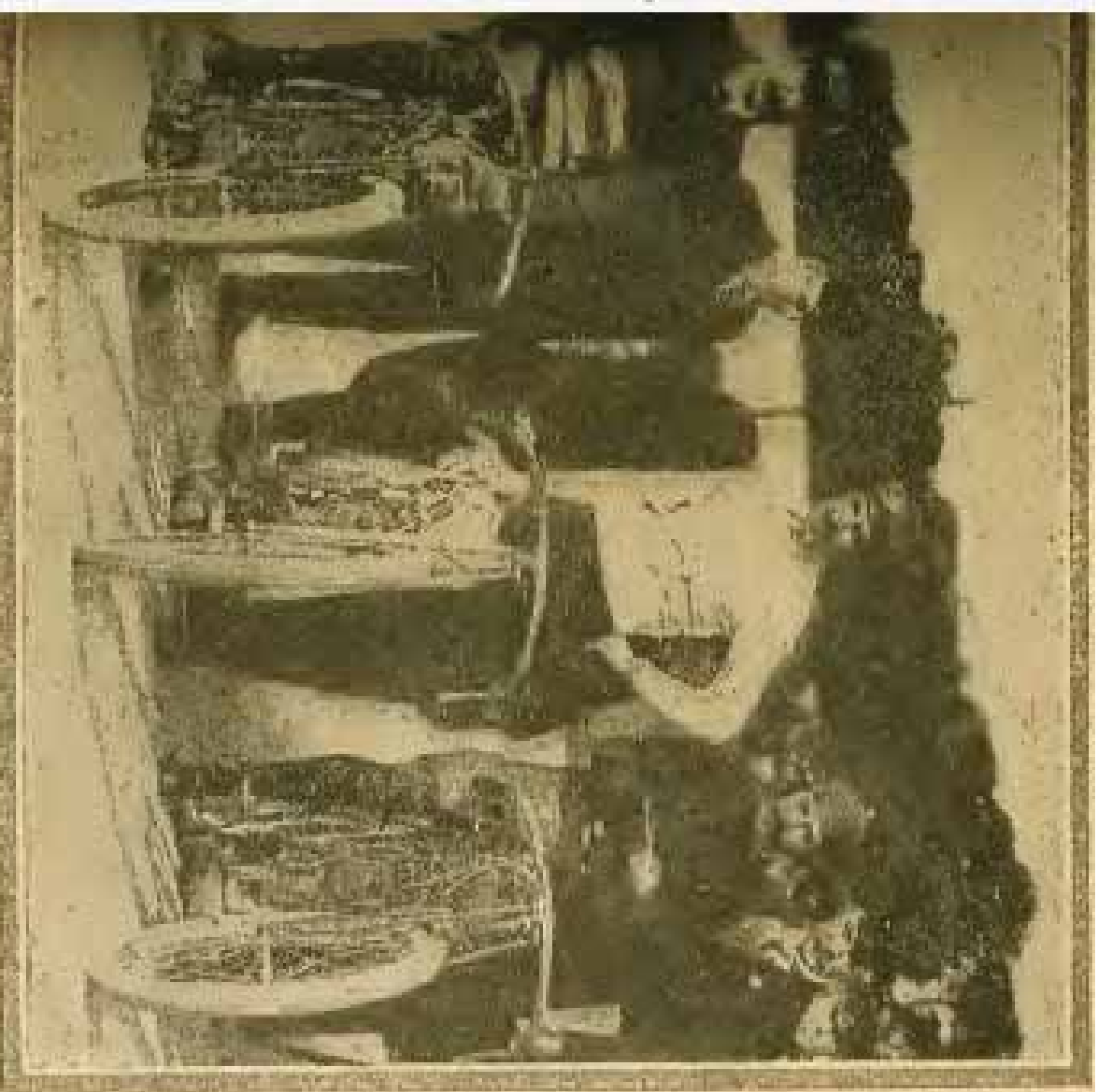
Misfiring due to Contact Points or Coil.

My mount is a $3\frac{1}{2}$ h.p. N.S.U., with accumulator ignition and plain coil, and have not been troubled before with misfiring, to which it has lately taken a fit. I have tried everything, and find after cleaning the tips of make and break that it runs well for about ten or fifteen miles, then starts misfiring badly, which I think is due to a deposit of something like solder on the ends of platinum tips, not black or pitted. I have tried adjusting them to touch as lightly as possible, but the engine will not fire at all unless they touch heavily. I have filed tips before, so do not think they were only capped with platinum.—F.E.E.

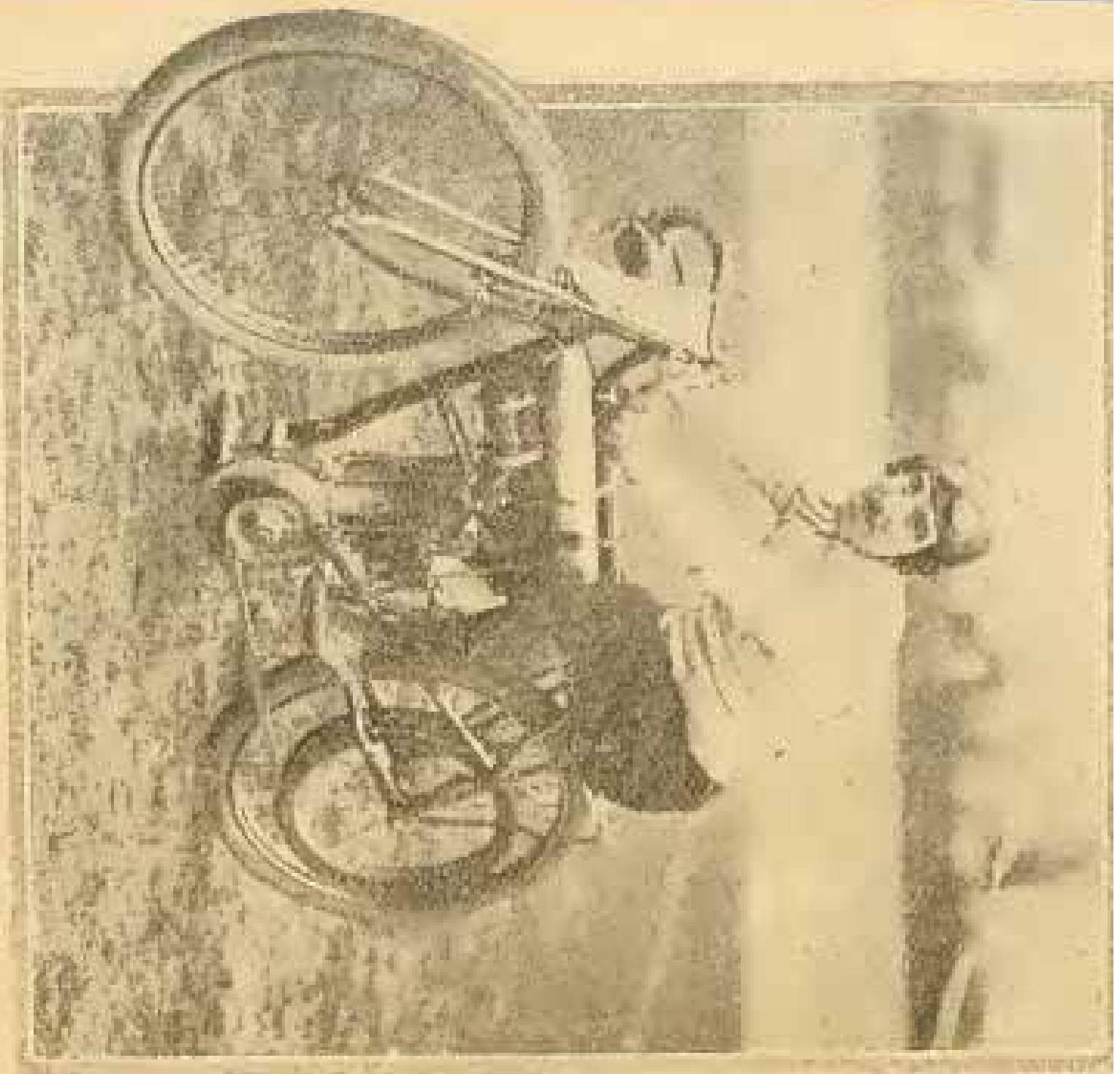
It seems most likely that the points require new tips of genuine platinum or iridium, but the trouble may be



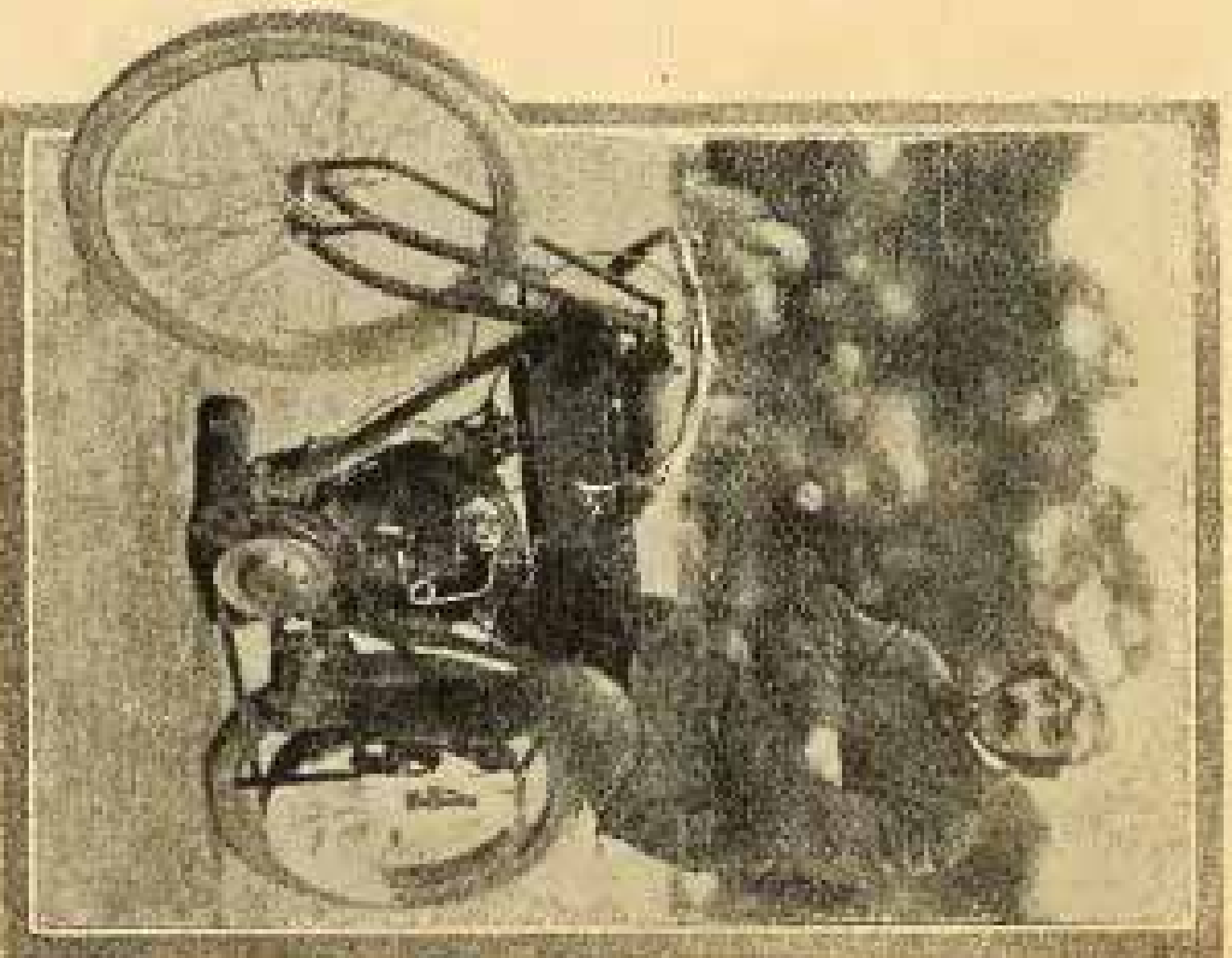
H. V. Colver (Plumstead), $3\frac{1}{2}$ h.p. Matchless J.A.P., m.o.i.v., accumulator and coil ignition, Longuemare carburetter, Dunlop tyres.



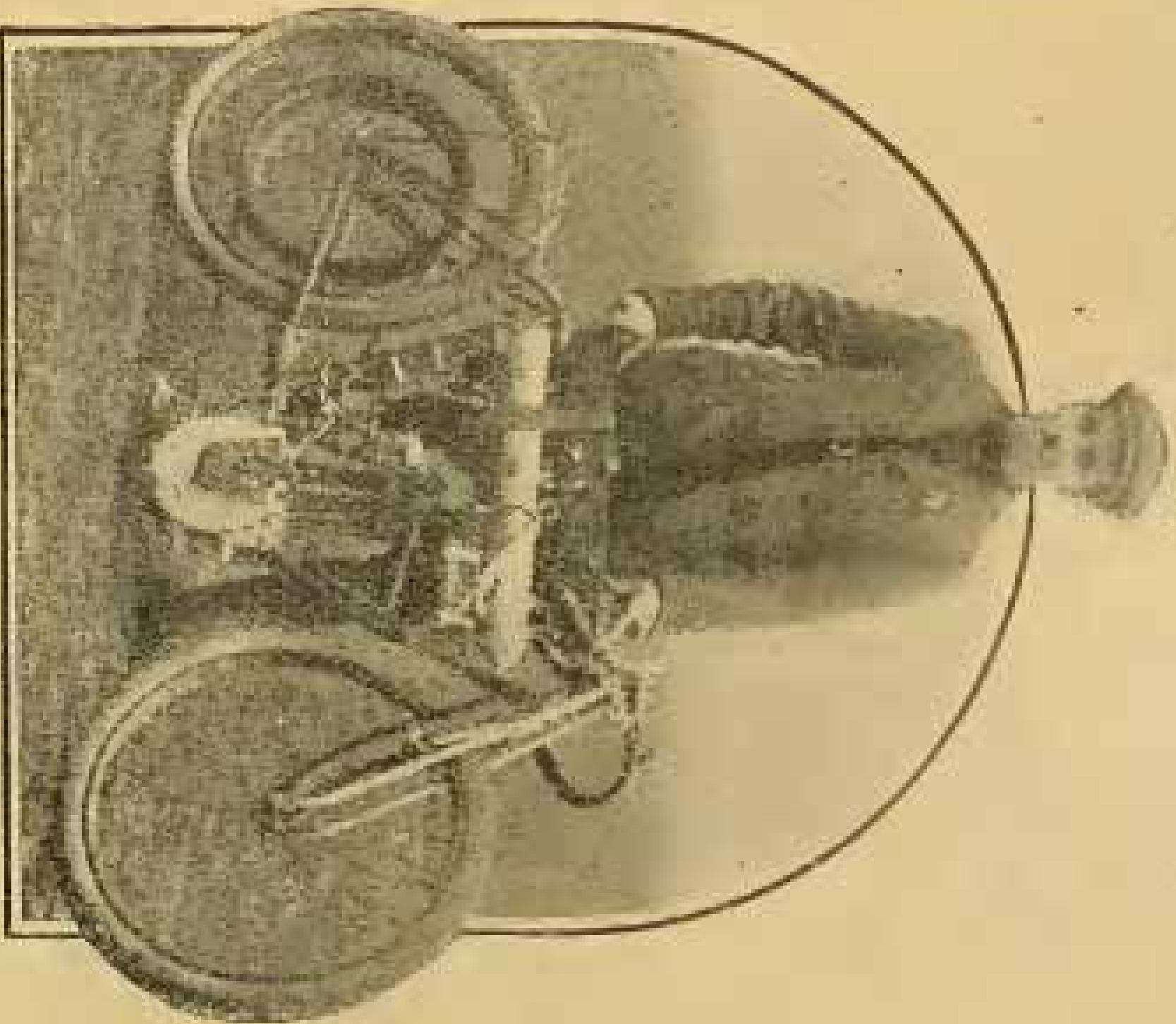
Nevertheless J. A. P. motor cycles performed the "hat trick" in the October Handicap. H. A. Collier was first, C. R. Collier second, and H. V. Colver third.



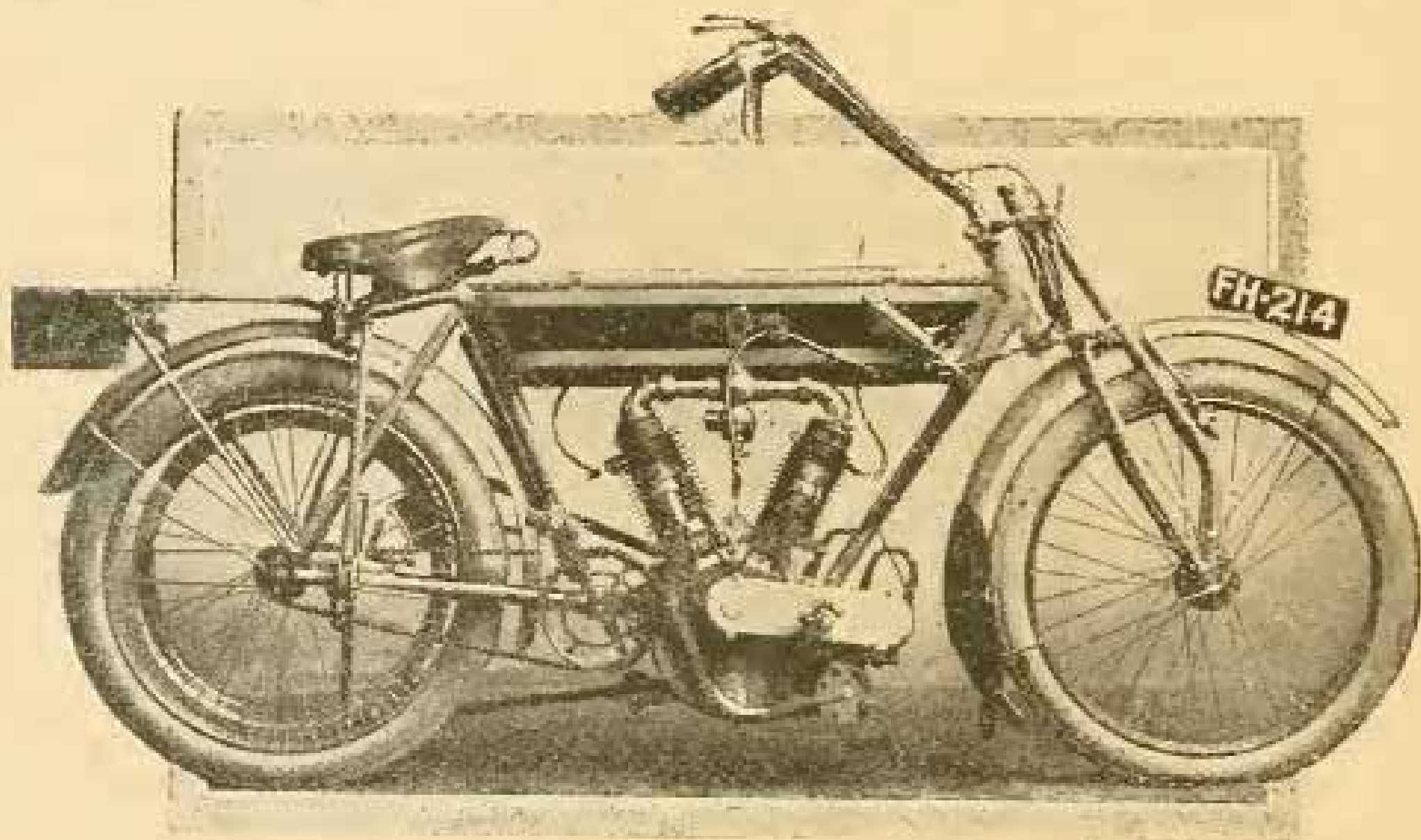
The well-nigh invincible C. R. Collier and the 85 - 60 min. Matchless-J.A.P. with which he won "The Motor Cycle" Challenge Cup, riding 50 miles 858 yards in the hour. He also won the "Automotor Journal" Challenge Cup for fastest time in the Mile (flying start) Time Trials. Collier's time was 1 min. 41 secs. - 56½ miles per hour.



H. V. Colver (8 h.p. Twin Matchless-J.A.P.), 964 c.c. capacity, holder of the 50 miles, 100 miles, and two hours' records, made at Brooklands on the 8th ult. Colver's two hours distance was 118 miles 14 yards. His machine was equipped with accumulator and coil ignition, Longuemare carburetter, and the new Hutkinson motor cycle tyres.



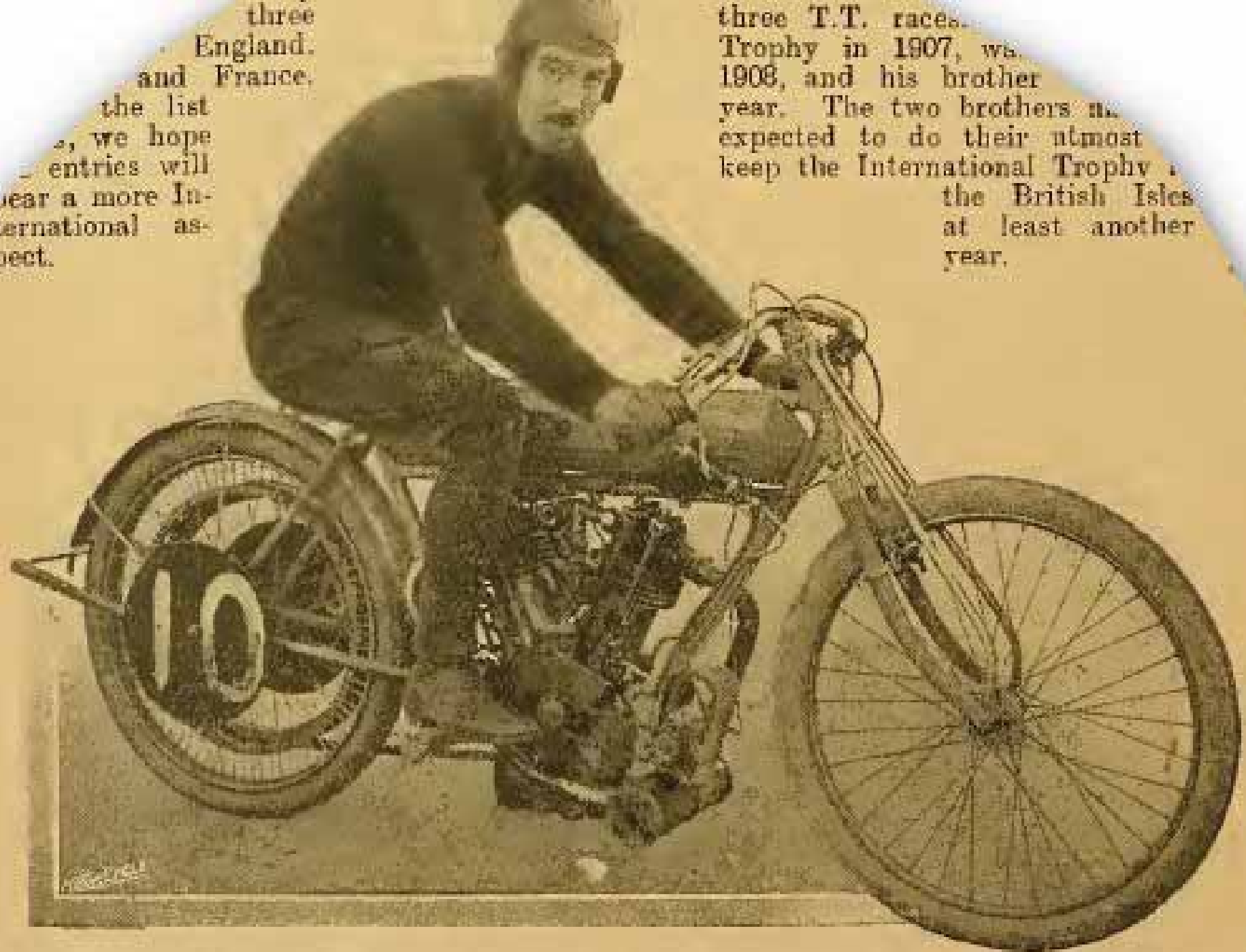
**C. R. Collier, who proved victorious, covering 48 miles
1740 yards.**



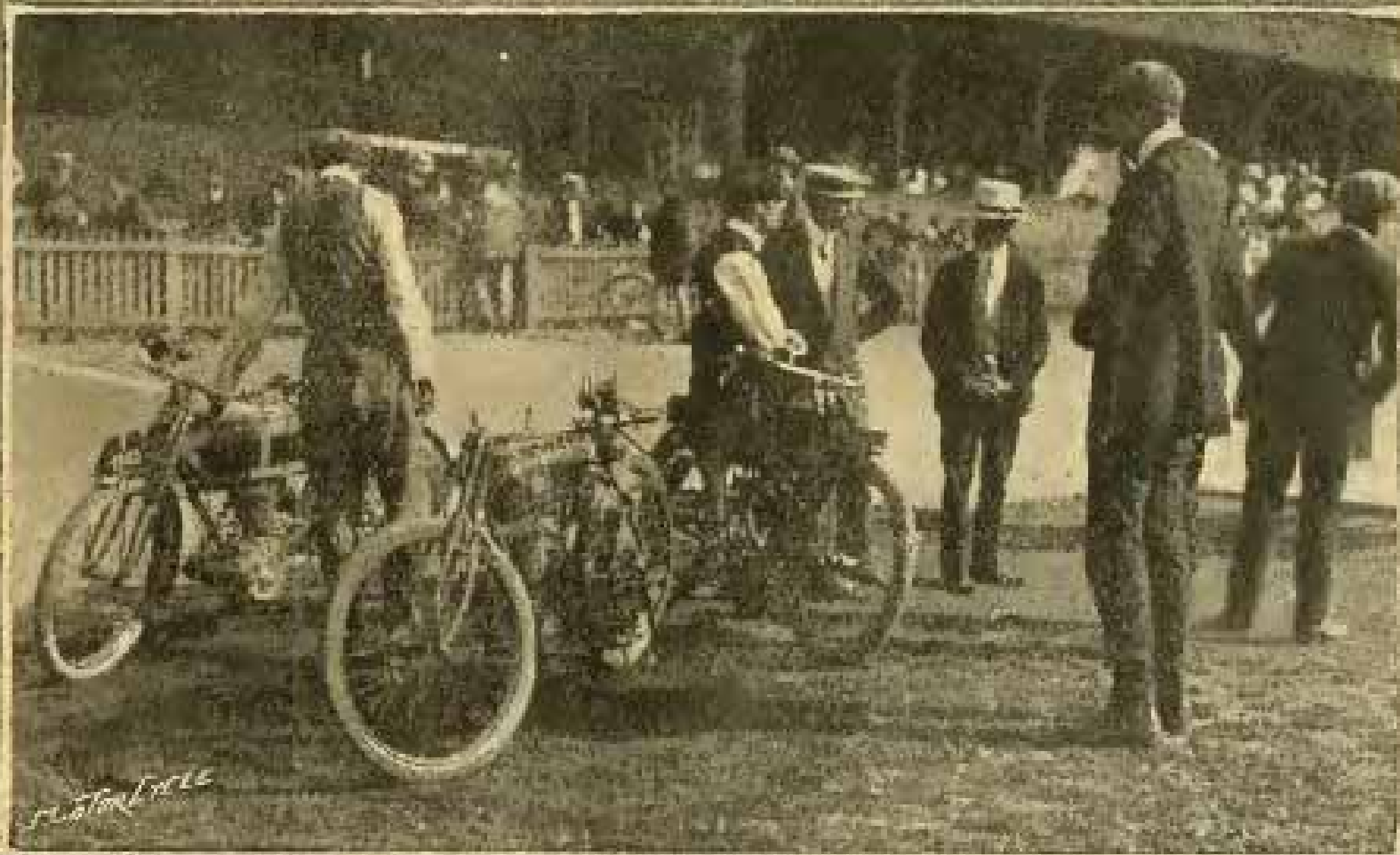
7 h.p. twin-cylinder a.o.i.v. Matchless-J.A.P., with spring forks, magneto, and new Amac carburetter.
A number of makers have adopted the position shown for the toolbag.

three
England.
and France.
the list
, we hope
entries will
bear a more In-
ternational as-
pect.

three T.T. races.
Trophy in 1907, was
1908, and his brother
year. The two brothers are
expected to do their utmost
keep the International Trophy
the British Isles
at least another
year.



C. R. Collier and the Matchless-J.A.P. he will ride in next month's Tourist Trophy Race. The engine has overhead valves, and the bore and stroke are 85×58.5 mm. The machine is fitted with Bosch magneto, Shamrock-Gloria 1in. belt, and Hutchinson 28×2½in. tyres.



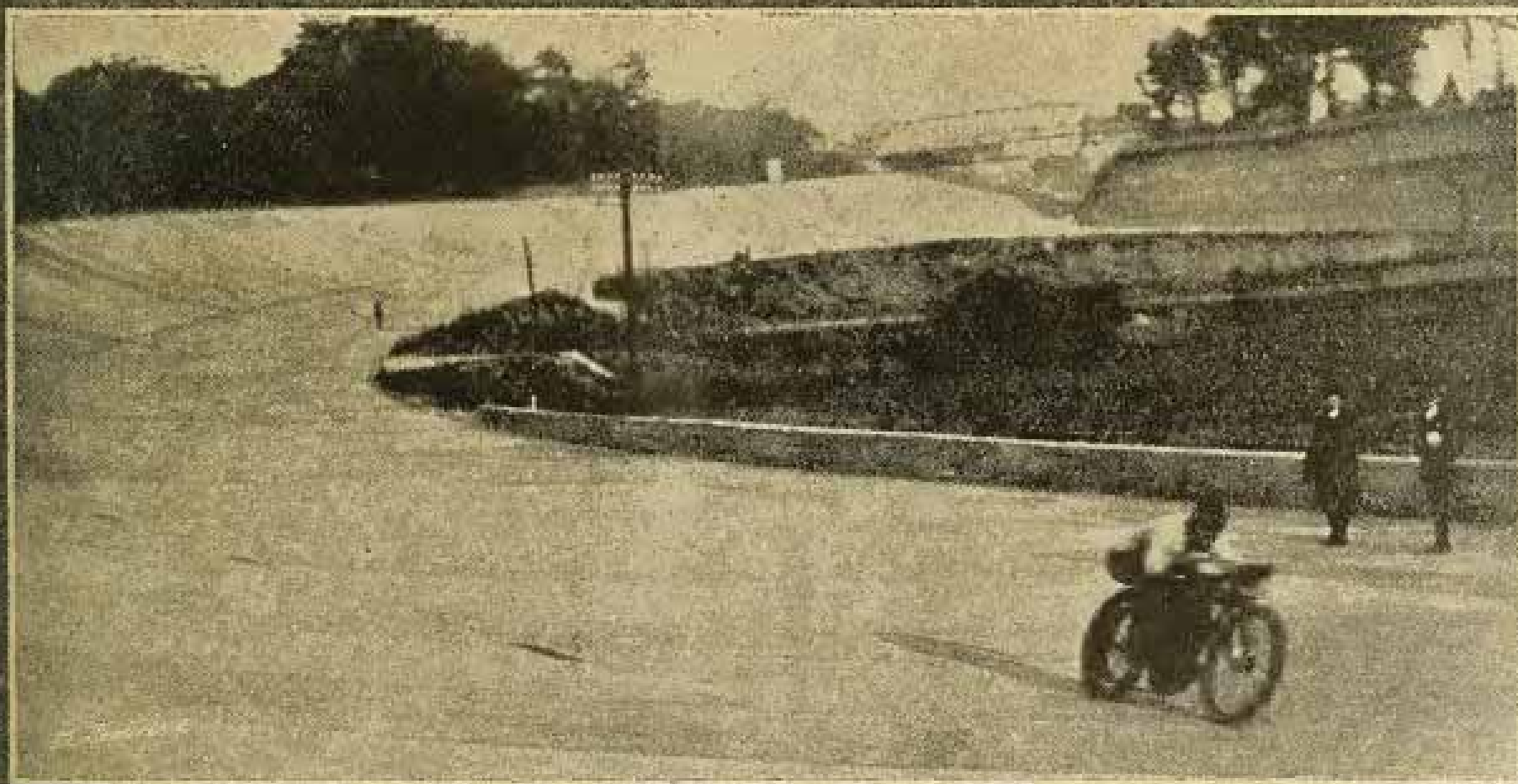
Anerley B.C. Race Meeting at the Crystal Palace. Ready for the Five Miles Open Handicap, won by H. A. Collier (3) h.p. Matchless, in 7min. 11'secs.



H. H. Collier congratulates his son on a splendid performance. Notice how fresh C. R. looks, notwithstanding the terrific speed he maintained.



C. R. Collier and the twin-cylinder machine on which he created a new world's hour record of 70 miles 105 yards last Thursday.

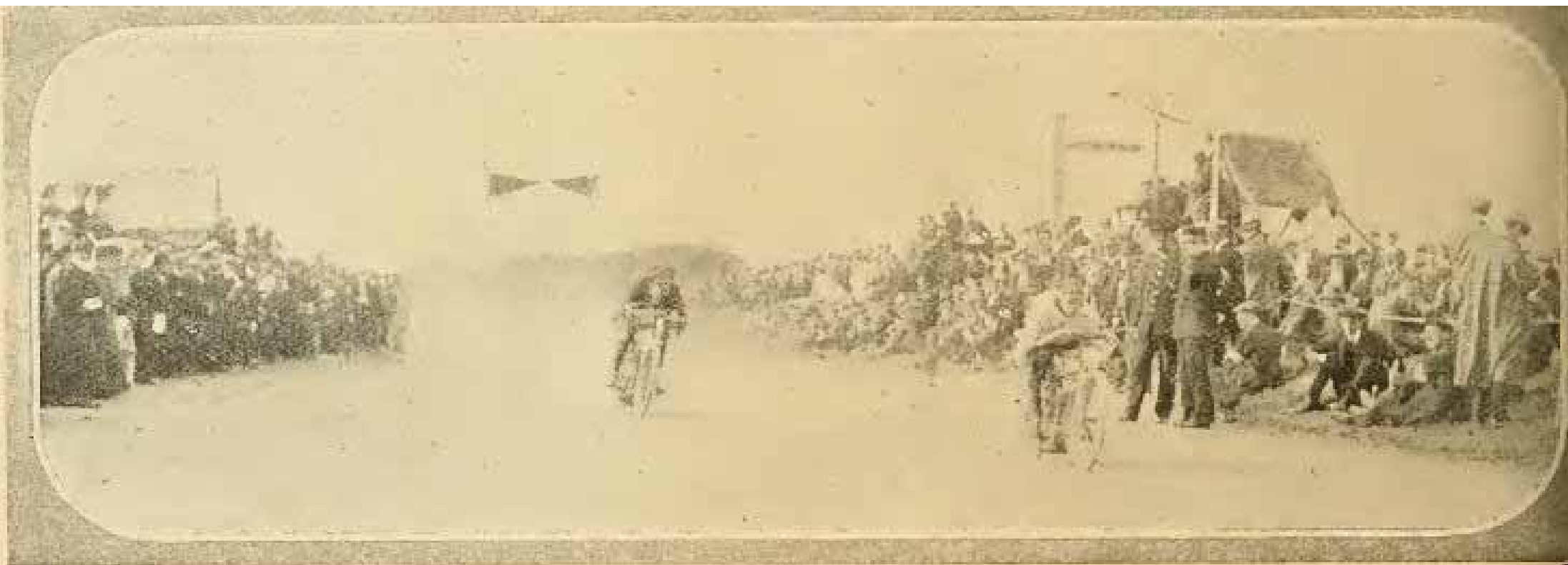


C. R. Collier
on his world's
hour record of
70 miles 105 yds.
at Brooklands.

H. A. Collier
and H. Martin,
who can be seen
in the illustra-
tion, signalled
his lap times,
which were re-
markably uni-
form.



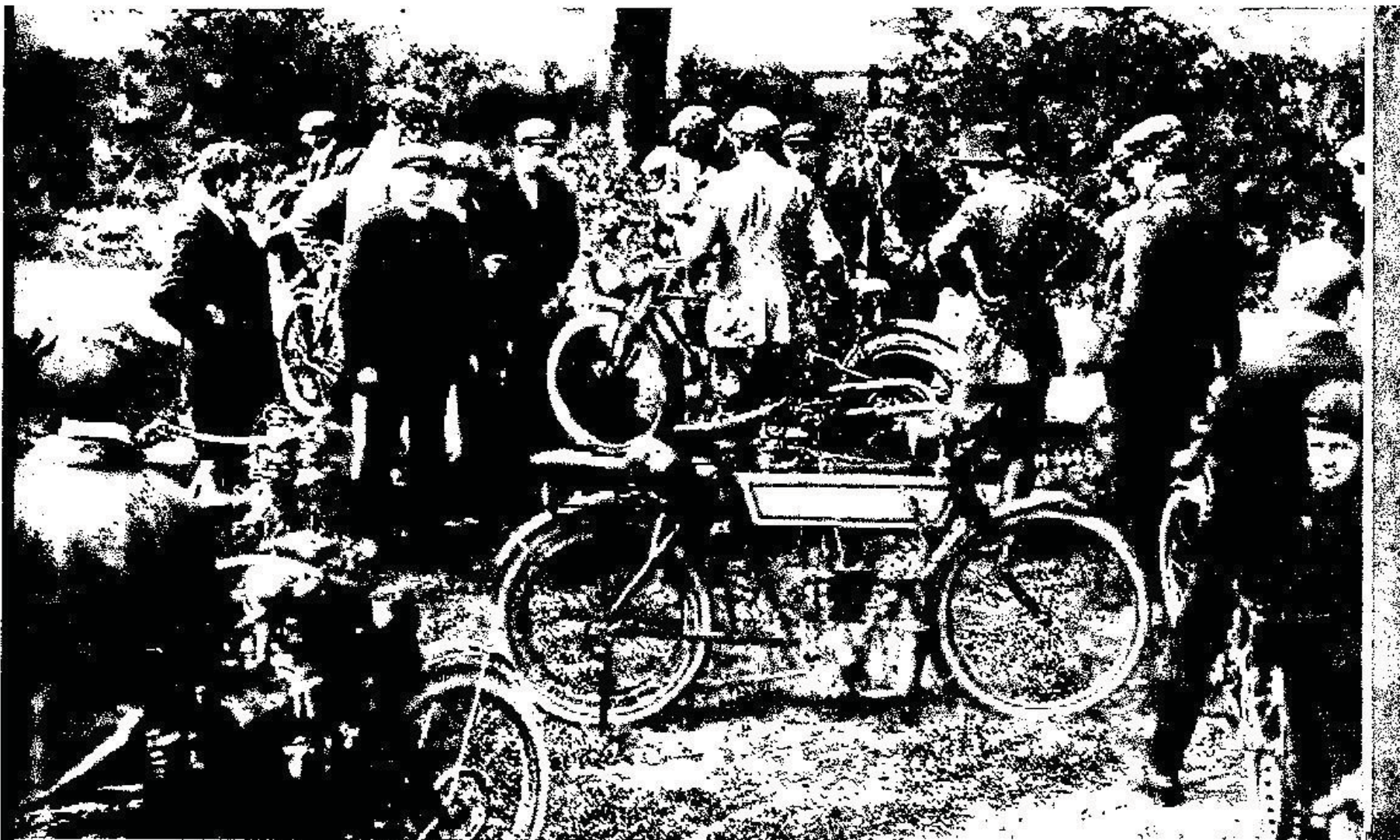
H. A. Collier (8 h.p. Matchless-Jap), who scored a runaway win at Brooklands last Wednesday. His average speed over the $8\frac{1}{2}$ miles was 69.4 miles per hour—the fastest accomplished in a motor cycle race.



The winner entering on the last round at St. John's. Collier is the second rider in the picture. The dust cloud shows the speed at which he is passing the other competitor.

Weighing
competitors'
machines in the
Essex M.C.
open hill-climb-
ing competition.

*Photographs by
Montague Dixon
and Co.*



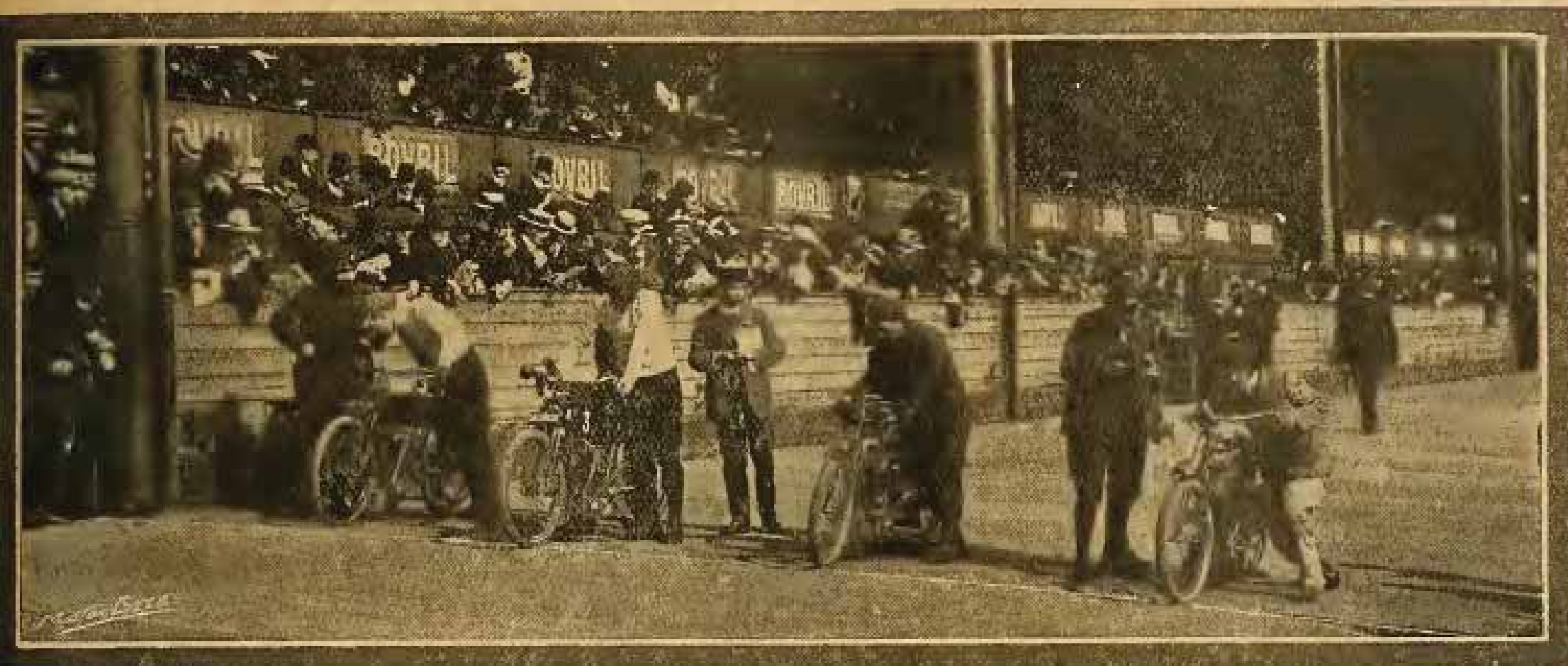
MAY 27th, 1908.

MOTOR CYCLE

425

Motor Cycle Racing at Birmingham.

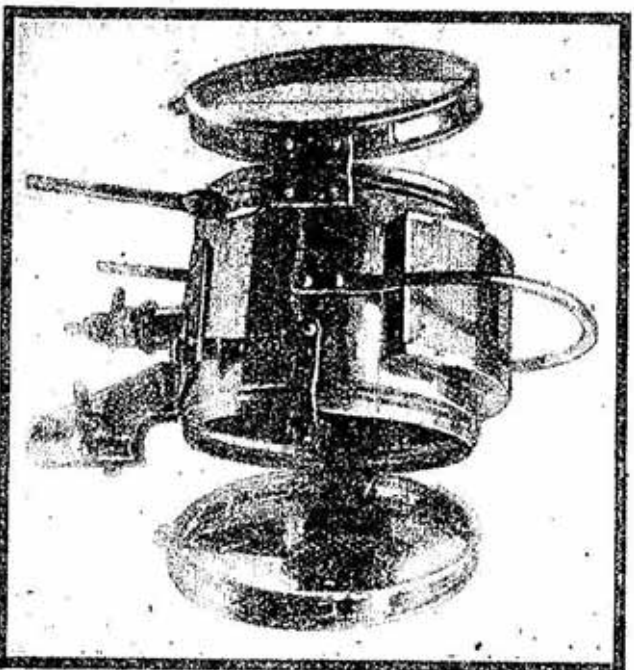
THREE-CORNERED MATCH AND OTHER RACES.



Start of the final race for the Five Miles Tourist Handicap. Reading from the right: V. Yates (3½ h.p. Rex), J. C. Smyth (3½ h.p. Rex), H. A. Collier (3½ h.p. Matchless-Jap), and G. R. Collier (3½ h.p. Matchless-Jap). Yates won in 7m. 48s.

Motor Cycle Lamps.—

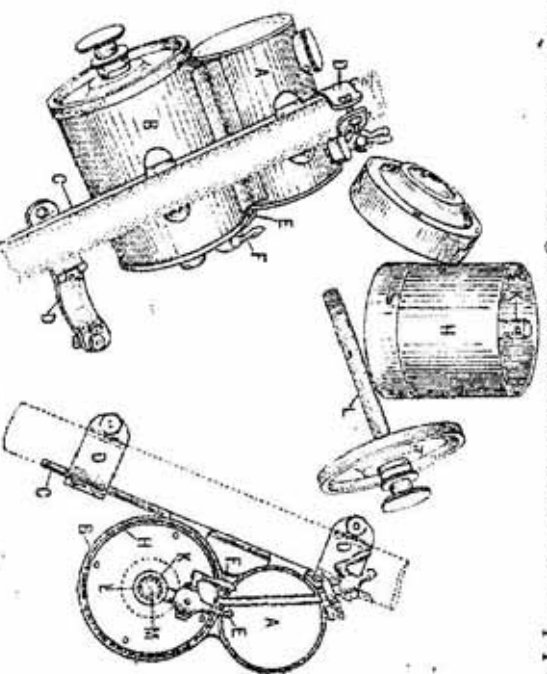
weight is only $1\frac{1}{2}$ lbs. This is extremely light for a lamp of the size, and from personal experience we are pleased to say that the lamp gives a most excellent light. Its shape follows the popular Rushmore design, and one of the special features is the door at the back as well as the dissected glass door at the front. This door is provided to enable the user to make a tyre repair or adjustment to any portion of the machine which is unlighted by the front rays of the lamp without detaching it from the lamp iron. Two small legs are provided, which allow the lamp to stand on the ground while lit. The size of the lamp under review is—length 5in., diameter of glass front $4\frac{1}{2}$ in., lens 4in. The attachment to the lamp iron is simple yet effective, for we have never had the lamp work loose on the lamp iron, although it has been fitted for some weeks to the top of the wings of a rigid framed tricar. The burner and gas tap are detachable, and a difference can be made in the projecting power of the light by moving the burner nearer to or further from the



F.R.S. Lamp, with the front and back doors open.

lens. The further forward it is put the more penetrating the light becomes. The generator differs in appearance and also in its action from the usual drip-feed generator supplied with motor cycle lamps. The line drawing we have prepared of this generator will show that it consists of two cylindrical parts—A the water chamber and B the generating chamber. C is a long bracket firmly attached to both the chambers. This, when placed against the round seat-tube of a motor cycle, is held in position by two hinged clips which pass round the bracket and the tube and hold the generator securely. Connecting the water chamber with the carbide container is a small pipe E fitted with a tap F, which either allows the water to flow into the carbide container or the gas to flow out from the generating chamber to the air, according to the position in which it is placed. The carbide is placed in the drum H, which is provided with a cap at each end, and a handle at one end for withdrawing it from the container. In the centre of it is a tube K perforated with holes, through which passes another tube L, forming

the tubular bolt locking the end cap on the container. The water from the tap F flows through a centre tube M, this latter being a continuation of the small pipe

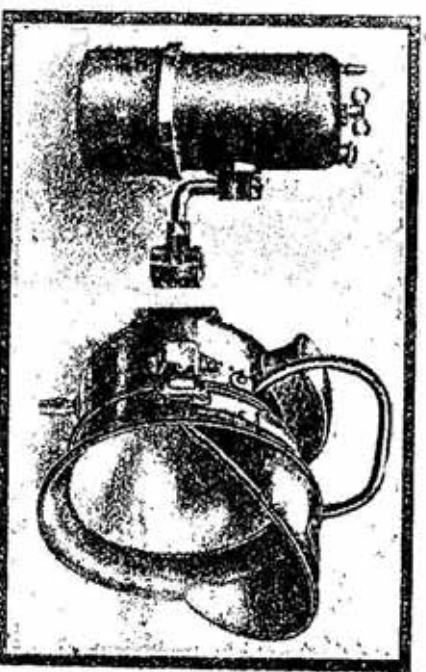


The F.R.S. Separate Generator.

- A. Water chamber.
- B. Generating chamber.
- C. Long bracket.
- D. Clips.
- E. Water pipe.
- F. Water tap.
- H. Carbide drum.
- K. Outer tube of generator.
- L. Middle tube of generator.
- M. Centre tube of generator.

outside, through which the water flows from the tank. It is claimed for this generator that it is perfectly automatic in action after turning on the tap. There are only two positions for this, viz., full on or full off, and the amount of gas required for any burner will be generated. Since receiving the generator for trial we have not been able to test this claim, but hope to do so shortly. In ordering the generator, it is necessary to state if it is to fit the forks, side of tank, or seat tube of bicycle frame. The F.R.S. generator will light a very large burner for six hours and, a smaller one for ten hours, such as a $17\frac{1}{2}$ litre burner. It is, of course, connected up to the lamp or lamps by means of a rubber tube in the usual way.

POWELL AND HAMMER, LTD., Chester Street, Birmingham, are an old-established firm of bicycle lamp makers, and have specialised in motor cycle lamps. The two patterns they make are a self-contained lamp



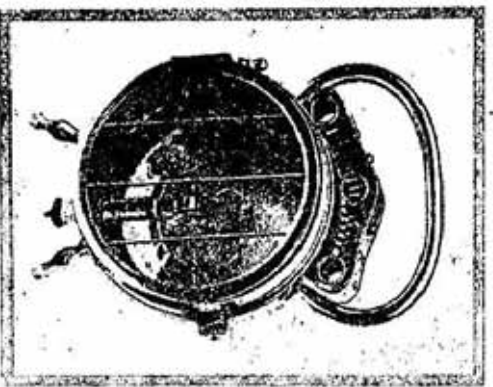
Powell and Hammer 'Headlight,' with separate generator.

and one with a separate generator, which we illustrate. It will be noticed that the generator has an adjustable bracket for securing it to the fork or any other part of the frame where it is required to be attached, and

Motor Cycle Lamps.—

no matter to what part it is fixed it can always be set in a vertical position. The lamp has a large front with hood reflector to throw the light down on the road. The lens is double convex, and the reflector is made of aluminium. Unfortunately we have not had samples of these lamps sent to us for inspection, so it is impossible to give a detailed description of the way they are fitted up and the method in which the separate generator operates, but the illustration of the lamp and separate generator is practically self-explanatory, and the length of time the firm have been established is sufficient proof that their workmanship can be relied upon.

The Kerry-Hella is an exceedingly well-made acetylene gas lamp, placed on the market by the East LONDON RUBBER CO., 2, 4, and -8, Great Eastern Street, London, E.C. It is certainly one of the best finished lamps we have ever examined, and it can be supplied in polished brass or nickel plated. The lamp body is strongly riveted, no solder being used in its construction. The front glass is dissected, and a glass mirror lens is provided. The novel method of fitting the lamp bracket at the back is worthy of mention. Instead of it being plainly riveted, the ends of the bracket are tucked inside the body of the lamp, so that it is almost impossible for it to be shaken loose—a not infrequent habit of heavy lamps with weakly fitted brackets. Two sizes of separate generators can be supplied. The small size measuring 6in. by 3in. will burn three and a half hours, and the larger pattern (8in. by 3½in.) for six hours.



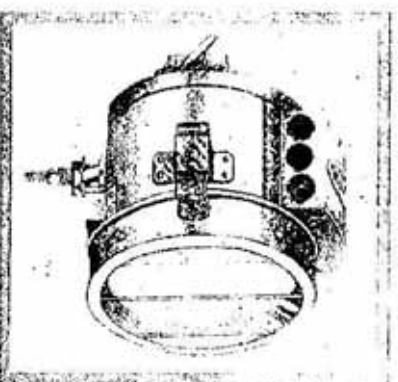
The Kerry-Hella Headlight.

The "Glare" electric headlight for motor bicycles and tricar's have been previously referred to in these pages. Their speciality is light weight combined with an adjustable bulb. The lamp body is specially shaped, and the bulb is screwed into the back of the lamp in such a way that it can be placed nearer to or further away from the front glass. The nearer the bulb is brought to the glass the further the light is projected. The bulbs consume rather more current than some others, but give a very good light, their chief advantage being that they can be used with a four-volt battery. The makers' address is J. W. Greenwood, Ltd., Portland Place Works, Halifax.



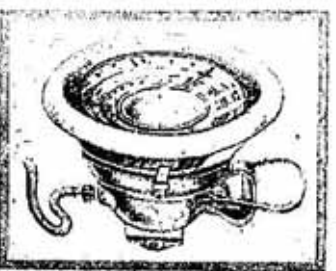
Glare Electric Headlight of small dimensions and very light weight.

A. W. GAMAGE, LTD., Holborn, supply no less than five different motor cycle gas lamps. Three different



"Nulite" Lens Mirror Headlight. Note the dissected front glass.

separate generator is a stoutly made to withstand rough use. Holborn condensing lens motor bicycle or tricar headlight. The size of this lamp over all is 6in. deep, with a front glass 4in. in diameter, the lens being 2in. in diameter, mounted on a screwed-on tripod, which is detachable if desired. It is provided with an aluminium reflector and atmospheric burner, and the price with separate generator is extremely moderate. This is a lamp of rather light construction, yet, it is claimed, quite strong enough for motor cycle work. Another type of Nulite separate generator headlight has a well-shaped hood and cowl, aluminium



The "Holborn" Motor Bicycle or Tricar Headlight, with condensing lens.



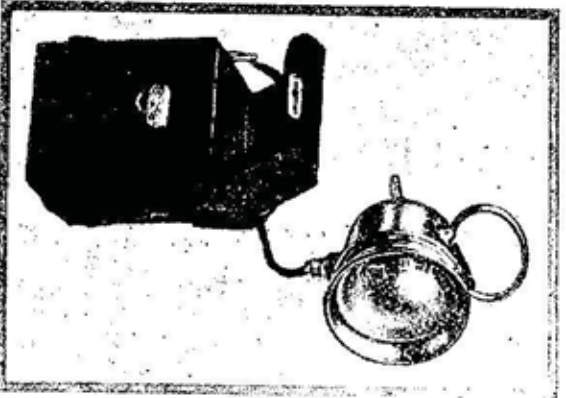
Gamage's "Nulite" Separate Generator Headlight.

tioned types, Messrs. Gamage also supply the Nulite self-contained headlight, which is practically the same as the one last mentioned with hood and cowl, except that it is self-contained and fitted with a stout gas bag to provide an even feed of gas to the burner. With this lamp is provided a special sprung fork bracket with round clip for clamping to the handle-bar stem, or a flat clip for clamping to the ordinary lamp iron. It will burn for over four hours. It is heavily nickel plated, and, in addition, is provided with a ball handle. The New Century is a separate generator lamp of ordinary pattern provided with a central lens,

Motor Cycle Lamps.—

4 $\frac{1}{4}$ in. glass and 2 $\frac{1}{4}$ in. lens. The reflector is highly polished, and the burner is a Bray's Cyka burner. The burner holder is detachable for cleaning purposes, the body is riveted throughout, and an extra strong bracket is provided for back fixing. This is a smart little lamp, British made throughout, and sold at a remarkably low figure. Those of our readers who wish to see illustrations of the whole of the motor cycle lamps supplied by Messrs. Gamage should write for the catalogue called "Everything for the Motorist." This can be obtained free on application to the above address, and contains illustrations of all the lamps we have described in addition to those for which we have not space in this article.

The Electary mirror lens acetylene projector and the Electary electric head lamps and side lamps are made by Messrs. W. AND R. JACOBS, 39c, King William



Jacob's Electric Headlight and Metal-lined Case for Accumulator.

Street, E.C. The acetylene projector is a stout gauge brass lamp with adjustable focus burner pillar. The dissected front glasses are all fitted into a separate metal flange before being attached to the lamp front, so that all chance of rattling or movement is avoided, and any of the glasses can be replaced at a moment's notice if the original is broken at any time. With the electric head and side lamps are now included a genuine Osram metallic filament bulb. These lamps are provided with a special type of polished reflector and a lens which throws the light well ahead. We are informed by Messrs. W. and R. Jacobs that one of these electric lamps used in the London-Edin-



Jacob's "Electary" Side Lamps for Tricycles.

burgh run was still giving its light long after many of the gas lamps had gone out, choked up, given trouble,

and caused delay. The firm supply, in addition, cheaper types of motor cycle head lamps with separate generators, and for use with the electric lamps special seven hour four and eight volt accumulators in tin-lined leather cases, with straps complete for attaching the case to a machine.

(To be continued.)

“THE AUTOCAR” LECTURES.

THE series of weekly lectures on the motor car which are being organised by *The Autocar* throughout the country commenced at the London centre yesterday, Tuesday, October 13th, in the small hall of the Queen's Hall, Langham Place, W. The complete list of dates at the various centres is as follows:

LONDON.—Queen's (Small) Hall, Langham Place, W. Tuesdays, October 13th, 20th, 27th; November 3rd, 10th, 17th, 24th; and December 1st at 3.30 p.m. and 8.30 p.m. (tickets available for either).

BIRMINGHAM.—The University, Edmund Street, at 7.30 p.m. Wednesdays, October 21st, 28th; November 4th, 11th, 18th, 25th; and December 2nd and 9th.

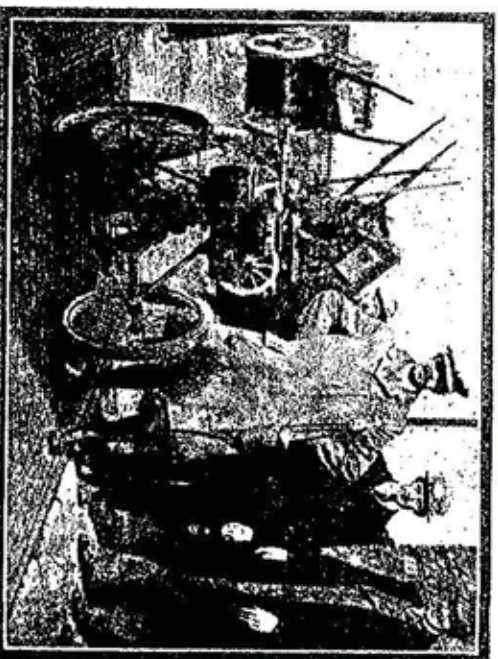
LEEDS.—The University, College Road, at 7.30 p.m. Thursdays, October 22nd, 29th; November 5th, 12th, 19th, 26th; December 3rd and 10th.

MANCHESTER.—Geographical Institute, The Parsonage, Deansgate, Fridays, October 23rd, 30th; November 6th, 13th, 20th, 27th; December 4th and 11th, at 4 p.m. and 7.30 p.m.

NEWCASTLE-ON-TYNE.—The Armstrong College, Mondays, October 26th; November 2nd, 9th, 16th, 23rd, 30th; December 7th and 14th.

There will be a discussion after each lecture, and the lecturers will deal with any special points desired by those who attend. We cannot too strongly urge our readers not to miss the opportunity these lectures offer for the obtaining of a sound practical knowledge of motor matters. They will prove of especial value to motor cyclists who hope one day to be car owners.

The lectures are an educational effort on the part of *The Autocar*, and the fee (£1 rs. for the course) is fixed as low as possible. Affiliated members of the M.U. may obtain tickets for the course at 12s. 6d. each. Applications for tickets should be made immediately to the Lecture Secretary, *The Autocar*, 20, Tudor Street, London, E.C.

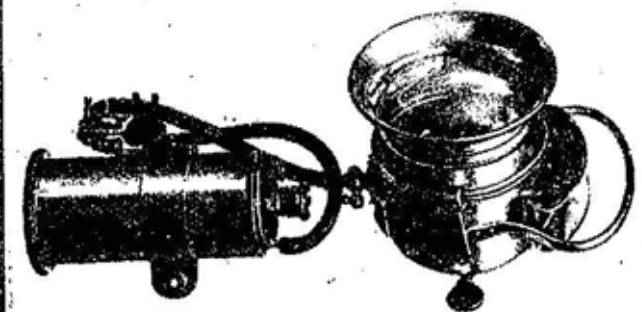


A member of the Liverpool M.C.—Mr. J. Proktering—usually stands at club runs and competitions on his “good old trike.” He has ridden it for years.

MOTOR CYCLE LAMPS.

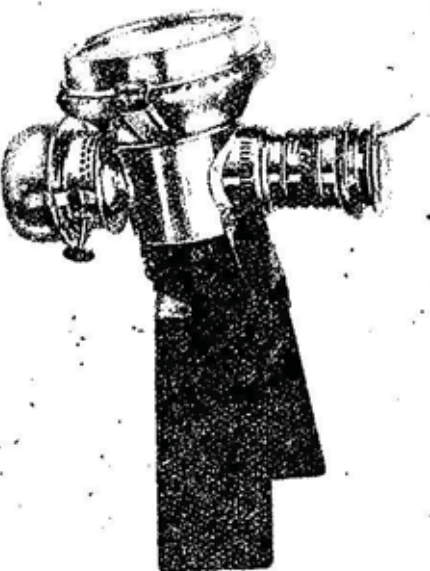
(Continued from page 800.)

WORSNOP AND Co., The Carlton Lamp Works, Halifax, are the manufacturers of the Fritax petroleum motor cycle lamp, which provides a novel system



Worsnop's Acetylide Headlamp with separate generator.

a bayonet joint. These lamps, it is claimed, give ten times the light of the ordinary oil lamp, being fitted with a scientifically constructed burner with a proper wind-up arrangement for the round wick. Provided the lamp glass will stand the vibration on a motor cycle, we see no reason why these paraffin lamps should not be successful, although we

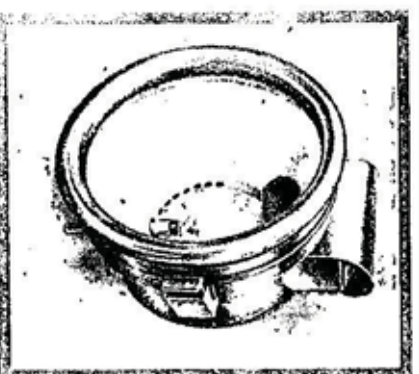


Worsnop's "Fritax" Paraffin Headlight with number plates.

must admit that we have not tried one ourselves. It certainly has advantages in the shape of simplicity and cheapness of fuel. We hope to give one of these lamps a trial very shortly, and if it comes up to our expectations we shall have something further to say

about it. In addition to the above petroleum lamp, Messrs. Worsnop and Co. make an acetylene gas lamp with separate generator. The lamp is fitted with a silvered reflector, stout lens, and is well finished in polished brass. It can also be supplied with the body of the lamp shaped on the lines of the Rushmore with mirror lens. Customers are given a choice of generators, viz., diving bell, percolator, and drip feed system. The lamp is provided with a tap for shutting off the gas when not required, and it goes by the name of the Acetylide gas lamp.

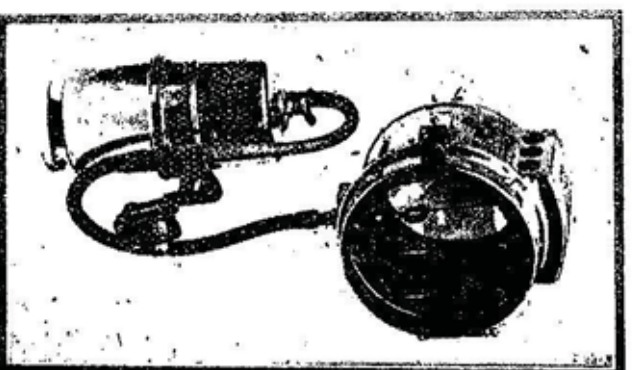
ANDRE GODIN, 1, Red Lion Square, W.C. The above firm does not make a speciality of motor cycle lamps, but sells a



A new headlight sold by Andre Godin.

small car lamp with separate generator which would serve admirably on a tractor. The lamp is well made, and should give a good light. Two distinct different kinds of generators are supplied, so that a purchaser can select whichever of the two he prefers. One is on the drip feed system, while the other works on the diving bell principle.

THE PREMIER MOTOR Co., LTD., Aston Road, Birmingham, have had their Premier searchlight



Premier Searchlight, with separate generator.

before motor cyclists since last winter. This lamp and generator are British made, constructed of brass throughout, and finished in polished brass or nickel plated. A mirror lens curved to the correct angle projects the light 200 feet ahead. After a careful examination of the Premier searchlight we are of the opinion that it is equal to anything of the kind sold for motor cyclists' use. There is nothing flimsy about it, and, while being strongly and substantially made, it is not particularly heavy. The dimensions of this lamp are: Height over all, 6½ in.; length, 9¼ in.; diameter of face, 4¾ in. The front glass is dissected, and where it fits into the frame of the door it is packed with some soft material to prevent rattling of the

Motor Cycle Lamps.—

glasses. From personal observations we have proved that this lamp gives an excellent light, projecting in one circle a long distance ahead of the machine without causing dangerous and objectionable glare at close quarters.

The generator, which is of the ordinary drip feed pattern, can be attached to any fork, and when fully charged gives five hours' continuous light. One of the special advantages offered by the company is a three days' trial of this lamp.

The name of C. A. VANDERVELL AND Co. is obviously associated with electric lamps, two patterns of which we illustrate. The head light for motor cycles is called the Model C, and is fitted with the new four-volt C.A.V. metallic filament bulb, manufactured especially for them by Edison and Swan. This lamp gives an extremely brilliant light, carrying its rays a considerable distance with a current consumption said to be as low as .56. The Model D electric lamps are for side lights on tricar, and are provided with a side red light so that it shows a red warning light to the rear as well as on both sides of the machine. This lamp is also fitted with the same bulb as the Model C, and, in addition, the Model C head light can be supplied in pairs for tricar, when a particularly brilliant light is desired. Suitable accumulators, put up in any style or shape, are supplied according to the desires of the purchaser. The address of C. A. Vandervell and Co. is Warple Way, Acton Vale, London, W.



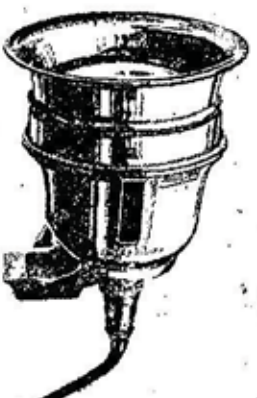
X-Ralite Headlight (with bull's-eye lens) and Generator.

any lamp iron, and is provided with a thumb-screw and lock-nut adjustment. A good point about the generator is that it has a patent cleaning needle for the water drip. This is a handy device, for, as users know, the valve occasionally becomes choked.

The question of producing a good motor cycle lamp has not escaped the notice of Messrs. A. DUNNELL, LTD., Euston Road, as they have a very complete assortment of headlights. Three of these are designed

for motor cycles. One is a lamp fitted with a combined generator and a specially strong bracket; the second is a lamp with a separate generator designed to fit on the forks of the machine; while the third is a well-constructed lens mirror headlight of a type which has become popular of late. This lamp, which has a separate generator, is known as the "Hella." The last of the series is a set of two tricar lamps supplied by one generator, capable of generating gas for six or eight hours. These lamps are well made, and have a special internal reflector designed to project the rays of light on the principle of the condenser lens largely used by many lamp makers.

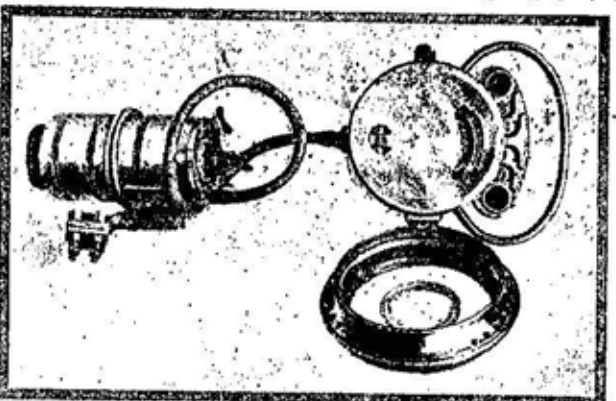
C.A.V. Model D Electric Sidelight for tricar, with red light shining partly to the rear.



C.A.V. Model C Electric Headlight, fitted with the new four-volt C.A.V. metallic filament bulb.

An article on motor cycle lamps would be incomplete without a description of the latest Frank motor cycle headlight with separate generator. All the latest Frank lamps are

provided with bull's-eye lenses fitted in the centre of the ordinary front glass. The projector is of polished aluminium, and the general finish and outline of the lamp is very handsome. The particular one illustrated is fitted with a bail handle of stout dimensions and an adjustable back bracket, which is quite the best type used on motor cycle lamps. Provided the lamp iron does not exceed $1\frac{1}{8}$ in. across, the bracket will fit all thicknesses of lamp irons from $\frac{1}{4}$ in. downwards.



The latest Frank Tricar Gas Lamp, with bull's-eye lens and separate generator. The bicycle size is slightly smaller, and has no bail handle.

The bracket for attaching generator to the forks is substantially made, and if the clip is carefully screwed up the generator cannot jump off, although the bracket is liable to slip. Mr. E. J. HARDY, Bishop's Street, Coventry, is the wholesale agent for Frank lamps.

Motor Cycle Lamps—

J. C. FULLER AND SONS, Woodland Works, Wick Lane, Bow, London, E., have sent us a sample of their motor cycle electric headlight.



The Fuller Electric Headlight showing the bull's-eye lens.

This lamp is provided with a duplex lens, and is made on substantial lines, similar to the motor car electric headlight which is manufactured by the same firm. It has a green glass on one side and a red glass on the other. The lamp bracket is supplied suitable for fitting the standard Lucas and other lamp irons.

A COMPLETELY PROTECTED MACHINE.

THE following particulars are of an improvement just patented by Mr. John A. Miller, Brentwood, Brighouse, Yorks., having as its object the keeping of rider and engine dry and clean in wet weather. The patentee says:

"I tried several plans, but got very little satisfaction from large front flaps and mudguards arranged with

trated in the annexed photographs, embodying complete protection for the feet, knees, engine, and magnet combined with a wind scoop for the cylinder. The shield is, of course, readily detachable.

"I rode from Huddersfield to Glasgow, Edinburgh, and back, through four days' rain, on September 20th, 23rd, and this fully satisfied me that dirty weather riding can be made much more comfortable, as during the four days I had not a wet boot or sock, although I discarded the general clothing equipment for touring. Nor at the end of any day's run was I unpleasantly through mud, and, finally, I had not one stop through the interruption of the spunk, although many of the roads were swimming in water, and I rode during some very heavy falls of rain, when even carter's on the road left their carts to seek shelter. Although I received the congratulations of many motor cyclists, some thought it would cause too much wind resistance, but as the guard is only the same width across as the rider's body while sitting in the usual easy position I think I will be seen that for any purpose, excepting perhaps racing, any little extra resistance is negligible; at least I found it so with my weight of 15 stones, including luggage.

"An angle-shaped guard, not shown, fitted around the belt circumference, and outside the main guard covers the protection of the rider and engine. The equipped one feels a pride in travelling at an even pace, indifferent to the filthy condition of the roads knowing that one will arrive at one's journey's end in a clean state. Surely, too, the engine will be better



For winter riding on very muddy roads, something more than the ordinary mudguards are required, and the above is a praiseworthy effort by J. A. Miller to keep engine and rider clean. The arrangement is described on this page.

sides carried well round the wheels, as once put forward by a contributor in *The Motor Cycle* for a winter machine.

"Again, when caught in very heavy rainfalls, apart from getting into an awful mess, my machine would stop on account of the water on the high tension terminal and the magneto plug, which would then require wiping with a dry cloth. This trouble would sometimes arise, too, from running through big puddles of water at even slow speed.

"Setting to work again in another endeavour to do away with the disadvantages of winter riding, I at last hit upon the idea of a shield and undershield, as illus-

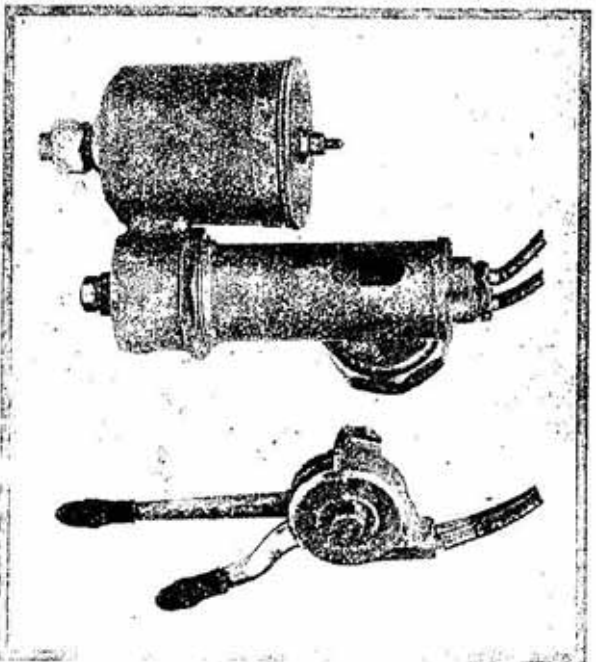
for the absence of what would otherwise cover it in the form of a grinding solution, free to penetrate the bearings, valve guides, etc.

"Features not to be overlooked are that the general accessibility and pedalling are in no way interfered with, and the pedals and the chain are not choked up with mud, as is usually the case."

Readers who wish to communicate with the makers of the Fit-all and Powell's hub two-speed gear, previously manufactured by the Burgess Eng. Co., Leicester, should note that the sole address is now A. D. Powell and Co., 3, Aylestone Street, Leicester.

THE 1909 B. AND B. CARBURETTER.

CARBURETTERS and their details are always of interest to motor cyclists, because a good carburetter which provides a uniform mixture enables an engine to be easily started, and is not too sensitive, renders a machine a joy and pleasure to its owner, whereas a bad carburetter, i.e., one that, however it is adjusted, causes difficulty in starting, and is constantly flooding, giving too rich a mixture, etc., is just the reverse of pleasant. The B. and B., made by Brown and Barlow, 16 and 17, Lowerlay Street, Birmingham, has been on the market for several years, and is acknowledged to be one of the best carburetters it is possible to obtain for motor cycles. Early this year the firm adopted handle-bar control in a neat



The 1909 pattern Brown and Barlow handle-bar controlled carburetter.

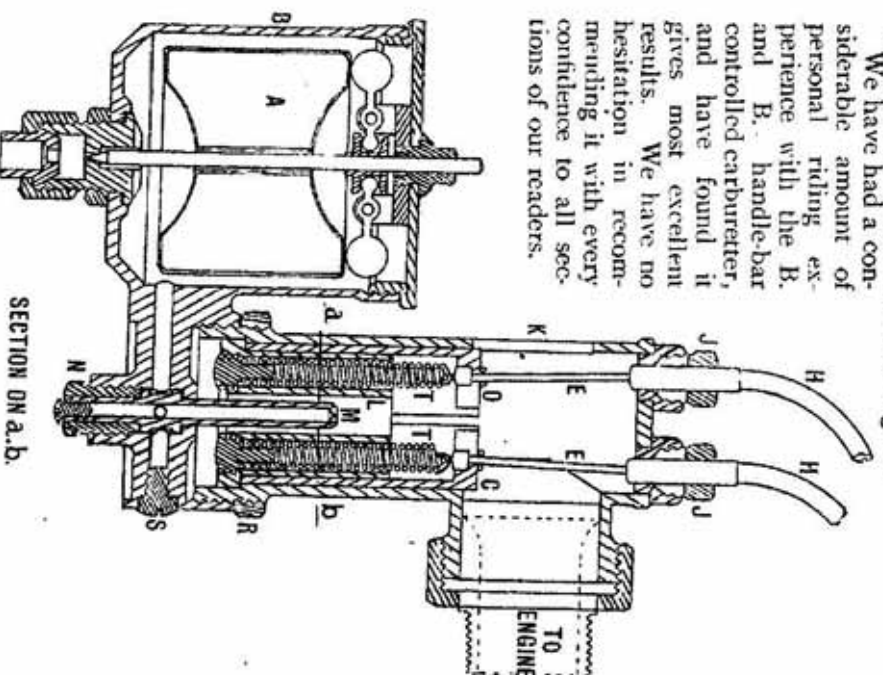
form, and for next year the details have been still further improved over the one last described and illustrated in these pages.

In the 1909 model the jet has been made to come out from the underside, simply by unscrewing the nut N at the base of the spray chamber. Provision for the adjustment of the two cables is also made by the two screws J J at the top of the spray chamber. The ends of the cables are protected by metal sleeves, and the nuts J J being conical and split, they grip the sleeves tightly when screwed into the top of the carburetting chamber. The coiled springs have been increased in length over last year's pattern, consequently providing increased elasticity. The valves C and D are held in position by the oval adapter I, as they slide down between the walls of the chamber and the outer portion of the adapter. To dissect the spray chamber J J at the top, when both cables can be pushed through and the throttle and air valves disengaged from their respective wires.

Among the improvements in the float chamber are the lid or cover which is now pressed, the guide for the needle being a separate piece of metal nutted to the lid by the bracket or carrier for the balance weights.

This carburetter is, of course, made for single and twin-cylinder engines. The single-cylinder model is

illustrated, a different top to the carburetting chamber being supplied to suit a twin engine. We have had a considerable amount of personal riding experience with the B. and B. handle-bar controlled carburetter, and have found it gives most excellent results. We have no hesitation in recommending it with every confidence to all sections of our readers.



SECTION ON a.b.



- | | |
|---|-------------------------------|
| A. Float. | K. Extra air opening. |
| B. Float chamber. | L. Oval shaped adapter. |
| C. Throttle valve or slide. | M. Detachable jet tube. |
| D. Air valve or slide. | N. Nut for removing jet tube. |
| E.E. Wire cables controlling air and throttle valves. | P.P. Fixed air openings. |
| H.H. Bowden flexible cables. | R. Lock nut. |
| J.J. Adjusting screws for ditto. | S. Draining screw. |
| | T.T. Coiled springs. |

A GOOD REPAIR.

A few weeks ago Messrs. Tufnell and Co., 527, High Road, Leytonstone, N.E., asked us to place at their disposal a motor cycle engine which required rebushing and cylinder grinding out and fitting with new piston, in order to give us a real idea of the quality of their work. Complying with their request, we sent them a $3\frac{1}{2}$ h.p. Brown engine which has been in constant use for about two years, during which time it has covered about 8,000 miles. We are pleased to say that the engine has been returned to us perfectly overhauled, and is quite in its old form again, pulling as well as it did when new. The piston is splendidly fitted in the cylinder, as also are the new bushes. There is a very slight amount of play on the big end of the connecting rod, but as this bearing is provided with a steel bush which must have a fair amount of clearance for oil, the amount of play at this point is necessary.

S 4492

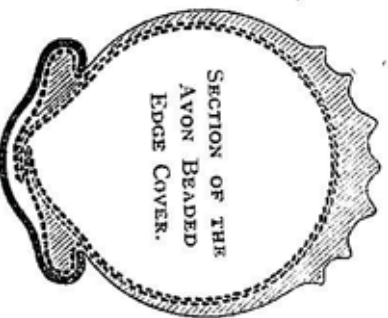
MOTOR CYCLE TYRES.

Tyres form a most important part of the equipment of any motor cycle, and the strength and quality should always be proportionate to the weight to be carried. The larger the tyre in proportion to the weight, the greater immunity from punctures, is a well-worn axiom. A common fault with makers is the under-tyring of motor cycles. This practice is not only the reverse of economical, —since large tyres protect the mechanism from vibration and road shocks, and of course wear longer than small tyres—but is a source of discomfort to the rider, and may, in the case of a sudden burst through fitting too thin a cover, be fraught with danger. The following illustrated article has been prepared with the idea of providing our readers with some definite data to go upon when purchasing a new machine, or making any change in the style or size of tyres with which their mounts are shod. Practically all the best makes of motor cycle tyres are dealt with in the article, but if there are any omitted it is because we are unacquainted with the names of the manufacturers, or they have failed to respond to our application for sample sections and particulars.

power, such as 5-6 h.p., the *Modèle de Course* pattern is advised; this cover has an extra heavy tread fitted, and as canvas is used as a foundation for this tyre, it makes it very strong and durable. In addition to the two patterns above mentioned, a rubber non-skid is made; this tyre has only been put on the market lately, and those who have used it, including competitors in the End-to-end, have expressed their entire satisfaction with its behaviour. Out of twelve

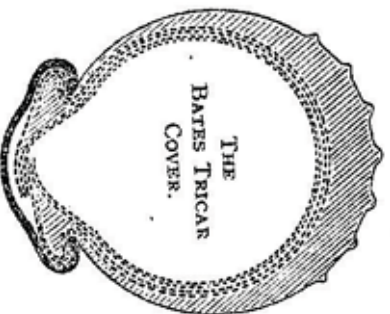
The AVON INDIA-RUBBER CO., LTD., Melksham, Wilt., who have made such good use of their

proximity to Stonehenge in their advertisements of late by depicting various motoring scenes at the time of the stone age, supply motor cycle tyres in all standard sizes, viz., 24in., 26in., and 28in. by 2in., 2¼in., and 2½in., either wired or beaded edge. The air tubes can be supplied either endless or but-ended. Our illustration is that of a section of the heavy, extra strong beaded edge cover; with this is supplied a standard red quality inner tube. A pair of these tyres are at present undergoing a test at our hands on the front wheels of a light passenger three-wheeler. Among other goods of interest to motor cyclists, manufactured by the same firm, are motor cycle plasters for effecting temporary repairs to a damaged cover; also motor cycle patches.



SECTION OF THE
AVON BEADED
EDGE COVER.

W. AND A. BATES, LTD., St. Mary's Mills, Leicester, make motor cycle covers in two weights, namely, ordinary and heavy, and also make a tri-car tyre. They do a large trade in these tyres, and as they are made of a special hard rubber suitable for motor cycle work, they give every satisfaction. With regard to sizes for different weights of machines and riders, the firm say that they usually leave this to the user.

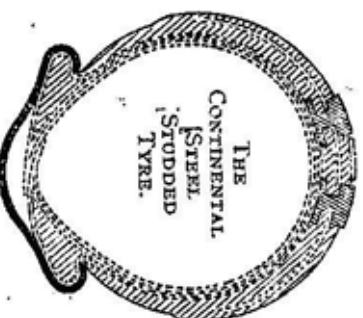


THE
BATES TRICAR
COVER.

For single-cylinder machines of 3 h.p. The CONTINENTAL TYRE AND RUBBER CO., LTD., 102-108, Clekenwell Road, E.C., recommend the standard pattern motor cycle tyre, which is supplied in all sizes for 24in., 26in., and 28in. wheels; the 26in. and 28in. sizes can also be supplied with wired edge if required. For twin-cylinder machines of high horse-



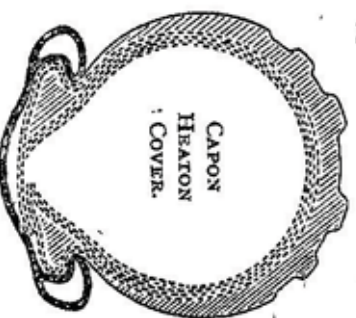
THE
CONTINENTAL
BASKET
PATTERN
NON-SKID.



THE
CONTINENTAL
STEEL
STUDDUED
TYRE.

riders who used these tyres ten obtained medals—eight bronze and two gold medals—whilst two were not fortunate enough to finish. The firm is also in a position to supply, if required, a steel-studded tyre in 24in. and 26in. sizes, and a steel-studded cover with leather tread. For tri-cars a 26in. by 3in. is recommended, and has been found very suitable, or if the tri-car is very heavy a car tyre, Pattern III. is best.

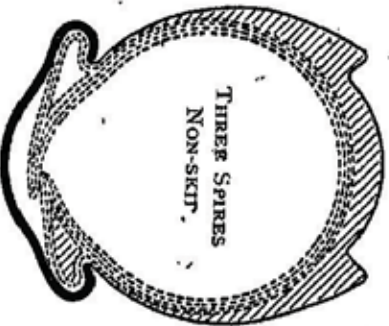
CAPON HEATON AND CO., LTD., Sturcley, near Birmingham, make two types of motor cycle covers. The one with beaded edge has three stout ridges on each side of the tread, which greatly prevent side-slip; the wired edge has a fluted tread. They are made in 26in. and 28in. by 2in., 2¼in., and 2½in. This firm also make a speciality of supplying motor cycle non-slipping shields with specially roughened backs to take solution, and also vulcanise plain treads to existing covers.



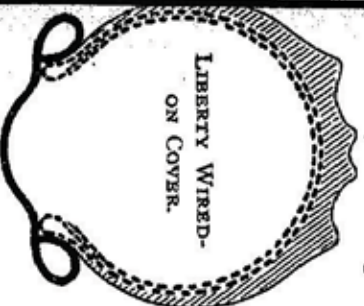
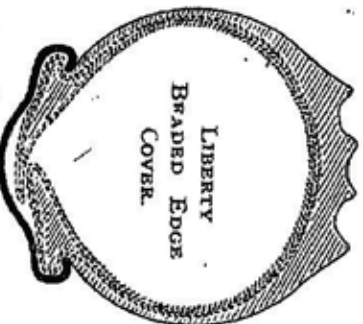
CAPON
HEATON
COVER.

Motor Cycle Tyres.—

THE COVENTRY RUBBER Co.'s speciality is a non-skidding tread which retains its anti-slipping advantages until the centre portion is worn down right to the canvas. These tyres are produced in 6in. by 2in. and 2½in. sizes, and deliveries of the new pattern cover, which we illustrate, can be made in a few days. It is interesting to note that, although the company have sold the ordinary pattern tyre since the early part of last February, they have only had two covers returned to them for repairs.

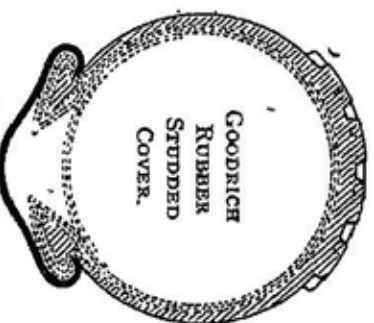
THREE SPIRES
NON-SKID.

THE LIBERTY motor cycle tyre made by Components, Ltd., Bournbrook, Birmingham, is noted for strength and durability, whilst its section shows that it possesses a desirable quality of non-liability to skid. Only the purest Para rubber (Cauchau) is used in the manufacture of this tyre, and the quantity is not stinted. The necessity of best quality in rubber for motor tyre

LIBERTY WIRED-
ON COVER.LIBERTY
BEADED EDGE
COVER.

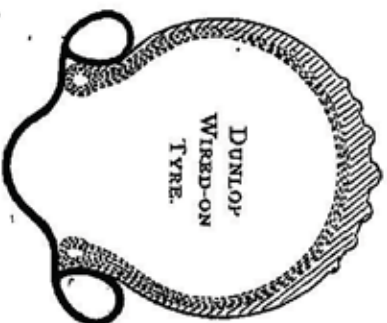
manufacture is one that has long been recognised by Components, Ltd., and anyone who has seen the difference between the solid meat-like slabs of rubber imported from the Amazon and the rag-like appearance of some of the inferior kinds of rubber coming from the West Coast of Africa and other districts will understand how it is that Liberty tyres have achieved such a reputation for durability. Liberty motor cycle tyres are made in both wired and beaded edge varieties and of 2in. and 2½in. sections.

THE B.F. GOODRICH Co., 7, Snow Hill, E.C., are pioneers of the rubber studded tyres and the holders of the patents for this type of non-slipping cover, which is made in one size only—26in. x 2½in. They will, however, fit any rims, which is an advantage to those riders who have machines soiled and desire to try the non-skidding properties of rubber-studded tyres during the coming winter. They have personally used some make of non-skid for several hundred miles, and were unable to detect any slowing effect due to the

GOODRICH
RUBBER
STUDDED
COVER.

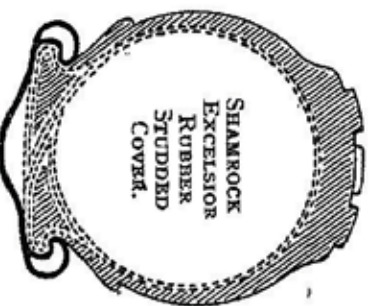
rubber studs, although it is claimed by some that rubber studded tyres slow a motor cycle both in speed and in hill-climbing. The inner flap of the cover is very useful and necessary, for it prevents the tube being nipped.

THE DUNLOP PNEUMATIC TYRE Co., LTD., 14, Regent Street, S.W., and Aston Cross, Birmingham. Readers in search of speedy tyres should not forget

DUNLOP
BEADED EDGE
COVER.DUNLOP
WIRED-ON
TYRE.

that Dunlop tyres were fitted to the winning machines in the T.T. Race, both single and twin-cylinder classes. In addition to being speedy, Dunlops are both well made and reliable. For the driving wheel of the heavier and more powerful motor bicycles, tricar, and quad a small motor car tyre is recommended. Dunlop tyres are made in both wired and beaded edge, the former is favoured for path-racing purposes and the latter for touring and ordinary road riding. The wired-on type, although more difficult to remove from the rim than the beaded edge, is safer when a sudden burst occurs, as the endless wires which are fitted in the canvas pockets at the sides of the cover cannot leave the rim without the application of a tyre lever. These tyres are supplied in the following sizes: 26in. and 28in. x 2in., 26in. and 28in. x 2½in., and 26in. and 28in. x 2½in. The Dunlop Pneumatic Tyre Co. quite wisely wish to impress upon motor cyclists the importance of fitting the largest possible tyres in proportion to the weight and power of their machines.

The 1908 Shamrock-Excelsior rubber studded tyres made by THE HANOVER RUBBER COMPANY have met with such universal approval that practically no alterations will be made for 1909. These tyres are made to fit almost all existing rims, especially the Clincher rim, in all 26in. sizes. The sizes are 24in. by 2½in. and 2½in., 26in. by 2½in., 2½in., and 2½in., and 26in. by 1¾in. light-weight; 28in. are not made. This firm favours a wide rim as used by most Continental manufacturers, and asks us to point out that the narrowness of some rims prevents the adoption of an extra strong casing, which is absolutely necessary for high powered machines. It recommends all motor cyclists when ordering a new mount for 1909 with S.E. tyres to specify these rims. For tricar a studded light car tyre is recommended, which is made in sizes 2½in., 3in., and 3½in. by 26in.

SHAMROCK
EXCELSIOR
RUBBER
STUDDED
COVER.

Y 17th, 1907.

I.C. Race Meeting.—



Waiting for the next race at the Essex M.C. meeting at Canning Town on Saturday.

home. The case was dismissed.

(holds the track record.

) Italic is ours.)



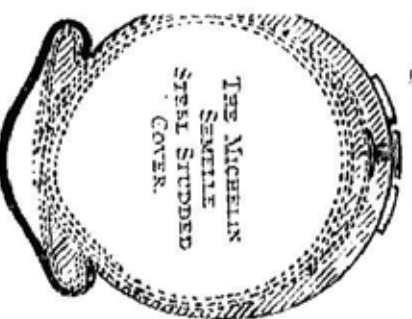
Motor bicyclists
and triearlists in
the annual Wood-
ford meet of
decorated motor
vehicles last
Saturday.

Motor Cycle Tyres—

we have pleasure in testifying to the excellence of these tyres, which have given us entire satisfaction during this year. A charger tyre made by the same firm is the Auto (corrugated). This is made in the same size as the S.E. studded tyre with the exception of the 20in. by 1½in. lightweight. In addition to the usual joined inner tubes, the Hanover Rubber Co. supply furnished inner tubes. Shamrock motor tyres have been uniformly successful in 1908, being particularly well represented in all the important competitions.

THE MICHELIN TYRE CO., LTD., 49, SURREY PLACE,

W. Known all over the world as makers of high class motor tyres, the Michelin motor cycle tyre can be relied upon as a suitable article for motor cyclist's use. Concerning the interchangeability of motor cycle outer covers, it is interesting to



note that the Michelin is interchangeable to the following extent: The 15in. wired-on cover will fit a 1½in. rim; the 15½in. beaded cover will do likewise; 25in. and 2½in. wired on covers will fit 2in. rims, and 2½in. beaded covers will fit 2½in. rims. The 25½in. and 2½in. beaded-edge covers require special rims. The motor cycle Michelin-

sewelle non-skid tyre is a reduced facsimile of the firm's non-skid car tyre, used with such success in many competitions. The studs, which are of hardened steel, project through a substantial leather tread vulcanised on to the cover, while behind the studs there is a thick leather strip, which effectually prevents the studs from penetrating to the cover. These non-skids are made with wired-on and beaded edges, and in the case of the latter a flap is fitted to prevent the tube from being dipped.

THE NORTH BRITISH RUBBER CO., LTD., Castle

Edinburgh, are the makers of the famous Lincher tyres. These tyres are made in several qualities—the A Won is the ordinary motor cycle tyre, the treadrough is a thicker cover for powerful machines and light passenger work, while the new introduction is a rubber studded tyre which is illustrated herewith. The A Won is made in 20in. and 25in. x 2½in., 2½in.

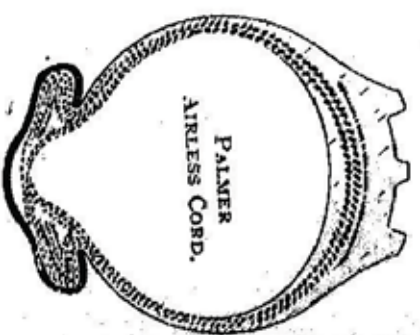


and 2½in. The Dreadnought in 2½in. and 26in. x 2½in., and the rubber-studded in 26in. x 2½in. only. The last named tyre was used by Mr. Arthur W.

Bentley on his Triumph when he broke the End-to-end record last June. For heavy passenger work, such as tri-car back wheels, a light voiturette tyre is recommended. This is made in sizes 650 x 65 mm. and 700 x 75 mm. = 26in. x 2½in. and 28in. x 3in. Both these in the same Clincher rim.

THE PALMER TYRE, LTD., 110-123, Shaftesbury

Avenue, W.C., who are one of the most popular makers of motor cycle tyres, pay special attention to supplying the wants of their motor cycling customers. The chief qualities of Palmer tyres are their extremely heavy tread, fitted with long and substantial ribs which are most effective against side-slip, and their patent Airless Cord, which takes the place of fabric, and gives enormous strength to the tyre. Palmer's have lately introduced an internal flap which prevents the tyre from being nipped, while a special 2½in. tyre is now made to fit a



Palmer 2in. rim. Motor cycle tyres are made in the following sizes: 26in. and 28in. x 2in.; a special tyre, 26in. and 28in. x 2½in. for the 2in. rim; a standard 26in. and 28in. x 2½in. for 2½in. rims; and tyres of 2½in., 26in., and 28in. x 2½in. It will thus be seen that all weights, powers, and types of motor cycles are adequately provided for. The fabric tyre is still made, but the Palmer Tyre, Ltd. strongly recommend their Cord motor cycle tyres for the more powerful machines, and particularly for passenger work with a sidecar. For heavyweight tri-cars, small car tyres are recommended.

THE PETER UNION TYRE CO., 6, Upper St. Martin's Lane, W.C., have long made a speciality of motor cycle tyres, being one of the first Continental makers to establish a London office and warehouse. All P.U. tyres are of the beaded-edge type, and are supplied in 2½in., 26in., and 28in. x 2in., 2½in., and 2½in. The covers are made with ordinary ribbed, basket-pattern non-skid, and steel studded non-skid treads. The latter are now made by inserting the steel studs into a leather band, which is attached to the cover by a special process.

The reinforced cover is a very strong and reliable article, and there is a big demand for it, particularly for the driving wheels of high powered twin-cylinder motor bicycles and tri-cars. The Peter Union puncture-proof band is a band of specially hard rubber with finely bevelled edges. This band fits between the cover and air tube, and protects the latter against outward influences in the shape of nails, pieces of glass, etc. It also prevents the heating of the air tube, by insulating it from the heat usually communicated to the tube by the cover, and caused by the frictional contact of the cover with the road during a fast ride.



DUNHILL'S MOTORITIES

FOR MOTOR CYCLISTS.



"PONCHO." Best Double Texture Material, 32/6.



DUST CAP, 3/6.



TROUSER OVERALLS.
Made from Finest Double Textile Waterproof Material, 18/2.



HILLINGTON CAP, 5/6.



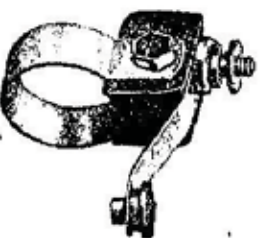
SINGLE TEXTURE FAWN WATERPROOF CAPE, 7/6.



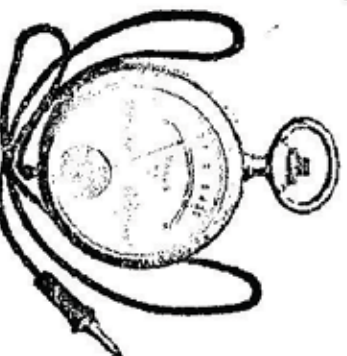
"COWEY" SPEED INDICATOR, 4 Gns.
This Indicator can also be supplied indicating speed and distance in Kilometres.



PUSH ACTION SWITCH, 3/-.



HANDLE-BAR SWITCH for Majordo, 3/-.



VOLTMETER, 4/6



HANDLE-BAR SWITCH, 3/-.



MOTOR CYCLE VALVE, 8/6.



"MATCHLESS" SPRING FORK ATTACHMENT.
Easily fitted and very effective. 15/6 per pair.



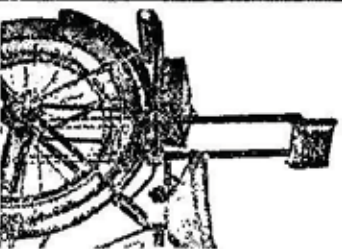
SPARKING PLUG, 6d.



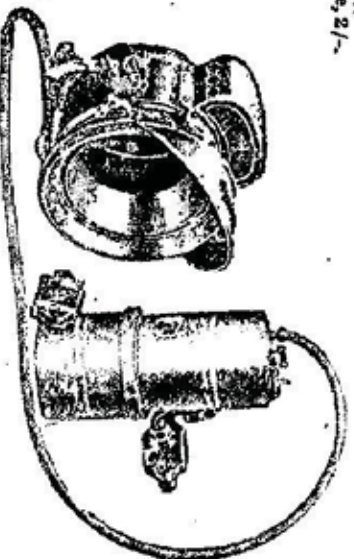
CARBIDE CARRIER, Complete, 1/8.
Filled with Carbide, 2/-.



OILER PLUG, 4/6.



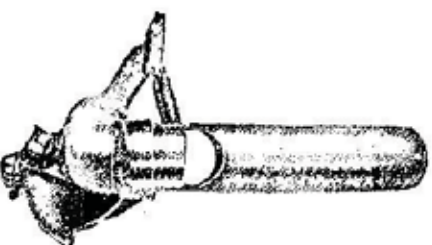
CORN EMERY POWDER.
For grinding valve settings 6d.



MOTOR CYCLE LAMP AND GENERATOR.
Well made, with powerful lens reflector which may also be used for Trenches, 27/-. Can also be used for Trenches, 27/-.



BELT PUNCH, 2/-.



EXHAUST WHISTLE, 10/6
Very Mellow Note.



THREE-TWIST, NICKEL-PLATED HORN.
Very deep note. 5/6.

Write to Dept. "M" for "Motor Cycle Catalogue, sent free on request.



"INVISTOR" HORN.
Loud and penetrating. 8/-.
Very Mellow Note.

DUNHILL'S

359-361, EUSTON ROAD, LONDON, N.W.
72, ST. VINCENT ST., GLASGOW.

86, CROSS ST., MANCHESTER.

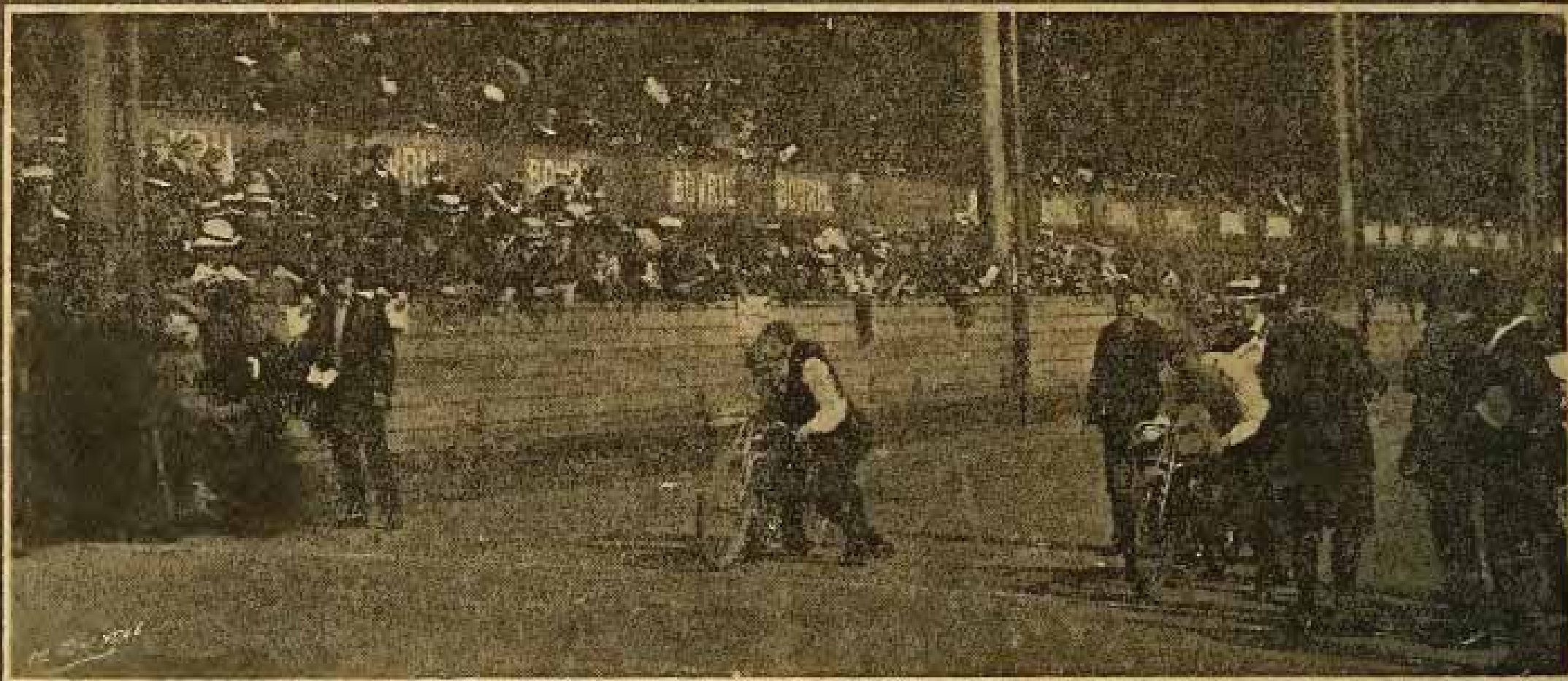
In answering this advertisement it is desirable to mention "The Motor Cycle."



E. J. Bass, (Chater, Lea 7 h.p. Peugeot), who had the honour of making the fastest ascent of Lippett's Hill.



S. Foreman, who rode a 5½ h.p. G.B., passing the finishing post.



Start of the three miles race at the *Sport and Play* meeting at Birmingham, May 23rd. C. R. Collier v. H. V. Colver. C. R. Collier, the winner, is on the left.

TABLE GIVING CUBICAL CAPACITY OF ALL SINGLE-CYLINDER ENGINES
having bores of from 50 to 90 mm. and strokes of from 50 to 100 mm.

For Multi-cylinder Engines, multiply by number of cylinders.

Bore in Milli- metres.		Stroke in Millimetres.																								Bore in Milli- metres.	
		50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73		
		Capacity in Cubic Centimetres.																									
50	98	100	102	104	106	108	110	112	114	116	118	120	122	124	126	128	129	131	133	135	137	139	141	143	145	50	
51	102	104	106	108	110	112	114	116	118	120	122	125	127	129	131	133	135	137	139	141	143	145	147	149	151	51	
52	106	108	110	112	115	117	119	121	123	125	127	129	132	134	136	138	140	142	144	146	149	151	153	155	157	52	
53	110	112	115	117	119	121	123	126	128	130	132	134	137	139	141	143	146	148	150	152	154	157	159	161	163	53	
54	114	117	119	121	124	126	128	130	133	135	137	140	142	144	146	149	151	153	156	158	160	163	165	167	169	54	
55	119	121	123	126	128	131	133	135	138	140	142	146	147	150	152	154	157	159	161	164	166	169	171	173	176	55	
56	123	126	128	130	133	135	138	140	143	145	148	150	153	156	158	161	163	166	168	171	173	176	179	181	184	56	
57	127	130	133	135	138	140	143	145	148	150	153	156	158	161	163	166	168	171	173	176	179	181	184	186	189	57	
58	132	135	137	140	143	145	148	150	153	156	158	161	164	167	169	172	175	178	180	183	186	189	191	194	197	58	
59	137	139	142	145	148	150	153	156	158	161	164	167	169	172	175	178	181	184	187	189	192	195	198	201	203	59	
60	141	144	147	150	153	155	158	161	164	167	170	172	175	178	181	184	187	189	192	195	198	201	203	206	209	60	
61	146	149	152	155	158	161	164	166	169	172	175	178	181	184	187	190	193	196	199	202	204	207	210	213	216	61	
62	151	154	157	160	163	166	169	172	175	178	181	184	187	190	193	196	199	202	205	208	211	214	217	220	223	62	
63	156	159	162	165	168	171	174	178	181	184	187	190	193	196	199	203	206	209	212	215	219	222	225	228	231	63	
64	161	164	167	170	174	177	180	183	186	190	193	196	199	203	206	209	212	215	219	222	226	229	233	236	238	64	
65	166	169	172	176	179	182	186	189	192	196	199	202	206	209	212	216	219	222	226	229	233	236	240	242	245	65	
66	171	174	178	181	185	188	191	195	198	202	205	209	212	216	219	222	226	229	233	236	240	243	247	250	253	66	
67	176	180	183	187	190	194	197	201	204	208	211	215	218	222	226	229	233	236	240	243	247	250	254	257	261	67	
68	181	185	189	192	196	200	203	207	211	214	218	221	225	229	233	236	240	243	247	250	254	258	261	265	269	68	
69	187	191	194	198	202	206	209	213	217	221	224	228	232	235	239	243	247	250	254	258	262	265	269	273	277	69	
70	192	196	200	204	208	212	215	219	223	227	231	235	239	242	246	250	254	258	262	265	269	273	277	281	285	70	
71	198	202	206	210	214	218	222	226	230	233	237	241	245	249	253	257	261	265	269	273	277	281	285	289	293	71	
72	203	208	212	216	220	224	228	232	236	240	244	248	252	256	260	265	269	273	277	281	285	289	293	297	301	72	
73	208	213	218	222	226	230	234	238	243	247	251	255	259	264	268	272	276	280	285	289	293	297	301	305	310	73	
74	215	219	224	228	232	236	241	245	249	254	258	262	267	271	275	279	284	288	292	297	301	305	310	314	318	74	
75	221	225	230	234	238	243	247	252	256	261	265	269	274	278	283	287	291	296	300	305	309	314	318	322	327	75	
76	227	231	236	240	245	249	254	258	263	268	272	277	281	286	290	295	299	304	308	313	317	322	327	331	336	76	
77	233	237	242	247	251	256	261	265	270	275	279	284	289	293	298	303	307	312	317	321	326	331	335	340	344	77	
78	239	244	248	253	258	263	267	272	277	282	287	291	296	301	306	310	315	320	325	330	334	339	344	349	353	78	
79	245	250	255	260	265	269	274	279	284	289	294	299	304	309	314	319	323	328	333	338	343	348	353	358	363	79	
80	251	256	261	266	271	276	281	286	291	296	301	307	312	317	322	327	332	337	342	347	352	357	362	367	372	80	
81	258	263	268	273	278	283	288	294	299	304	309	314	319	325	330	335	340	345	350	355	360	365	371	376	381	81	
82	264	269	275	280	285	290	296	301	306	311	317	322	327	332	337	342	347	352	357	362	367	373	378	383	388	82	
83	270	276	281	287	292	297	303	308	314	319	325	330	335	341	346	352	357	362	368	373	379	384	389	394	399	83	
84	277	283	288	294	299	305	310	316	321	327	332	338	343	349	355	360	366	371	377	382	388	393	399	404	410	84	
85	284	289	295	301	306	312	318	323	329	335	340	346	352	357	363	369	374	380	386	392	398	404	410	416	422	85	
86	290	296	302	308	314	319	325	331	337	343	348	354	360	366	372	377	383	389	395	401	407	412	418	424	430	86	
87	297	303	309	315	321	327	333	339	345	351	357	363	368	374	380	386	392	398	404	410	416	422	428	434	440	87	
88	304	310	316	322	328	334	340	347	353	359	365	371	377	383	389	395	401	407	413	420	426	432	438	444	450	88	
89	311	317	323	330	336	342	348	355	361	367	373	379	386	392	398	404	410	417	423	429	435	442	448	454	460	89	
90	318	324	331	337	343	350	356	363	369	375	382	388	394	401	407	413	420	426	432	439	445	452	458	464	471	90	

TABLE GIVING CUBICAL CAPACITY OF ALL SINGLE-CYLINDER ENGINES
having bores of from 50 to 90 mm. and strokes of from 50 to 100 mm.

For Multi-cylinder Engines, multiply by number of cylinders.

Bore in Milli- metres.	Stroke in Millimetres.																			Bore in Milli- metres.
	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	
50	147	149	151	153	156	157	159	161	163	165	167	169	171	173	175	177	179	181	183	184
51	153	155	157	159	161	163	165	167	169	171	174	176	178	180	182	184	186	188	190	192
52	159	161	163	166	168	170	172	174	176	178	180	183	185	187	189	191	193	195	197	200
53	165	168	170	172	174	176	179	181	183	185	187	190	192	194	196	198	201	203	205	207
54	172	174	176	179	181	183	185	188	190	192	195	197	199	201	204	206	208	211	213	215
55	178	180	183	185	188	190	192	195	197	199	202	204	207	209	211	214	216	218	221	223
56	185	187	190	192	194	197	199	202	204	207	209	212	214	217	219	222	224	226	228	231
57	191	194	196	199	201	204	207	209	212	214	217	219	222	224	227	230	232	235	237	240
58	198	201	204	206	209	211	214	217	219	222	224	227	230	232	235	238	240	243	246	249
59	205	208	210	213	216	219	221	224	227	230	232	235	238	240	243	246	249	251	254	257
60	212	215	218	220	223	226	229	232	235	237	240	243	246	249	252	255	257	260	263	266
61	219	222	225	228	231	234	237	240	243	245	247	250	254	257	260	263	266	269	272	275
62	226	229	232	235	238	241	244	247	250	254	257	260	263	266	269	272	275	278	281	284
63	234	237	240	243	246	249	252	256	259	262	265	268	271	274	277	280	283	286	289	293
64	241	244	248	251	254	257	260	264	267	270	273	277	280	283	286	289	293	296	299	302
65	249	252	255	259	262	265	269	272	275	279	282	285	288	292	295	299	302	305	309	312
66	256	260	263	267	270	274	277	280	284	287	291	294	298	301	304	308	311	315	318	321
67	264	268	271	275	278	282	285	289	293	296	300	303	307	310	314	317	321	324	328	331
68	272	276	280	283	287	290	294	298	301	305	309	312	316	320	323	327	330	334	338	341
69	280	284	288	292	295	299	303	307	310	314	318	321	325	329	333	336	340	344	348	351
70	289	292	296	300	304	308	312	316	319	323	327	331	335	339	342	346	350	354	358	362
71	297	301	305	309	313	317	321	325	329	332	336	340	344	348	352	356	360	364	368	372
72	305	309	313	317	321	325	329	332	336	340	344	348	352	356	360	364	368	372	376	380
73	314	318	322	326	331	335	339	343	347	351	355	360	364	368	372	376	380	384	388	392
74	322	327	331	335	340	344	348	353	357	361	365	370	374	378	383	387	391	396	400	404
75	331	336	340	344	349	353	358	362	367	371	375	380	384	389	393	398	402	406	411	415
76	340	345	349	354	358	363	367	372	376	381	385	390	395	399	404	408	413	417	422	426
77	349	354	358	363	368	372	377	382	386	391	396	400	405	410	414	419	424	428	433	437
78	358	363	368	373	377	382	387	392	397	401	406	411	416	420	425	430	435	439	444	448
79	368	372	377	382	387	392	397	402	407	412	417	421	426	431	436	441	446	451	456	461
80	376	382	386	392	396	402	407	412	417	422	427	432	437	442	447	452	457	462	467	472
81	386	392	397	402	407	412	417	422	428	433	438	443	448	453	459	464	469	474	479	484
82	396	401	407	412	417	422	428	433	438	444	449	454	459	465	470	475	480	486	491	496
83	406	411	417	422	427	433	438	443	449	454	460	465	471	476	481	487	492	498	503	508
84	416	421	427	432	438	443	449	454	460	465	471	476	482	488	493	499	504	510	515	521
85	425	431	437	443	448	454	460	465	471	477	482	488	494	499	505	511	516	522	528	533
86	436	441	447	453	459	465	470	476	482	488	494	499	505	511	517	523	529	535	541	547
87	446	452	458	464	470	475	481	487	493	499	505	511	517	523	529	535	541	547	553	559
88	456	462	468	474	480	486	493	499	505	511	517	523	529	535	541	547	553	559	566	572
89	466	473	479	485	491	498	504	510	516	522	529	535	541	547	553	559	566	572	578	584
90	477	483	490	496	502	509	515	522	528	534	541	547	553	560	566	572	579	586	592	598

THE NUMBER OF MOTOR CYCLES REGISTERED

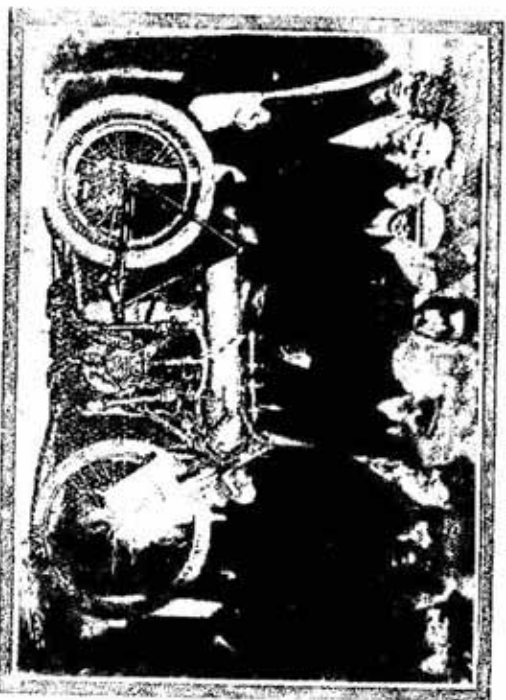
From Midsummer, 1906, to Midsummer, 1907.

SPECIALLY COMPILED BY "THE MOTOR CYCLE."

Registration Authority.	Index Letters.	Motor Cycles Registered.	Registration Authority.	Index Letters.	Motor Cycles Registered.
ENGLAND.					
County Councils.—					
Bedfordshire	BM	482	County Boroughs (cont.)		
Berkshire	BL	477	Burnley	CW	146
Buckinghamshire	BH	406	Burton-on-Trent	FA	78
Cambridgeshire	CE	399	Bury	EN	66
Cheshire	M	189	Canterbury	FN	133
Cornwall	AF	286	Chester	FM	71
Cumberland	AO	257	Chester	FM	71
Derbyshire	R	472	Chester	FM	71
Devonshire	T	745	Chester	FM	71
Dorset	BF & FX	293	Chester	FM	71
Durham	J	481	Chester	FM	71
Essex	F	1,547	Chester	FM	71
Gloucestershire	AD	402	Chester	FM	71
Herefordshire	CJ	167	Chester	FM	71
Hertfordshire	AR	729	Chester	FM	71
Huntingdonshire	EW	177	Chester	FM	71
Isle of Ely	EB	171	Chester	FM	71
Isle of Wight	DL	133	Chester	FM	71
Kent	D	1,460	Chester	FM	71
Lincolnshire	B	1,011	Chester	FM	71
Leicestershire	AY	342	Chester	FM	71
Lincs. (Holland)	DO	223	Chester	FM	71
" (Kesteven)	CT	248	Chester	FM	71
" (Lindsey)	BE	308	Chester	FM	71
London	A, L, C, L, N	7,350	Chester	FM	71
Middlesex	H	1,855	Chester	FM	71
Monmouthshire	AX	172	Chester	FM	71
Norfolk	AD	377	Chester	FM	71
Northamptonshire	BH	427	Chester	FM	71
Northumberland	BD	411	Chester	FM	71
Nottingham	X	411	Chester	FM	71
Oxfordshire	AL	498	Chester	FM	71
Peterborough, Soke of	BW	240	Chester	FM	71
Rutlandshire	FL	154	Chester	FM	71
Salop	FP	90	Chester	FM	71
Somersetshire	AW	301	Chester	FM	71
Southampton (County of Hants)	Y	568	Chester	FM	71
Staffordshire	AA	706	Chester	FM	71
Suffolk (East)	E	749	Chester	FM	71
Suffolk (West)	BJ	213	Chester	FM	71
Surrey	CF	164	Chester	FM	71
Sussex (East)	P	1,674	Chester	FM	71
Sussex (West)	AP	493	Chester	FM	71
Warwickshire	BP	420	Chester	FM	71
Westmorland	AC	524	Chester	FM	71
Wiltshire	EC	168	Chester	FM	71
Worcestershire	AM	563	Chester	FM	71
Yorkshire (E. Riding)	AB	403	Chester	FM	71
Yorkshire (N. Riding)	BT	168	Chester	FM	71
" (W. Riding)	AT	232	Chester	FM	71
"	O	825	Chester	FM	71
Total		31,615	Chester	FM	71
County Boroughs.—					
Bath	EO	111	Chester	FM	71
Birkenhead	FB	100	Chester	FM	71
Birmingham	CM	132	Chester	FM	71
Blackburn	O	1,435	Chester	FM	71
Blackpool	CB	134	Chester	FM	71
Bolton	FR	58	Chester	FM	71
Bosley	BN	179	Chester	FM	71
Bournemouth	EM	48	Chester	FM	71
Bradford	EL	201	Chester	FM	71
Brighton	AK	286	Chester	FM	71
Bristol	CD	338	Chester	FM	71
	AE	645	Chester	FM	71
WALLES.					
County Councils.—					
Anglesey	EY	55	Chester	FM	71
Breconshire	EU	67	Chester	FM	71
Cardiganshire	EJ	50	Chester	FM	71
County Boroughs (cont.)					
Burnley	CW	146	Chester	FM	71
Burton-on-Trent	FA	78	Chester	FM	71
Bury	EN	66	Chester	FM	71
Canterbury	FN	133	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
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Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM	71	Chester	FM	71
Chester	FM				

First Motor Cycle Race at Brooklands.

ON Easter Monday motor cyclists had an opportunity of trying their mounts for the first time in open competition on the famous track at Brooklands. The racing was confined to one event, viz., a five and a half miles race, the entrant of the winner to receive 20 sovs. or a cup at his option.



W. Cook (7-9 N.L.G. Peugeot), winner of the motor cycle race at Brooklands. His speed for about 5½ miles was equal to 63 miles an hour.

and the entrant of the second 5 sovs. or a medal at his option. For motor bicycles of which the engines, if twin-cylinder, do not exceed 80 mm. by 98 mm. for each cylinder. No less than twenty-four entries were obtained. The remaining five events were all for motor cars, and will be fully dealt with in *The Autocar* for the 25th inst.

Competitors in Order of Finishing.

Entrant, rider, and machine.	Bore.	Stroke.
Mr. A. G. Forster (W. Cook), 7.9 h.p. N.L.G. Peugeot	80	98*
Mr. E. Kichham (owner), 7 h.p. Leader Peugeot	80	98*
Mr. C. R. Collier (owner), 6 h.p. Matchless J.A.P.	76	95*
Mr. W. G. McMinnies (owner), 3½ h.p. Triumph	84	86
Mr. W. H. Wells (owner), 5 h.p. Vindoc Special	75	76*
Mr. G. Schink (M. Geiger), 6 h.p. N.S.U.	75	90*
Mr. H. Pasball (J. H. Slaughter), 3½ h.p. Triumph	84	86
Mr. J. C. Davis (owner), 5½ h.p. Rex	76	81*
Mr. E. C. W. FitzHerbert (owner), 6 h.p. F.N.	50	574
Mr. E. W. Applebee (owner), 5 h.p. Rex	76	80*
Mr. H. Reed (owner), 7 h.p. Dot-Peugeot	80	98*
Mr. O. L. Bickford (owner), 5 h.p. Vindoc Special	75	76*
Mr. H. A. Collier (owner), 3½ h.p. Matchless J.A.P.	85	76
Mr. H. A. Cooper (owner), 3½ h.p. Triumph	84	86
Mr. H. Shanks (owner), 2½ h.p. Chatter Lea	75	75
Mr. E. Gwynne (owner), 5 h.p. Vindoc Special	75	76*

Others who did not finish or were so far behind that they were not recorded:

Mr. W. W. Giehn (owner), 7.8 h.p. Minerva	80	85*
Mr. A. G. Reynolds (owner), Vindoc Special	75	76*
Mr. W. Pollard (owner), 3½ h.p. Chatter Lea	81	88
Mr. F. Toman (owner), 4½ h.p. Laturin and Nement	75	88*
Mr. G. Lee Evans (owner), 3½ h.p. Rex	...	3½ in. 3½ in.
Mr. C. Harford (G. Adams), 6 h.p. Griffin	75	80*
Mr. J. B. Haulin (owner), 5 h.p. Vindoc Special	75	76*
Mr. O. C. Godfrey (owner), 5 h.p. Rex	5 in.	3½ in.*

* Twin-cylinder. † Four-cylinder.



Brooklands Motor Cycle Race. Competitors and their machines in the paddock.

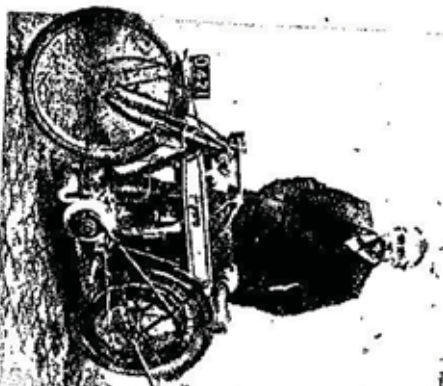
Although only twenty-one numbers were put up on the indicator board when the bell rang, the full number of entrants were on parade. The rushing past of such a large number of machines at fast speed created considerable enthusiasm among the spectators.

All the riders were started together, and, after one or two failures to get the engines going, W. Cook (7-9 h.p. N.L.G. Peugeot) got away finely, and had a good lead at the members' bridge, about one-third of a mile from the start. He continued to forge ahead,

COMPETITORS FOR THE T. T.



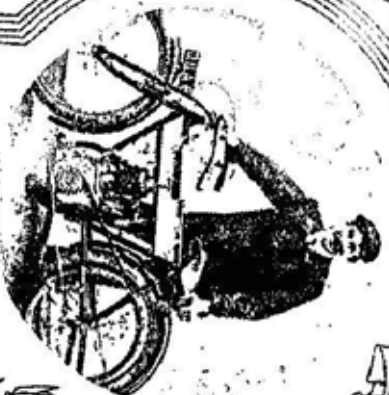
Fred Turrey, 3rd Humber,
R. & B., Dunlop.



J. L. Norton, 3rd Norton,
R. & B., Shams, Clutchers.



W. H. Groves, 3rd Ariel,
R. & B., Bosch.



F. Savory, 3rd Premier,
R. & B., Shams, Dunlop.



H. Ross Fowler, 4th Rex,
R. & B., Bosch.



Howard Smith, 3rd Triumph,
Bosch, Dunlop.



J. R. Alexander, 5th Indian,
Bosch, Horn.



J. H. Slaughter, 3rd Ariel,
R. & B., Bosch.



F. Weatherill, 3rd Zenith-
Cradock, R. & B., Bosch.



F. A. Appleby, 4th Rex,
R. & B., Clutch-drive, Horn.

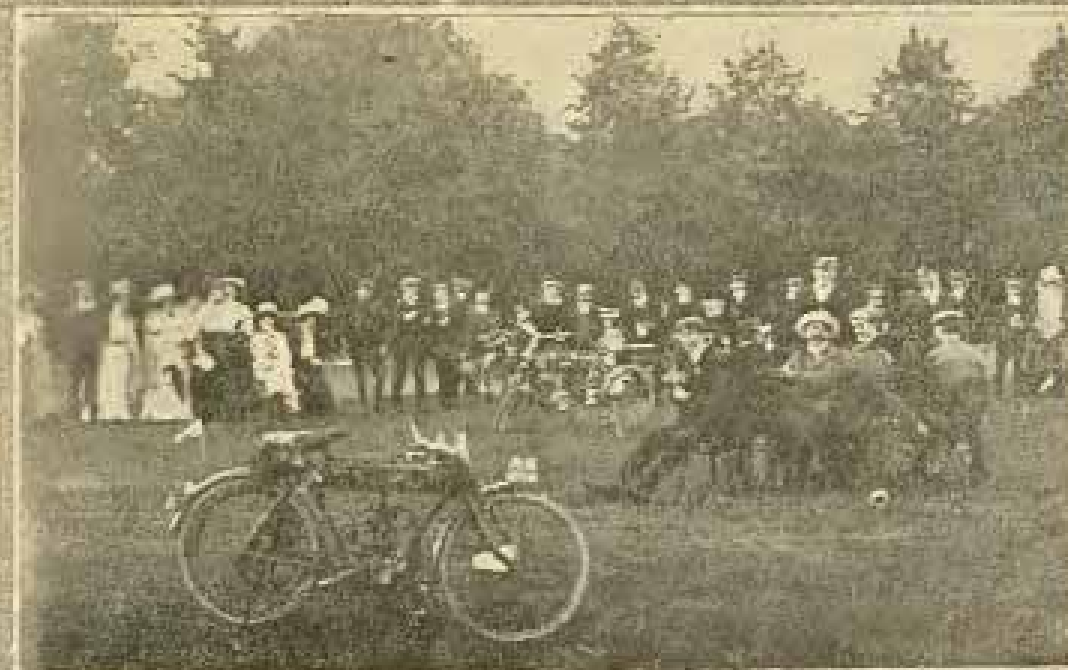


Sydney Jones

ESSEX M.C. GYMKHANA, JULY 11th.

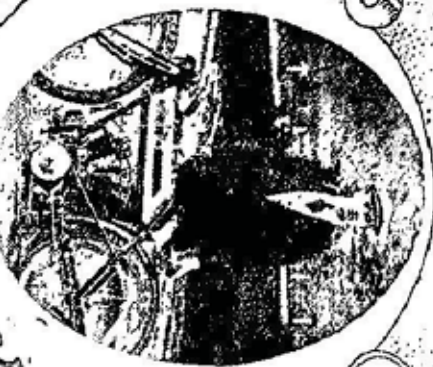


Changing sparking plugs against time. An interesting occupation, especially when the engine is hot!



The musical chairs event for motor cyclists, which caused much amusement.

COMPETITORS FOR THE T.T.



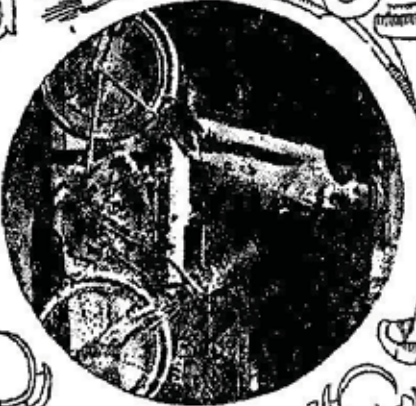
A. J. Sproston, 4 Rex,
B. & B., Continentale.



G. Lee Evans, 5 Indian,
Bosch.



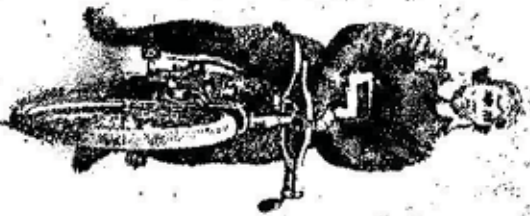
W. B. Grange, 3 1/2 Rex,
Machay, Dunlop.



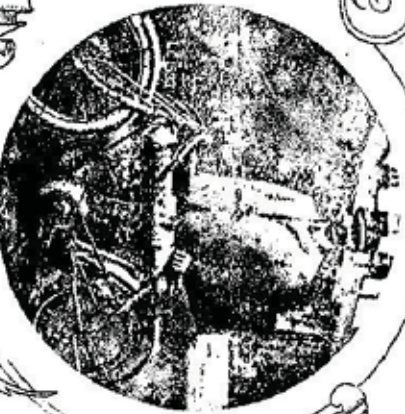
G. R. Collier, 6 Matchless,
J.A.P., Amco, Hutchinson.



A. J. Meethouse, 5 Indian,
Bosch.



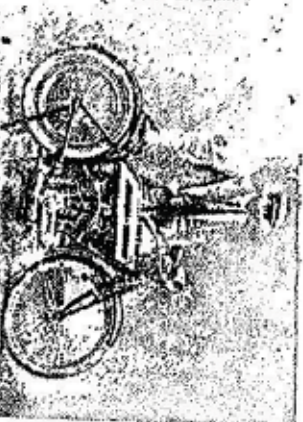
W. O. Bentley, 5 Indian,
Bosch.



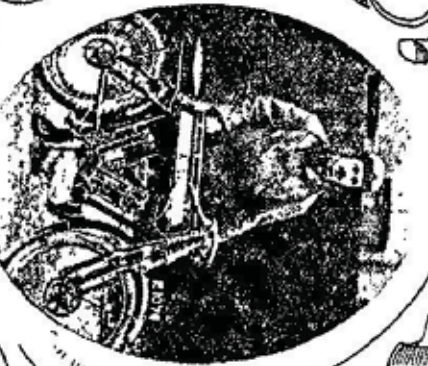
H. A. Collier, 5 Matchless,
Longemare, Hutchinson.



Noel E. Drury, 5 J.A.P.,
B. & B., Bosch.



E. F. Baxter, 4 Rex, B. & B.,
Bosch, Continentale.

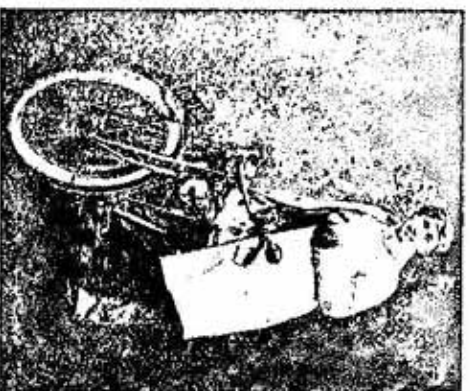


H. Martin, 5 J.A.P.-A.S.L.,
Bosch, Amco, Continentale.

COMPETITORS FOR THE T.T.



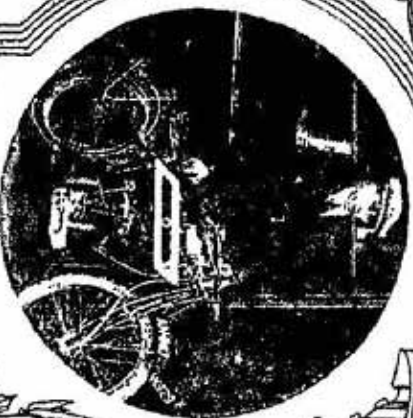
D. R. Clarke, 5 Indian,
Bosch.



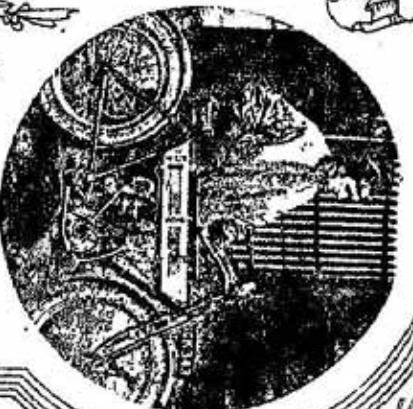
C. E. Murphy, 3 1/2 Triumph,
Bosch, Dunlops.



H. V. Colver, 5 Matchless,
Longemare, Hutchinson.



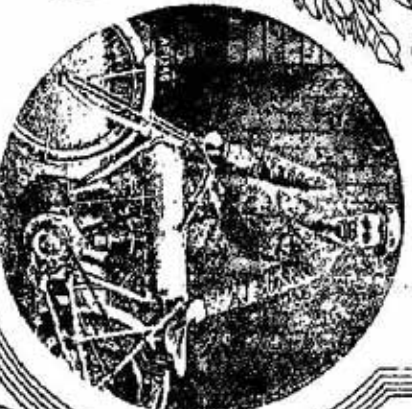
J. R. Woodward, 4 Rex,
Bosch.



H. Boulting, 3 1/2 Motor-
J.A.P., Amac, Bosch.



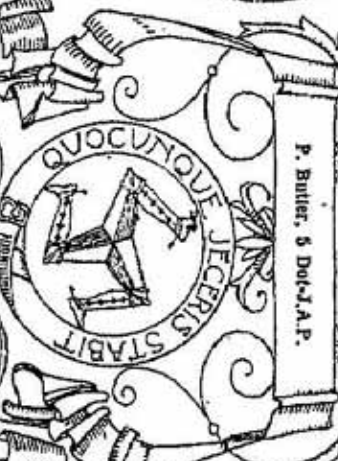
H. J. Seale, 5 J.A.P.,
Amac, Bosch.



F. W. Dayrell, 5 Rati-J.A.P.,
Amac, Continental.



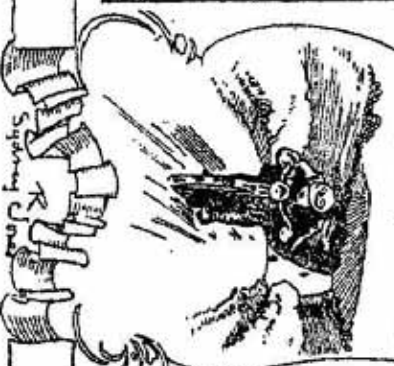
P. Butler, 5 Dof-J.A.P.



F. G. Bagshaw, 4 Rex,
B. & B., Continental.

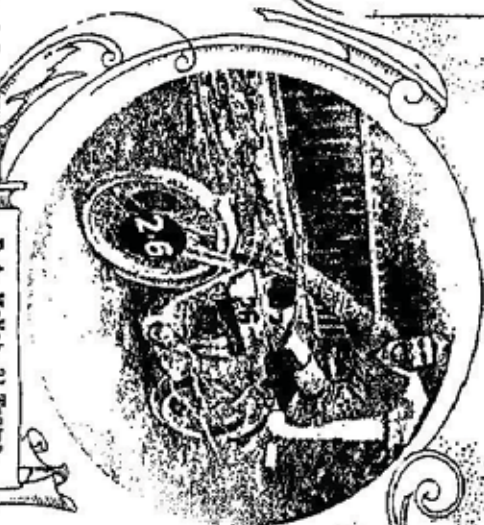


A. E. Woodman, 5 Indian,
Bosch.

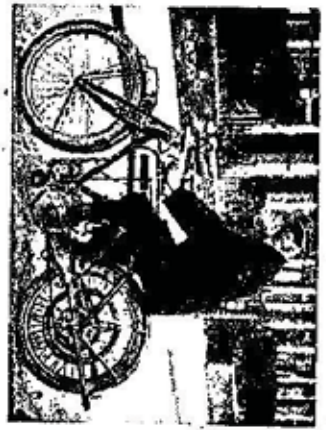


Sydney Jones

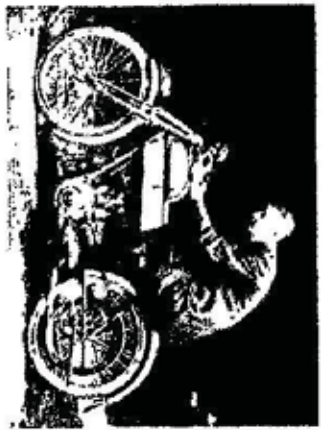
COMPETITORS FOR THE T.T.



F. A. McNab, 31 Trump,
Hellersen, Continentals.



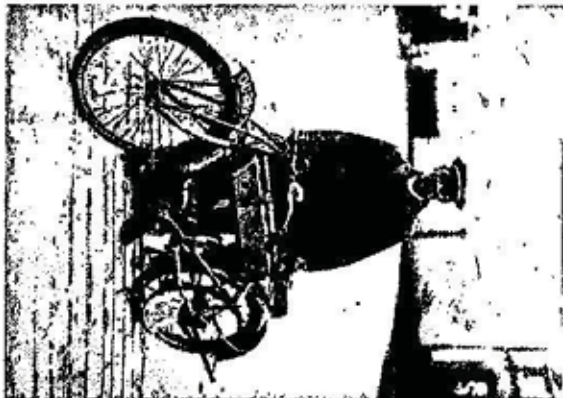
A. R. Abbott, 31 Rex
Bosch.



S. C. Perryman, 5
Blamfield.

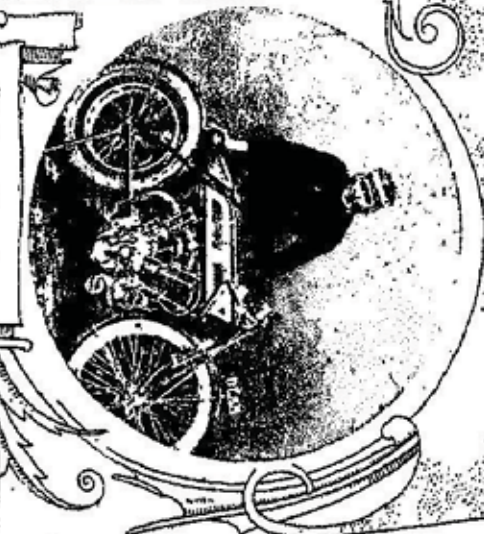


J. B. Franklin, 4 Indian
C. and J. B. and R.



W. Heaton, 5 N.S.U.,
Bosch, Continentals.

5th and 5th



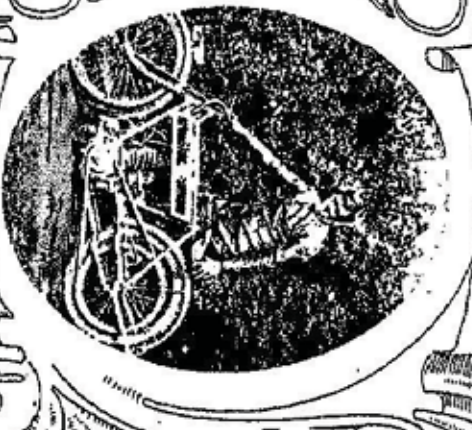
A. Reed, 6 Do-I-A.P.



H. H. Bowen, 5 Bat,
Lampsonare, Rom.



J. W. Adamson, 34 Tri-
umph, Bosch, Dunlops



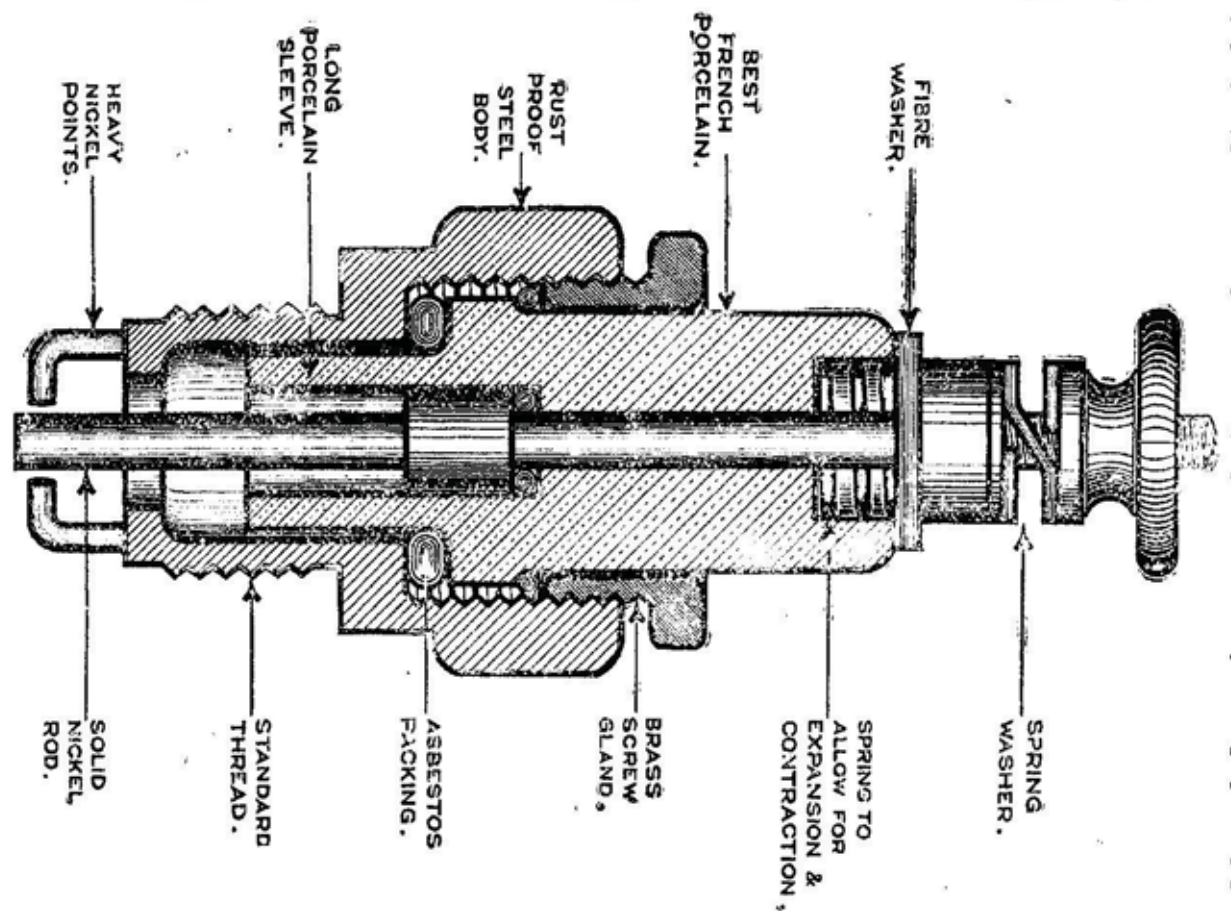
J. Gibson, 34 Trump,
Bosch.

THE LODGE SPARKING PLUG.

Every plug supplied with special steel gauge for accurately setting sparking points.

**DESIGNED
FOR
MAXIMUM
POWER.**

**THE MOST
PERFECTLY
CON-
STRUCTED
PLUG.**



4/-

Fully
Guaranteed.

**THE BEST
PLUG FOR
MAGNETO
IGNITION
(OR
ACCUMULATOR).**

**EVERY
DETAIL OF
IT CLAIMS
YOUR
ATTENTION.**

The name "LODGE" is clearly visible on the porcelain. Special pattern suitable for the Triumph engine.

... ASK TO SEE THESE PLUGS AT YOUR GARAGE ...

If you should have any difficulty in obtaining them, they may be had direct from us, but cash should in every case be enclosed with order. They will be sent o f by return (post free in U.K.) Money back if not approved.

PRICE **4/-** EACH NET.

Not at Stanley Show.

Descriptive pamphlet sent post free on application.

LODGE BROS. & CO., 14, NEW ST., BIRMINGHAM.

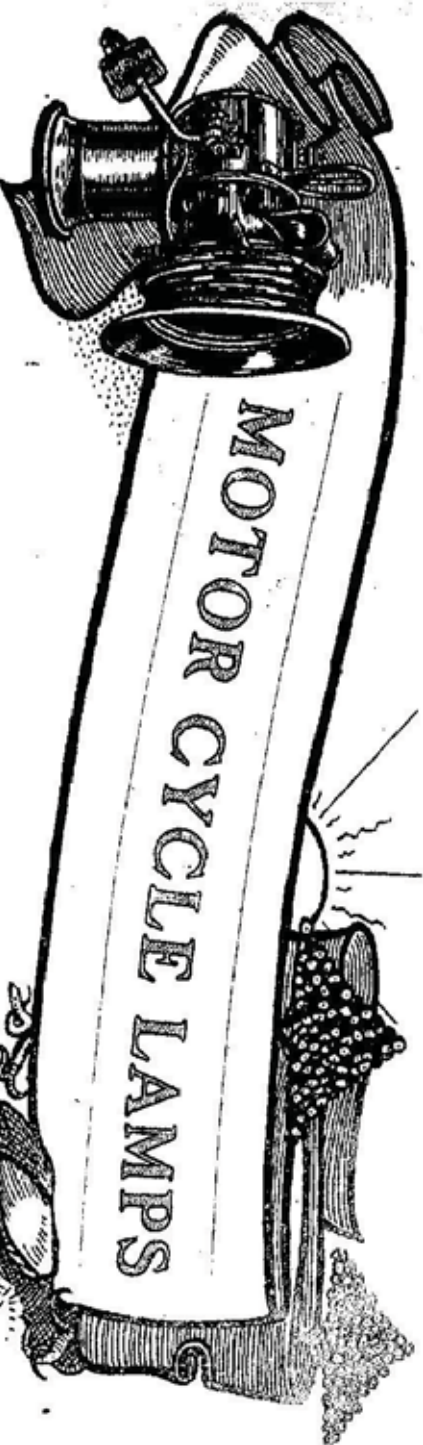
5
DECEMBER 20th, 1909.

MOTORCYCLE

1005



MISTAKING THE FIRING.



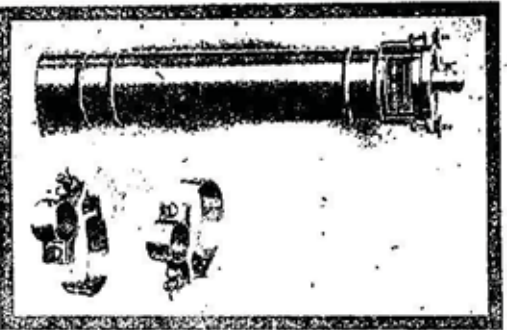
For night riding we have for some time relied upon a Model F Autoclipse lamp with eclipsing mechanism, and although of comparatively small dimensions its light-giving powers are wonderful. It is 400 candle-power, and the projective power 200 feet. But the brilliant light it gives is not its only good point, for the lamp is splendidly finished and stoutly constructed, and after carrying it on our motor bicycle for many hundreds of miles it is just as solid and free from rattle as ever. We mention this,



The Eclipsing Disc of the Autoclipse Lamp.

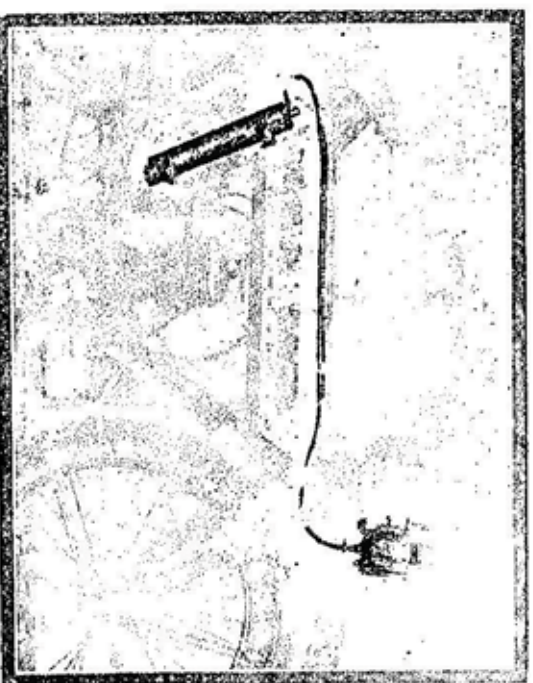
as all riders who have used flimsily constructed lamps know how tiresome they can be. It is certainly a high-priced lamp, but it is obvious that the makers studied quality first, and not cost. The eclipsing mechanism is shown in the accompanying illustration. By altering the position of the operating lever shown on the right, a disc is interposed between the burner and the reflector, thus completely eliminating the long-distance rays which are so dazzling when riding in traffic, and cause much annoyance. Even when the eclipsing disc is in use a good light is maintained for immediate surroundings. The lamp can be obtained from BROWN BROS., LTD., Great Eastern Street, E.C., with either side or back lamp-bracket, and without the eclipsing mechanism if desired. It weighs $2\frac{1}{4}$ lbs.

We wish we could speak in as high terms of praise for the generator, which works on the diving bell principle; that is to say, gas is generated by water soaking through a capillary pad at the bottom of the carbide reservoir, and after enough gas has been evolved it automatically forces the water away from the carbide, so preventing further decomposition of the carbide. As soon as the gas generated has been consumed, the water again attacks the carbide and a further supply of gas is generated, and so on. But in use the generator only lasts one and a half to two hours, and is



Autoclipse Diving Ball Generator, with clips for attaching to the seat tube.

very wasteful with carbide, requiring to be filled each time a light is required, and personally we prefer the ordinary drip-feed generator (which Brown Bros. also supply) on account of its reliability and simplicity. But, though heavy, the Autoclipse generator is very neat and well made, and quite adds to the appearance

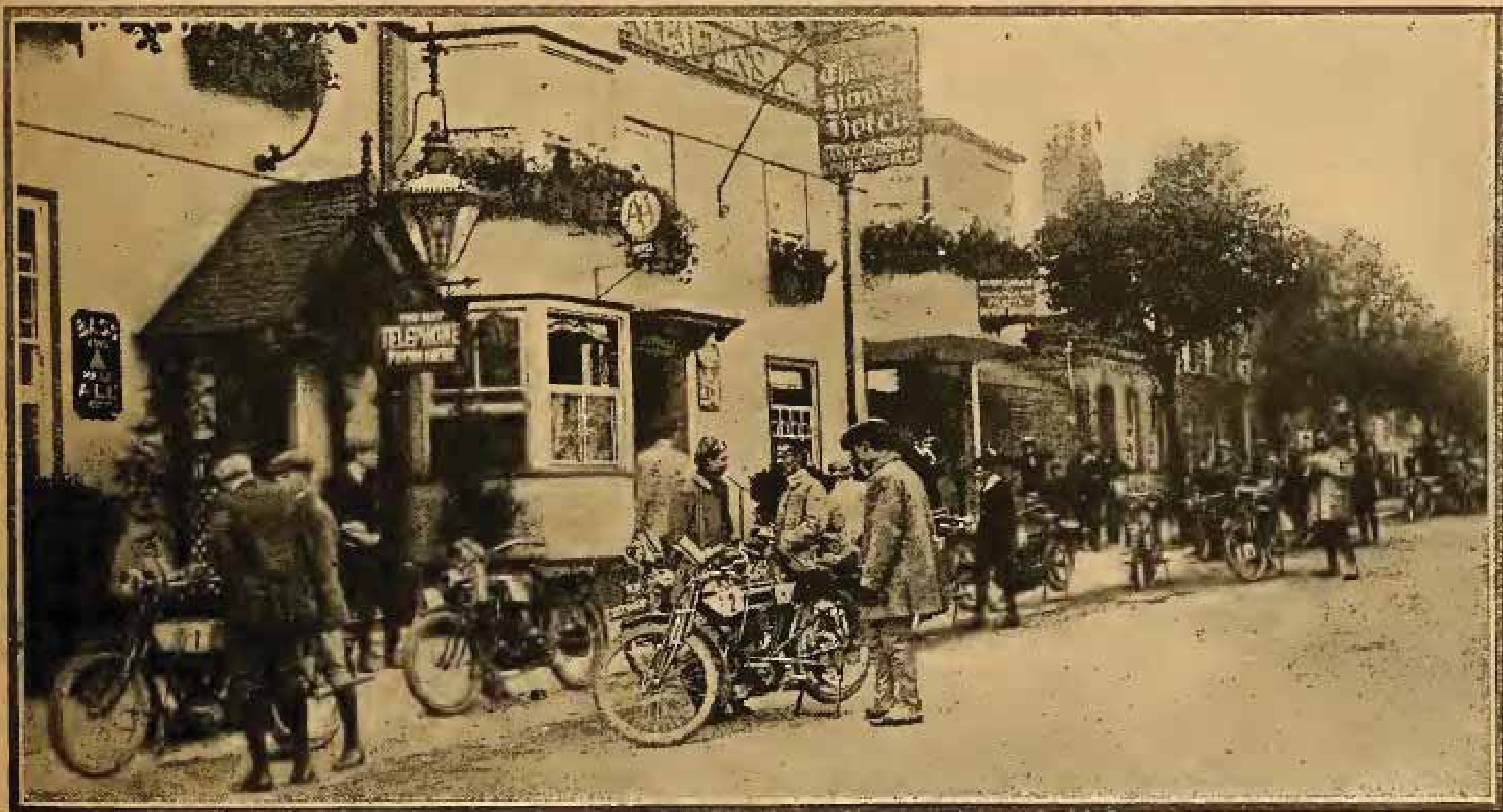


The Autoclipse Lamp and Generator, showing the neat method of carrying the latter between the seat tube and rear mudguard.

of a machine when attached to the seat tube by the clips provided. A drip-feed generator designed to be attached to the seat tube in the same manner would make an excellent combination. The firm also sell the Duco lamp and separate generator, which is a cheaper pattern than the Autoclipse.

THE SERVICE CO., LTD., 292, High Holborn, W.C., supply the Service mirror lens headlight and generator. This lamp has been designed to meet the requirements of those motor cyclists who do a great deal of night riding. The mirror lens is detachable, the front glass is dissected, and the lamp is supplied complete with generator, tubing, and clip for attaching generator to the fork. A carbide carrier is also supplied by the same firm to fulfil a very necessary want, viz., a case in which the carbide may be carried until it is actually required for use in the lamp.

The F.R.S. lamp is the outcome of suggestions made to Messrs. SAMUEL HALL AND SONS, LTD., of 12, Clyde Street, Edinburgh, by readers of *The Motor Cycle*. The latest pattern F.R.S. has a body made of aluminium and plated brass combined, and the total



Scene at the start of the M.C.C. 12 hours Run on Bank Holiday Monday (see page 742). Competitors lined up outside Ye Olde Thatched House, Epping.



A representative meet of Essex Motor Club members on the occasion of the 1908 opening run.



Essex M.C. Gymkhana. Officials and competitors at tea.

ESSEX M.C. GYMKHANA.



F. A. Hardy (Twin V.S.) slicing the lemon.



A. G. Reynolds (3½ h.p. Bradbury) tilting at the ring.

Essex M.C.

Team :

Alan Hill.

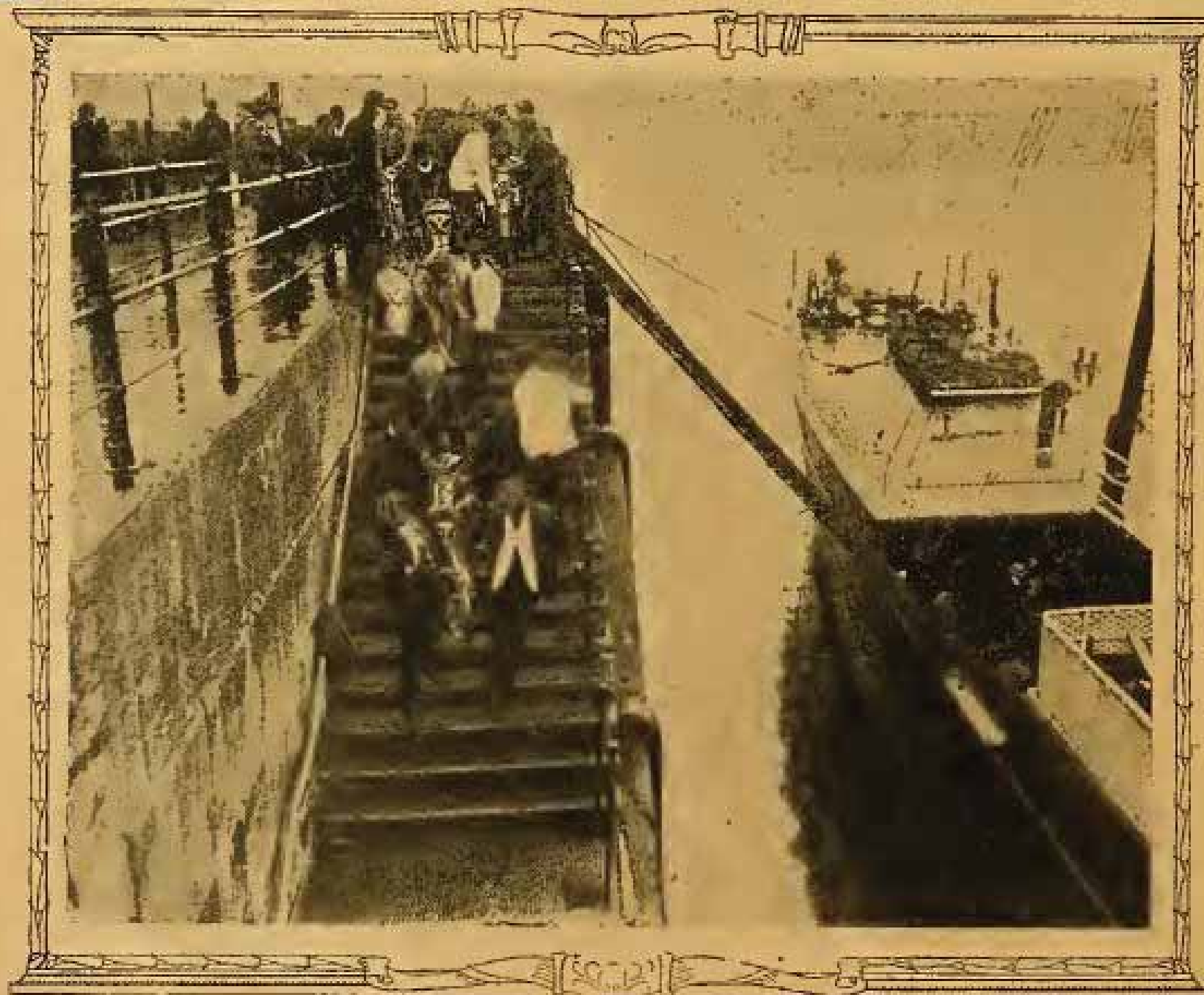
G. L. Fletcher,

A. G. Peppercorn,

and

A. B. Howard.





Carrying motor cycles down the Douglas quay steps on to the boat. This antiquated method of shipping machines at Liverpool and Douglas was the cause of much grumbling. Three and sometimes four labourers had to be chartered. We suggest that the Isle of Man Steam Packet Co. or the dockyard authorities adopt proper slings at an early date. A tarpaulin covering on deck would also be appreciated in case of wet.



Collier crossing the River Neh, in the T.T. Race, at over forty miles an hour.





Scene at Ongar
before the start of
the 200 Miles
Non-stop Compe-
tition.

THE LOCAL EXPERT.

(With apologies to Longfellow.)

Within the village "Chestnut Tree"

The local expert stands.

Indeed, a knowing man is he,

Though time hangs on his hands,

And oil and petrol, belts and tyres,

He stocks, of doubtful brands.

His air is willing, shrewd, and bland,

More noticed, perhaps, in spring;

His brow is wet with useless sweat;

He "nicks" whate'er you bring,

And he loves to speak of tuning up,

For he knows not anything.

Week in, week out, from morn till night

His horn you'll hear him blow;

You'll hear him on his worn-out bike,

With measured beat and slow,

Like lampless wight returning home

When the evening sun is low.

And victims coming down the road

Look in at the open door,

Rejoice to see his dozen tools

Reposing on the floor,

And think that they have still a chance

Of getting home by four.

He goes on Saturday to hill-climbs

Amidst a crowd of boys;

They like to hear him scoff and preach

More sense, I fear, than noise;

But still, to hear the expert speak

Embraces some folks' joys.

Spoiling, rejoicing, borrowing,

Onward through life he goes;

New victims with some ticklish job

Find him about to close.

Nothing effected, someone done,

Has earned a night's repose.

Thanks, thanks to thee, my worthy friend,

For the lesson thou hast taught;

Thus at this flameless forge of thine

Experience must be bought;

And to maintain your proud renown

Fresh victims must be caught

F. D.

