

A Chat with Mr. H. Collier, Sen.

WE found Mr. Collier at the new premises, 44, Plumstead Road, Greenwich, two minutes' walk from Woolwich Arsenal gates.

It is not generally known that Mr. Collier served his country years ago by working at the big lathes in the naval gun factory at the Arsenal. His experience with "explosion engines" therefore dates from early days.

The new Matchless works should greatly facilitate the turning out of the 1912 models. It is a compact little factory, well equipped, well lighted, run on up-to-date lines, and capable of extension—a real credit to the hard work of Mr. Collier and his sons, who might well share the motto of another famous business man, "Great oaks from little acorns grow."

Unlike many other manufacturers, Mr. Collier is a hearty supporter of races of all kinds. In 1902-3, Charlie and Harry were making rings round their rivals, at Canning Town, using a 2½ h.p. De Dion engine slung in an inclined position on the frame—an engine which was tuned out of all recognition. The two keen brothers learned their trade in the excellent school kept by Dame Experience, and now what they do not know about engine tuning, and making

for that matter, is not worth talking of.

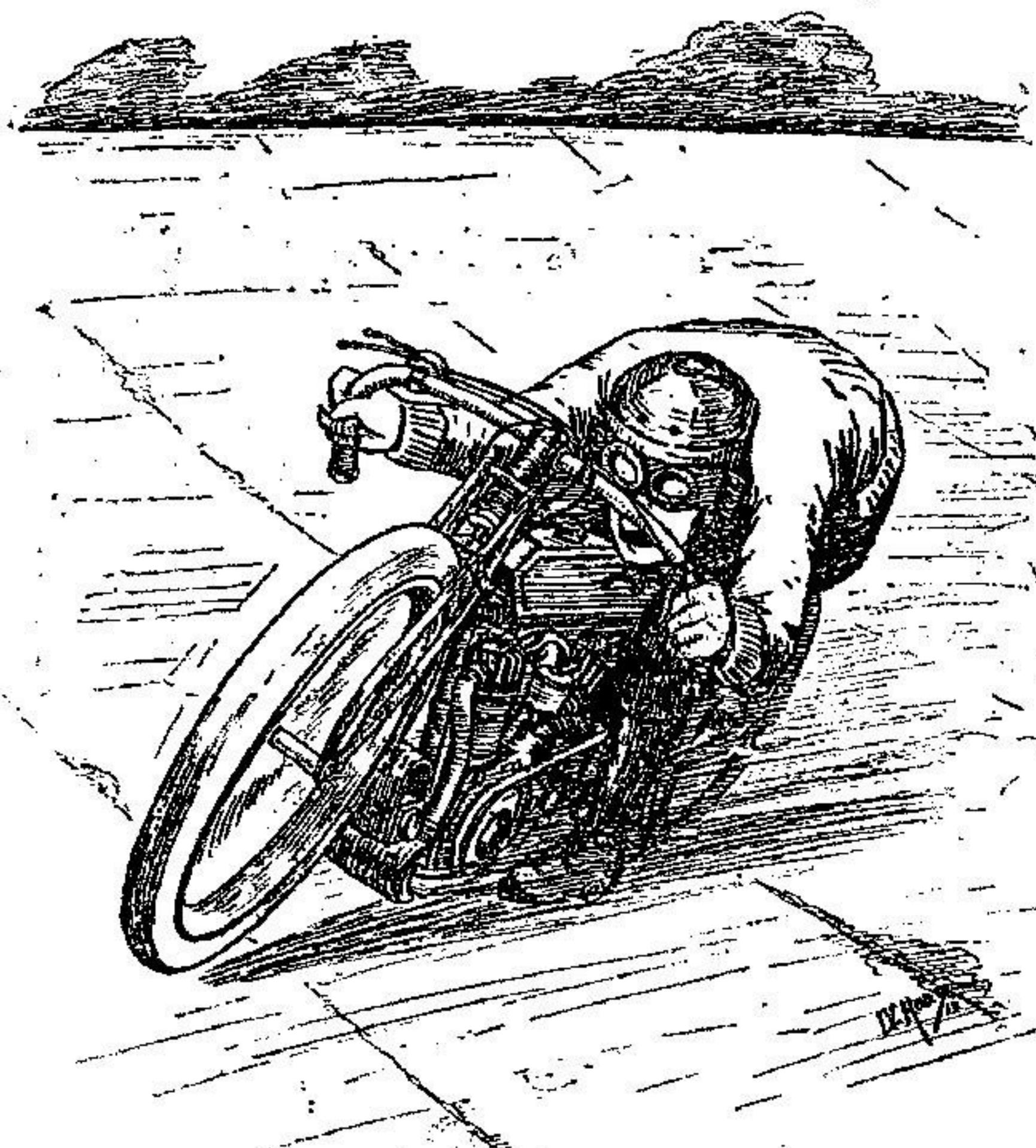
1912 Matchless machines are now being fitted with Matchless engines,

made by Messrs. J. A. Prestwich and Co. We mention this fact, because it shows how much the Matchless firm has benefited by racing experience. Mr. Collier therefore seems to be thoroughly justified in what he says about the value of racing.

"Where are France, Austria, and Germany," said Mr. Collier, "who gave up racing five or six years ago, and at the time they gave it up could beat us? We have never given up motor cycle racing, nor have the Americans, and American or English machines can safely take on any Continental make."

Asked about Charlie's proposed visit to the States, Mr. Collier said he was quite willing for him to go, only he wisely insisted that the money guaranteed should be deposited, preferably with the Auto Cycle Union or some independent party, before he would allow his son to leave the country. Whether or not he could go would also depend on the date of the Tourist Trophy Race, and the number and date of competitions on the Continent this year.

In conclusion, Mr. Collier told us he felt the motor cycle boom was only just beginning, and that in the near future the use of the motor cycle would be vastly extended.



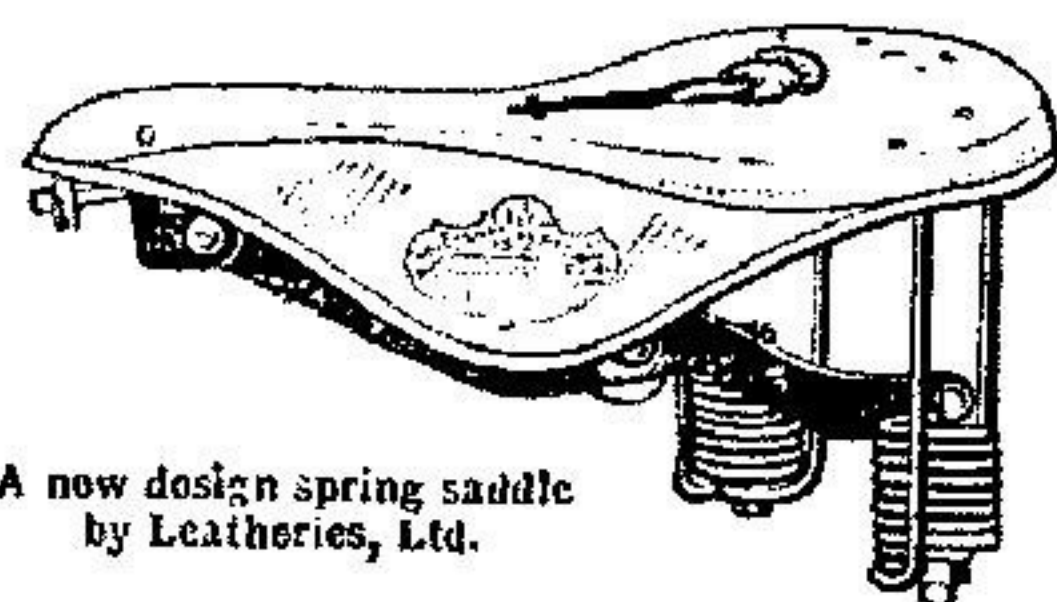
An impression of C. R. Collier at speed on his 8 h.p. Matchless-Jap. It is interesting to note that this Englishman's speed of 91.37 m.p.h. remains the fastest ride ever accomplished on a motor cycle.

The College Patent Leather Mudshield.

Beard, Brown, and Co., College Street, Wolverhampton, the makers of the College mudshield, send free to all enquirers a full size model of the shield with samples of the leather of which it is constructed, and of the apron material. The model can be fitted up immediately by the rider, and by its means he is able to see at a glance how it adapts itself to his machine.

A New Saddle.

The Leatheries, Ltd., Sampson Road North, Birmingham, has recently introduced a new motor cycle saddle which is called the "Empire de Luxe." It is designed to allow the requisite clearance to enable the saddle springs to fit over the



A new design spring saddle by Leatheries, Ltd.

carrier and mudguard. The measurement between the spring hangers is 7in., which gives an extremely low position. F. A. McNab used one of these saddles in the Birmingham M.C.C. winter trial to York and back on the 27th ult., when he gained a gold medal, and was placed first with a total error of 1m. 45s. McNab weighs over 15 stones, so that the saddle was put to a severe practical test.



Automatic Carburetters.

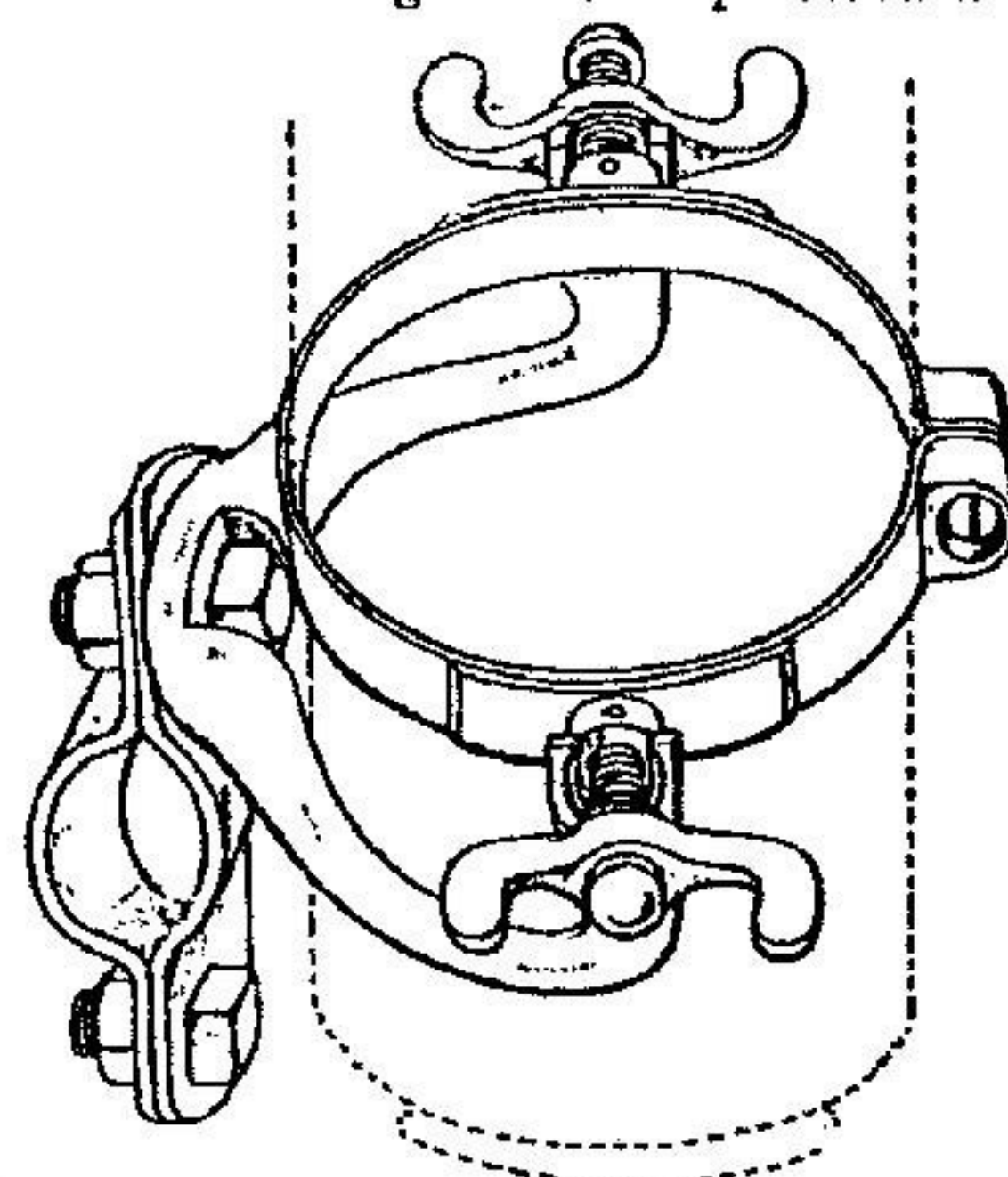
Mr. T. W. Pattersall drove a five years old mount in the M.C.C. Exeter run, fitted with a Stewart-Precision carburettor. Describing his experiences, he says that the exhilaration of driving with the throttle control only is superb, and variations of road, sudden or gradual, have no effect on the mixture, and the effortless feel of the engine is most satisfying. Petrol consumption averaged between seventy and eighty miles per gallon over wet and heavy roads with a twin-cylinder engine (75 x 75 mm.) sidecar and passenger.

Garage Accommodation in the City.

There have often been complaints about finding accommodation for motor cycles and obtaining petrol in the City of London, and it is interesting to note that the New Hudson Cycle Co., Ltd., have moved to new and larger premises for their London depot at 45, Gray's Inn Road, W.C. (just by Holborn Town Hall). The latest New Hudson models are in stock, also spare parts and sundries. A large garage at the back will be exclusively devoted to the needs of motor cyclists, and as few firms hereabouts have petrol licences the firm has made arrangements to supply small quantities of motor spirit to motor cyclists.

A New Generator Holder.

Samuel Hall and Sons, Ltd., Wrotesley Street, Birmingham, have introduced a new generator holder, which we illustrate. This holder is for use with any generator that can be held by side fixings. If it be wanted to fix a generator unprovided with



the necessary side attachments in any other place on the machine than where it was originally intended a series of bands can be supplied by the same firm, which are made in all sizes from 2½in. to 3½in. diameter. The band in the sketch is 3in. diameter. The introduction of these attachments makes it possible to fit a generator on any single tube of either motor cycle or sidecar.

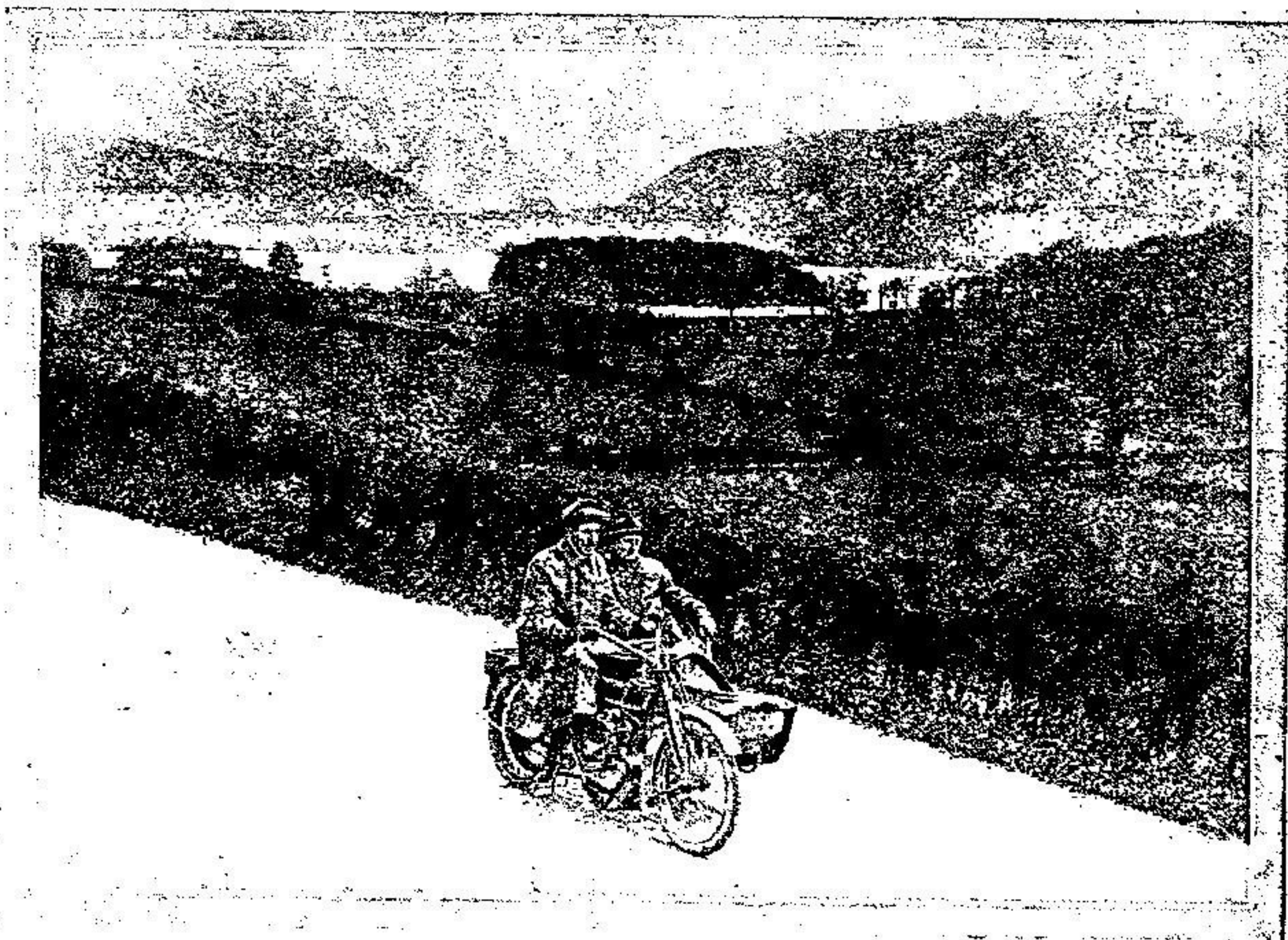
ANOTHER CLIMB UP HONISTER PASS.

ON Saturday last, C. R. Collier arranged to make an attempt on Honister Pass with a standard 8 h.p. Matchless and sidecar. Accordingly the Cumberland County M.C.C. made arrangements similar to those made for Frank Smith when he performed the wonderful feat of climbing the pass with his Clyno and sidecar with passenger on the 9th inst. The club are always glad to welcome to the hills and dales their comrades from the South and Midlands. Having assembled at Quirk's Garage at 2.30 p.m. and met C. R. Collier on his 8 h.p. Matchless and sidecar, the party then rode out to Honister, where the most remarkable epoch in the history of that remote region was completed.

The Descent.

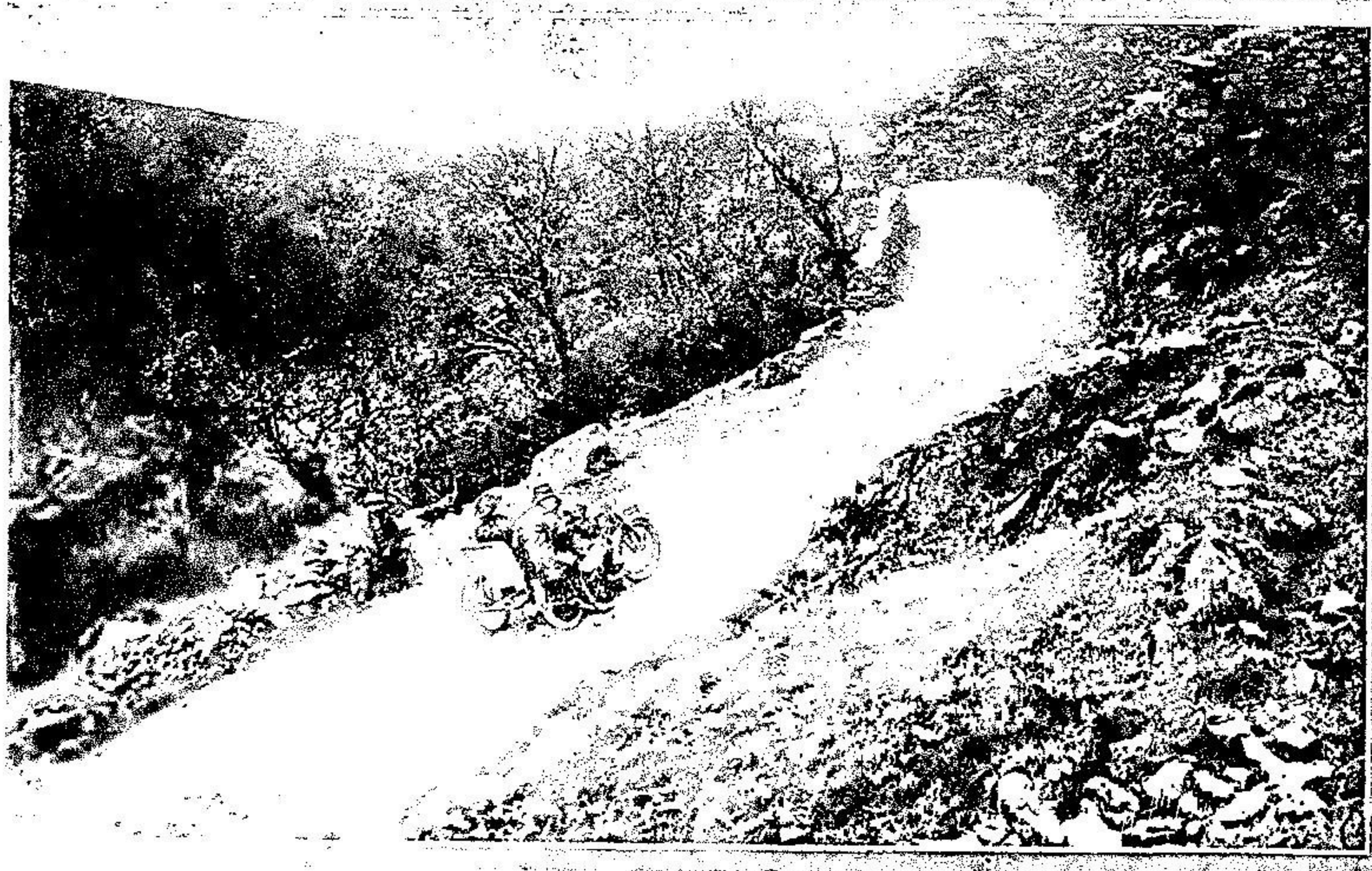
At the top of the pass we met many more members of the Cumberland and Westmorland Clubs who were anxiously waiting in the mountain rain for our arrival. C. R. Collier descended the pass with F. S. Whitworth as passenger, and I followed on my machine to start them from Gatesgarth, the bottom of the pass. We skidded and rolled from side to side until eventually we reached the starting point. The members waiting on Hill Step in the meantime examined the state of the road, and considered it to be in normal condition, and the

opinion was expressed that the machine would stick fast when it got its wheels into the loose shale. However, for the moment this was forgotten as a speck appeared away down the valley, which gradually got



C. R. Collier leaving Keswick for Honister Pass, which he successfully climbed with a passenger from the steepest (Buttermere) side from Gatesgarth.

nearer and resolved itself into the Matchless, C. R. Collier, and his 11 stone passenger. Quickly they drew nearer until it was observed that their speed was abnormal for such a road. They travelled up the



C. R. Collier (8 h.p. twin Matchless sidecar) ascending Honister Pass by the old road from Borrowdale with three up. The two passengers are members of the Cumberland County M.C.C.



My Most exciting Ride: No. 1. HARRY A. COLLIER.

Interrogated by L.C.

WHEN I interrogated the elder of the famous brothers, who are perhaps the best known motor cyclists in the world, he began to meditate, and gave me some interesting motor cycle history before he arrived at that event which provided the most exciting ride he had undertaken. The Colliers are essentially careful riders, and the fewness of their mishaps bears testimony to this. Harry Collier's first machine was a De Dion "quad," which he rode in 1899, and it was not until four years later that he began competitive riding. The eliminating trials for the International Race of 1905 saw him placed second, but still his riding was singularly uneventful. In 1906, however, he had an experience which he reflects upon with thankfulness for his immunity from an accident. After being chosen to represent England for the international race in Austria, he journeyed across to Patzau, where the big race was to begin. The course was over a road which had been primarily designed for oxen, and on the one side was a steep precipice, except for an interval of some miles, when the road ran along the side of a big lake. On the other side, the road was bounded, not by the grass mounds to which English riders are accustomed, but by huge stone boulders, while the road itself was terrible, both in its tortuous descents and in its irregular surface.

During the race, Harry Collier went all out, passing competitors time after time, and keeping to the road by the greatest efforts. All through his nerves were at a tension to which they were entirely unaccus-

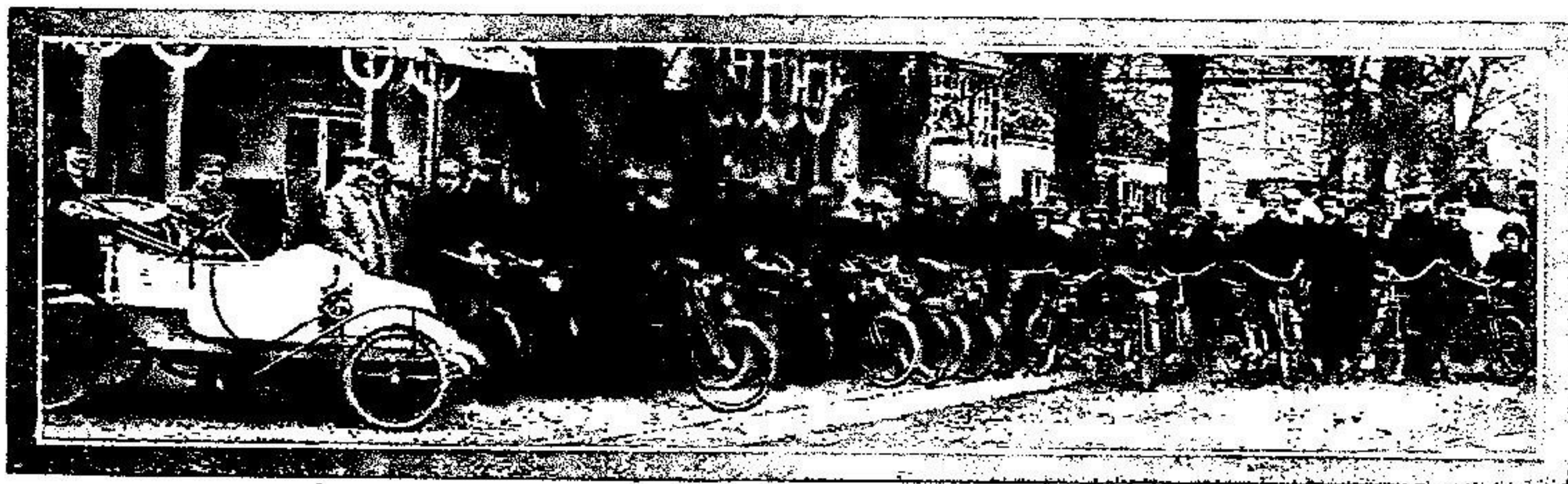
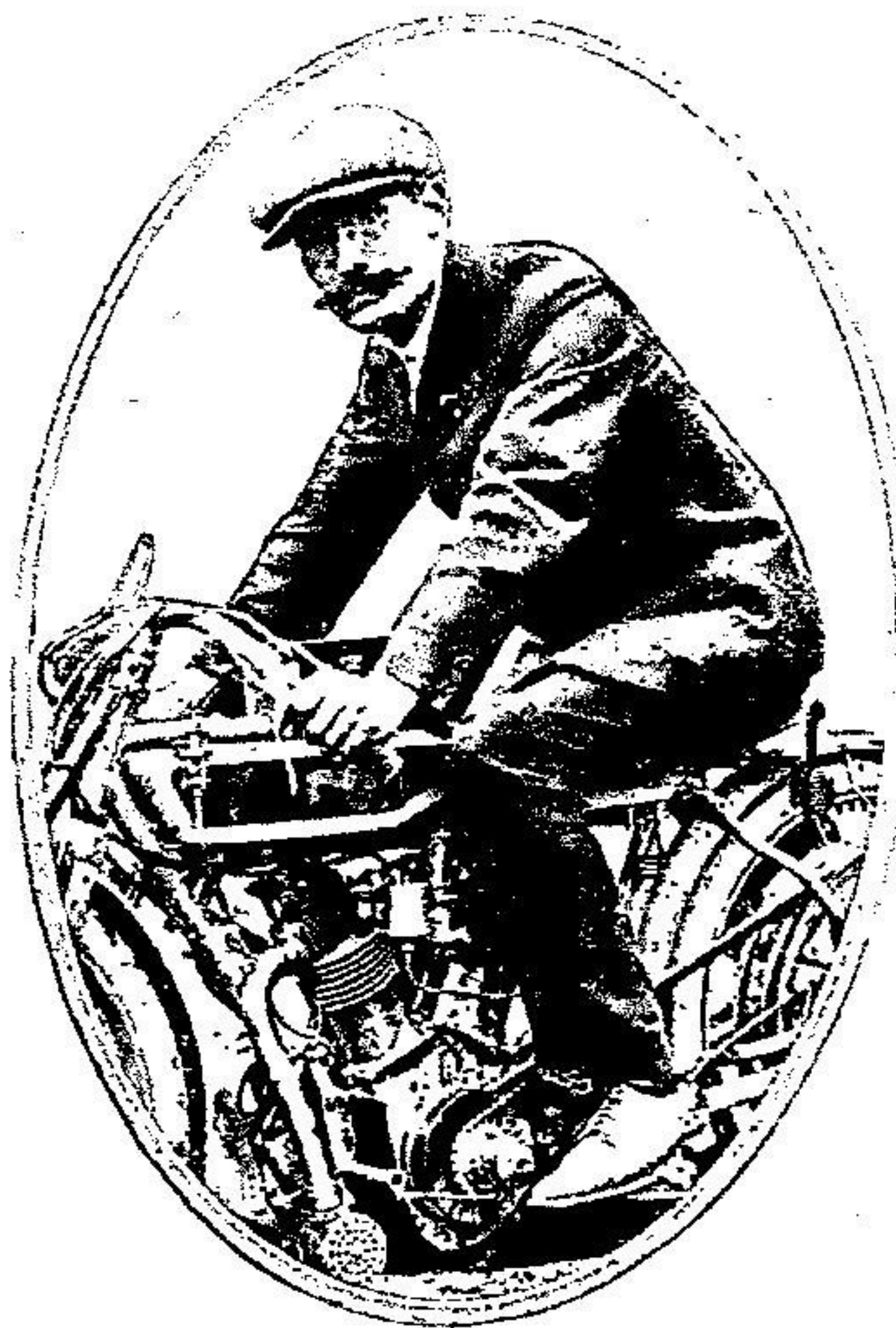
tomed, and when he did eventually finish, his first impression was one of relief at having come safely through the ordeal. He occupied third place. One unfortunate competitor hit the rocky side of the road and fell into the lake, breaking both legs and being

nearly drowned, while others had accidents which Collier was thankful not to have heard about until he was through with the race. Collier has had some exciting times on road and track in so far as the striving for premier position has been concerned, but he reckons all his rides as child's play compared with that terrible race in Austria.

"What about the Tourist Trophy Races?" I remarked, thinking to recall experiences which had befallen him in Mona.

"I haven't had any excitement over there," said he, "other than the natural excitement of preparing for the event, for on each and every occasion I have started out with the idea of riding as carefully as possible, and consequently it has been nothing more than a somewhat monotonous run round the course at high speed. Charlie and I have always done well over there, but we have done it without excitement or untoward incident. No, the

Austrian International Race was the most exciting event I have ever competed in, and I don't want to come across such another test of nerves. Of course, a motor cyclist cannot afford to be on speaking terms with 'nerves,' but on such an occasion as that, where it was a case of being between the boulders and the precipice, one is in a high state of excitement the whole time, especially when the course is unfamiliar."



Opening meeting of the Dutch Motor Cycle Club. Members to the number of forty journeyed from all parts of Holland to Het Loo, the summer residence of H.M. Queen Wilhelmina.

Another Remarkable Success

at Honister Pass, Cumberland.



Mr. C. R. COLLIER conquers this notorious hill on a
“SHAMROCK - GLORIA BELT”

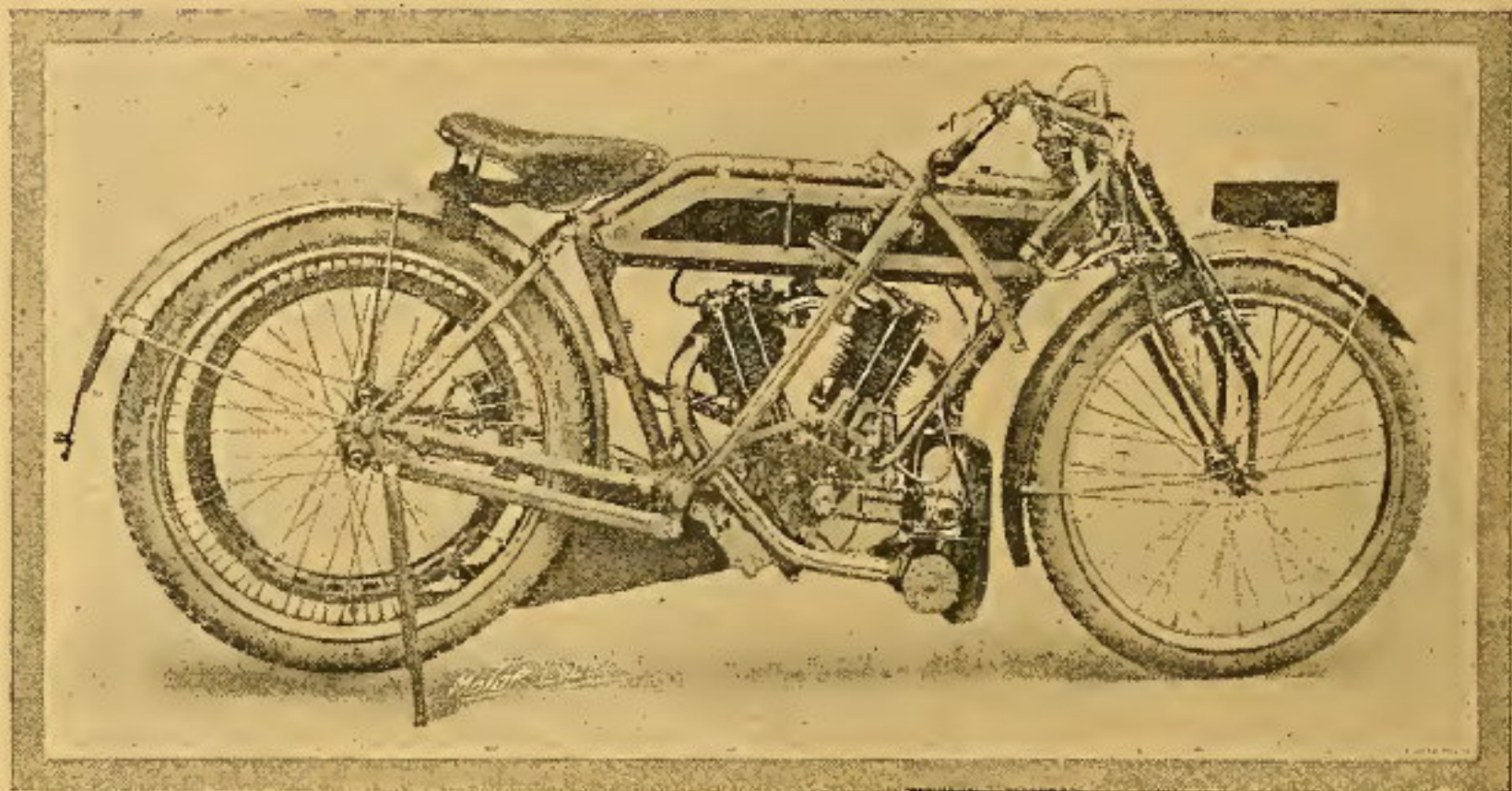
The S.G. Belt is the only one having accomplished
the ascent on a passenger machine with 2 passengers.
Avoid Substitutes.

THE HANOVER RUBBER COMPANY,
17, Goswell Road, London, E.C.

TRIST TROPHY RACES.

Improvements to the Course.

Advance Details of T.T. Models.



Valve side of the new T.T. twin Matchless, showing gear changing lever, etc.

made a new gear operating mechanism

The Matchless T.T. Machines.

The 1912 T.T. Matchless machines differ in but minor details from those which were run last year. The variable gear is retained, but this has been improved considerably so far as handiness in practical use is concerned. The engine is a $3\frac{1}{2}$ h.p. twin-Jap, constructed specially for the Matchless machines, and has a bore of 70 mm. and a stroke of 64.5 mm., the cubic capacity is thus 496 c.c. The valves are of the usual overhead Jap type, all mechanically operated. For its power output the engine is very light, turning the scale at 40 lbs. all on. In comparison with the size of the cylinders, the flywheels appear to be rather on the small size, but in this connection it must be pointed out that the engine is purposely designed to turn over at a very considerable speed. It is in order to keep up the revolutions and so have at command the utmost reserve of power that a special engine is being used rather than employ one of last year's pattern, 76 mm. bore, with the stroke sufficiently reduced to come within the 500 c.c. limit. With the same idea in view, the gear has this year been arranged to give the comparatively low ratios of from $3\frac{1}{4}$ to 1 to 7 to 1.

"THE HONOURS OF THE DAY TO THE ENGLISH."

—*L'Auto.*

Open International Hill Climb, La Course de Côte
de Gometz-le-Châtel, France, December 17th.

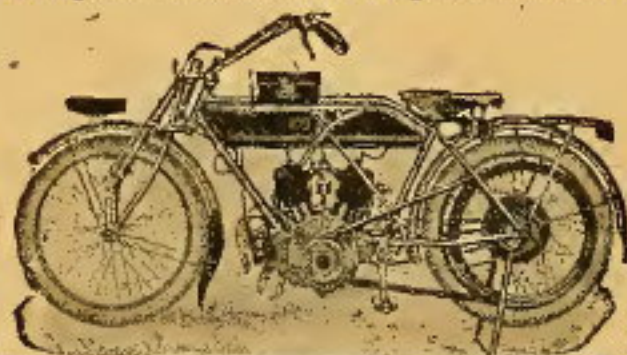
MATCHLESS

MADE FASTEST TIME OF THE DAY.

Unlimited Class, H. Bashall—**FIRST.**
Amateur Class, H. Bashall—**SECOND.**

NOTE: All correspondence and enquiries to be addressed to

H. COLLIER & SONS, Ltd.,
Office and Showrooms,
44. Plumstead Road,
LONDON, S.E.



All goods and parcels
to be sent to the works
entrance,
BURRAGE GROVE
PLUMSTEAD, S.E.

wherever we wished. Getting petrol was our next difficulty. There were some cases of it on the dock side, but the owner could not be found, so, enlisting the services of one of the usual



W. N. Fawcett, the writer of the accompanying article, astride his 3½ h.p. Matchless-Jap.



W. E. Grange (3½ h.p. Bradbury), who accompanied Mr. Fawcett on the tour.

the handbook showed us hotel. It was knocked o

Great Heat and

Another glorious day, and after we had filled up with petrol, we bought a glass to replace our goggles. Whilst we were

MATCHLESS

"The Passenger Machine"

That takes you out and brings you home again with the speed of an Express Train, and the quietness of a £1,000 car.

6 Weeks' Delivery from
date of Order Guaranteed.

ALL Spare Parts in
Stock for Engine, Gear, and
Machine.

For Immediate Delivery.

1912 8 h.p. Passenger Model.....	70 guineas.
1912 6 h.p. T.T. Roadster Model.....	54 guineas.

REPAIRS. **EXCHANGES.**

"The Only Authorised AGENTS"—

The LONDON MATCHLESS MOTOR CYCLE AGENCY

184, Great Portland Street, LONDON, W.

along the route, for the entry was large, and the procession of motor bicycles must have seemed unending to the various spectators.

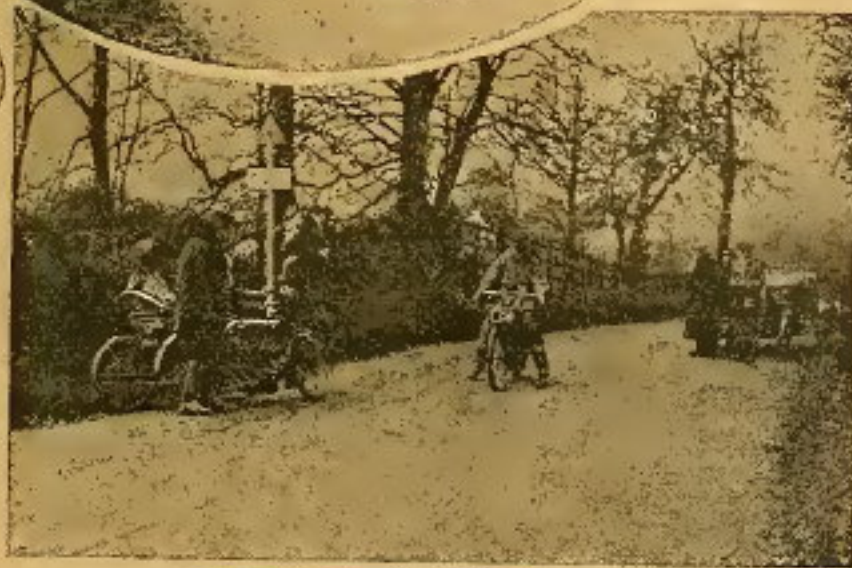
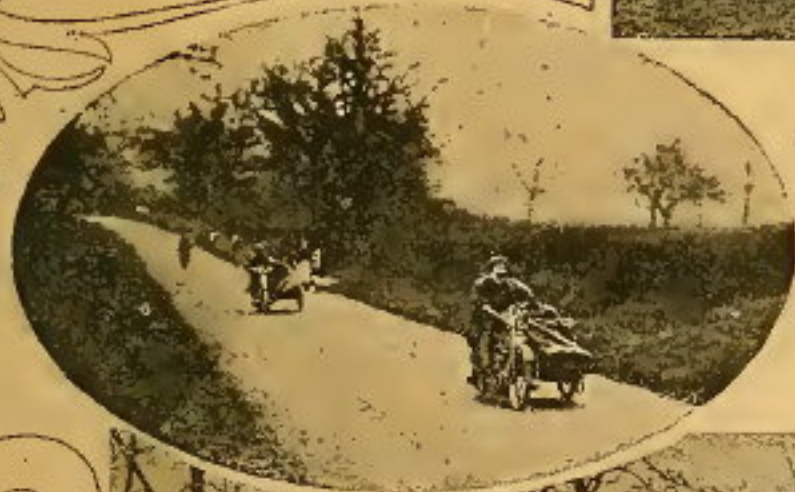
Steadiness in the Grease.

Soon after leaving Bromsgrove one of the Morgans was seen in trouble with tyres, the roads were in a shocking con-

dition. He had put a gallon and a half into a tank that just held a gallon. He tried in vain.

Homeward Bound.

Starting back, we found the road a bit drier, but Edge Hill was very greasy, and the side-car drivers had to get their passengers to bear down on the back wheel—a matter for



- (1) General view at the foot of Warmington Hill, at the hairpin bend on Sunrising. (2) Competitors approaching Edge Hill, C. R. Collier (Matchless) leading. (3) H. C. Newman (Ivy-Precision) (4) The last knock. A failure on Sunrising. (5) A Triumph rider makes a good ascent of Edge Hill.

CLIMBING WARMINGTON
HILL IN

THE MIDLAND RELIABILITY
TRIAL.



R. E. Guest (8 h.p. Matchless sidecar)
winner of

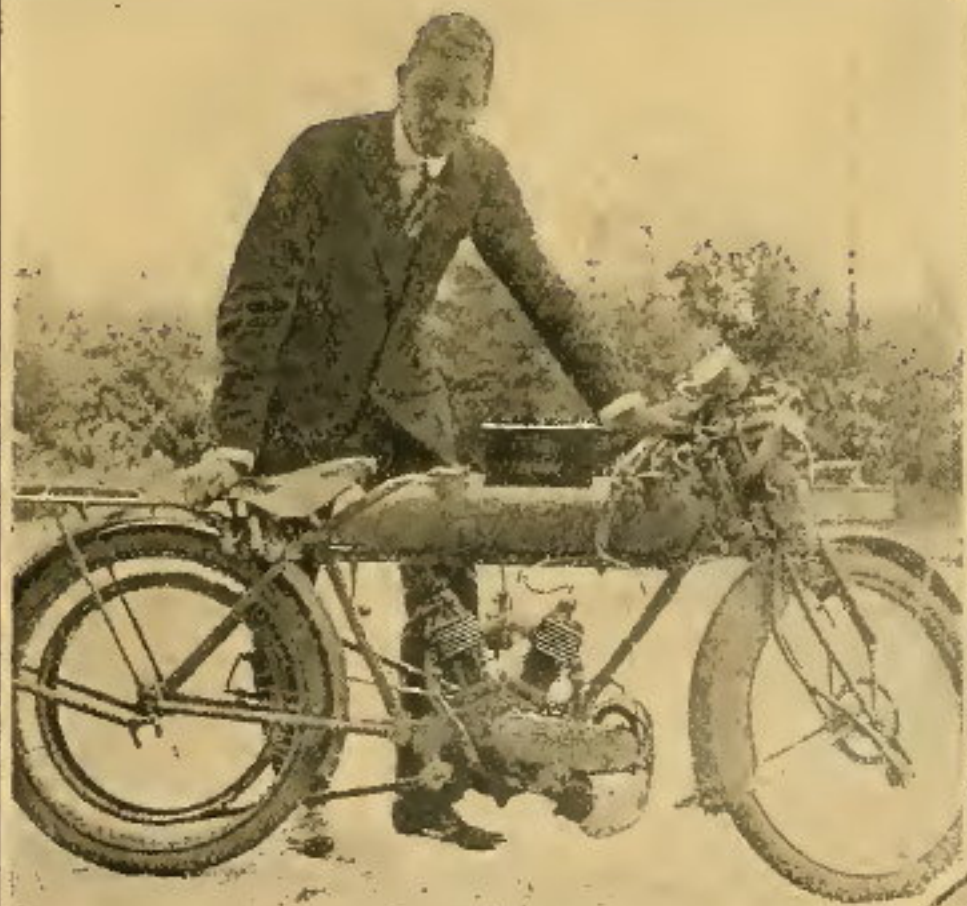
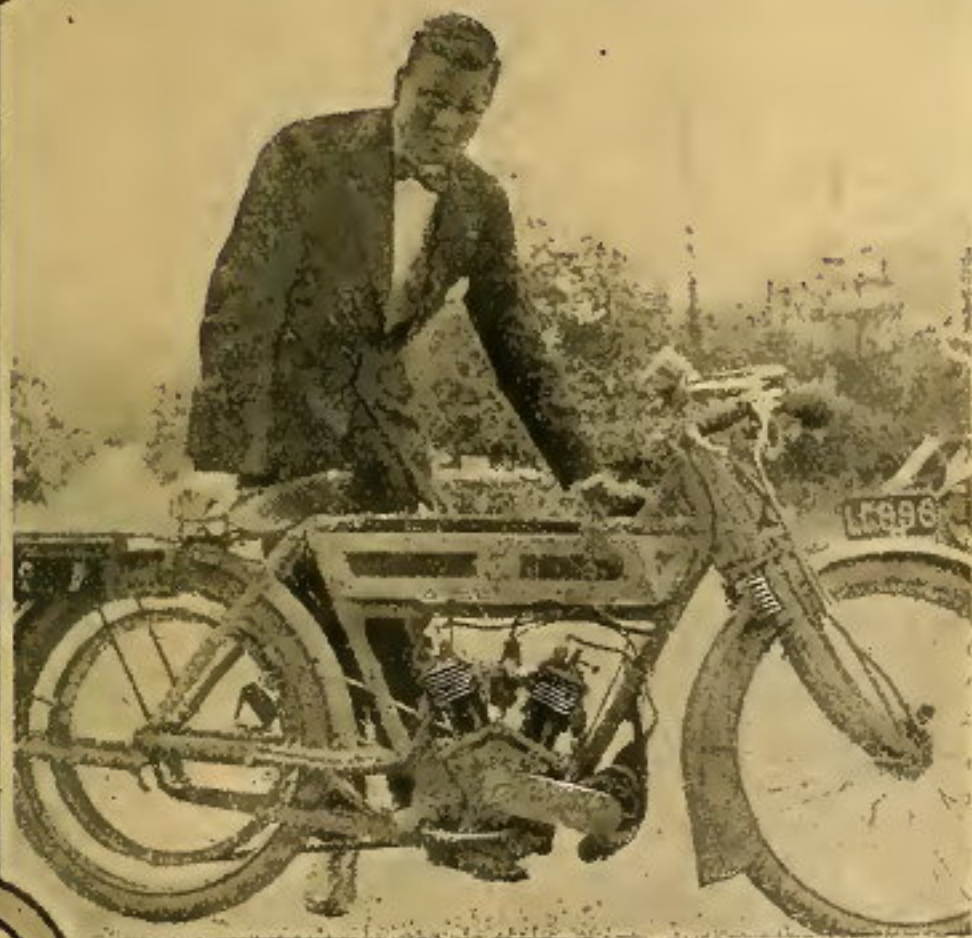
the gold medal for best performance
by an amateur.

NEW RECORD MADE IN NATAL.

Of the several motor cycle events in the motor gymkhana

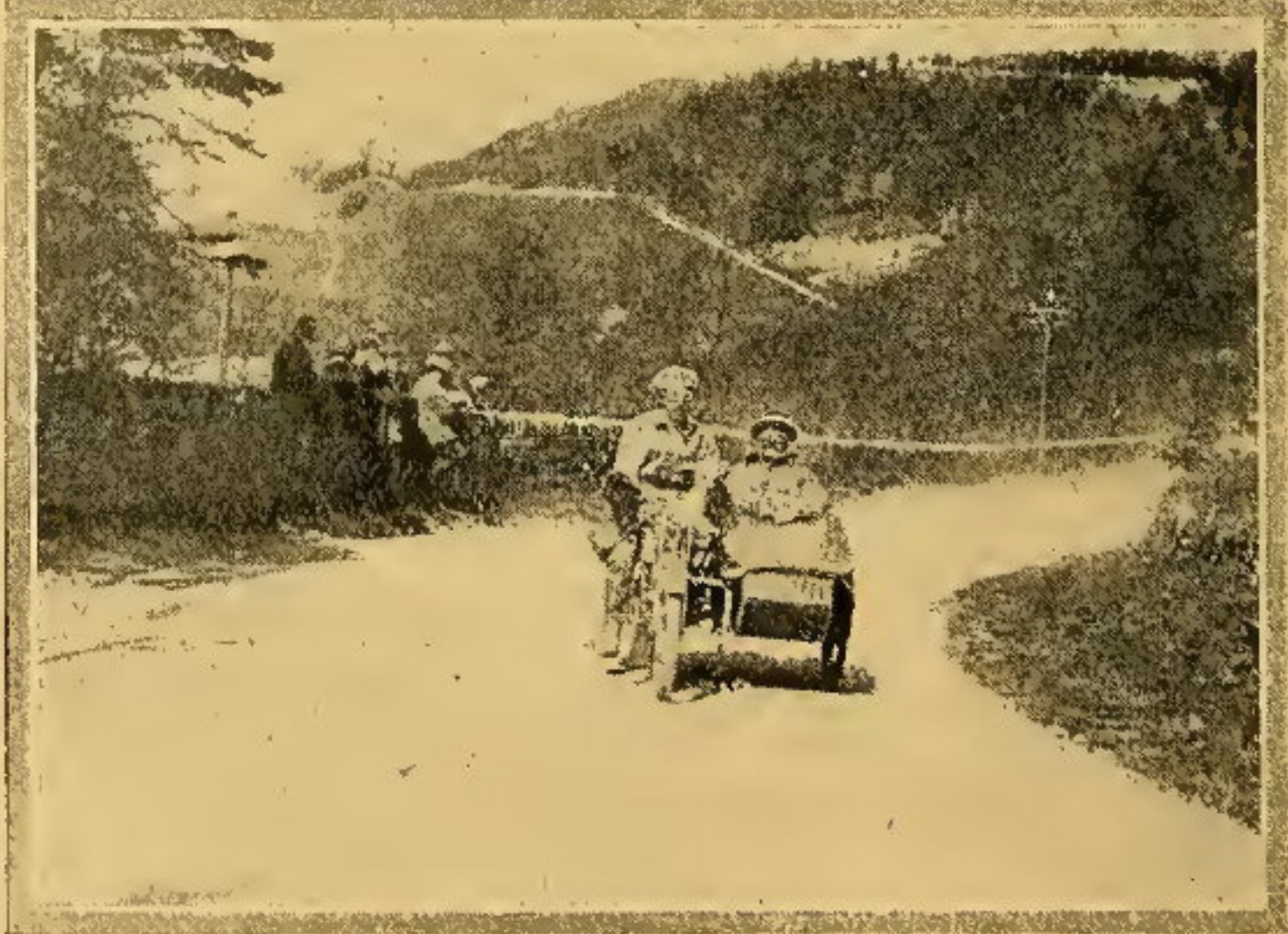
SOUTH AFRICAN CHAMPIONSHIPS.

The motor cycle championships, held on the West Rand of

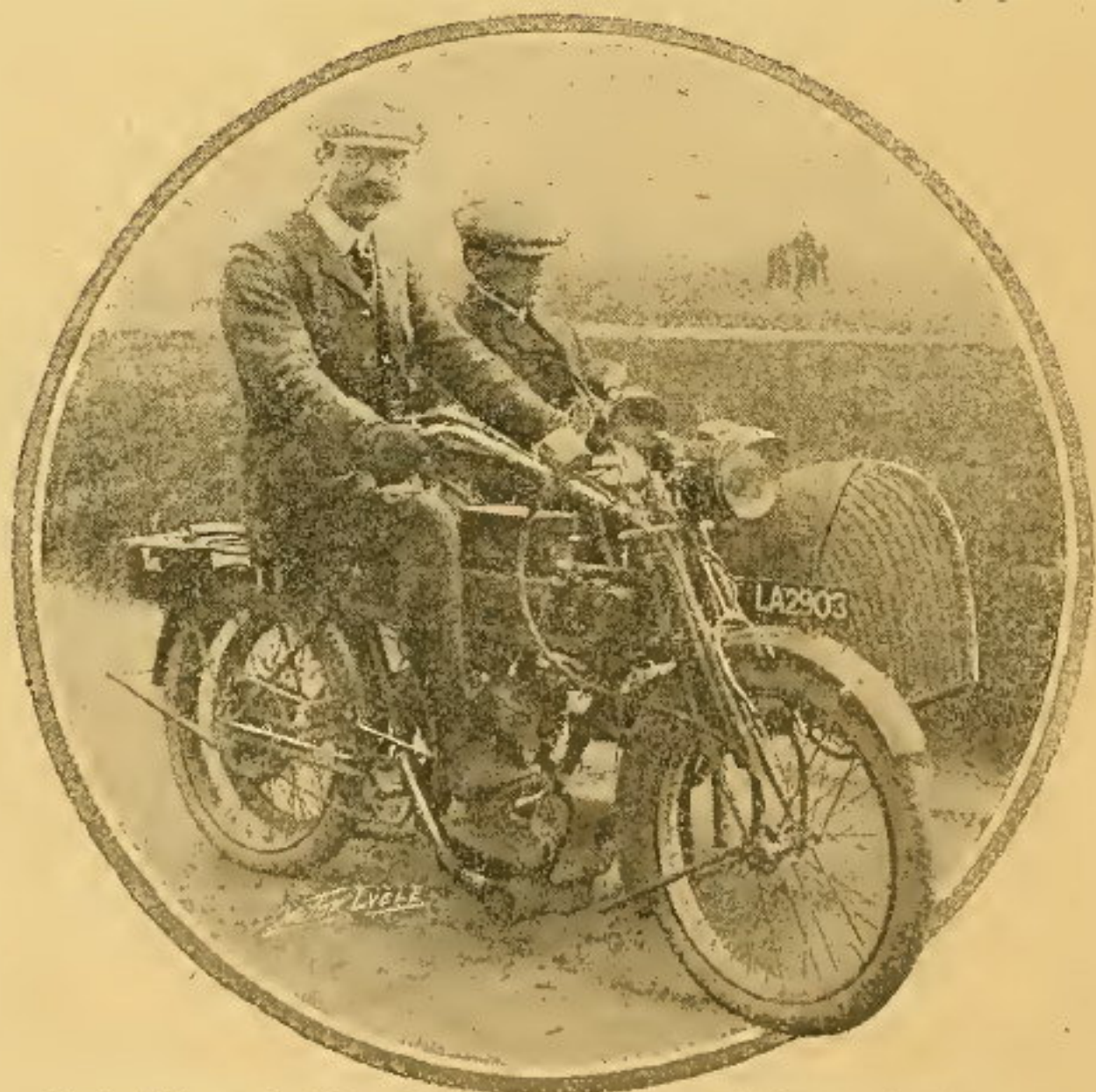


SMALL TWIN ENGINES AND THEIR ENTHUSIASTIC RIDERS.

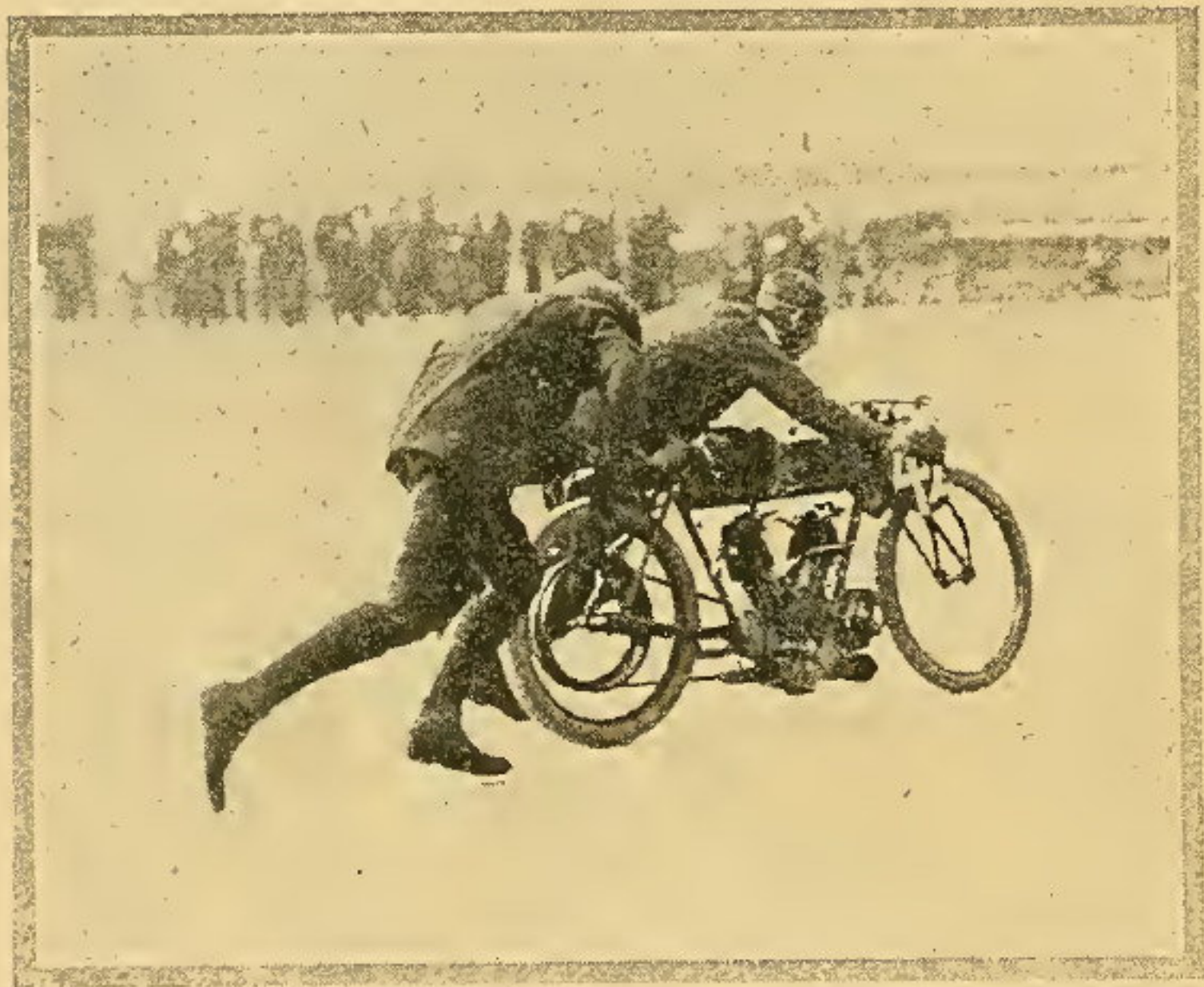
Both these machines—a Trump and a Matchless—are fitted with the J.A.P. $3\frac{1}{2}$ h.p. twin engine (80 mm. bore by 76 mm. stroke, cubic capacity 430 c.c.). The owners tell us that the machines are capable of an average speed of 35 m.p.h. when geared $4\frac{1}{2}$ to 1, that they can do 54 m.p.h. on Brooklands track, and climb the test hill at 30 m.p.h. The riders, S. G. and J. C. Bain, have previously owned single-cylinder machines, but are so delighted with the little twins that they inform us they do not intend to ride any but multi-cylinder machines in the future.



C. R. Collier (8 h.p. Matchless sidecar) coming up Birdlip. A similar machine (not in the trial) ascended the hill with large up.



H. A. Collier on the 8 h.p. Matchless motor cycle and sidecar which he drove through the A.C.U. one-day trial. This machine secured a first class award.

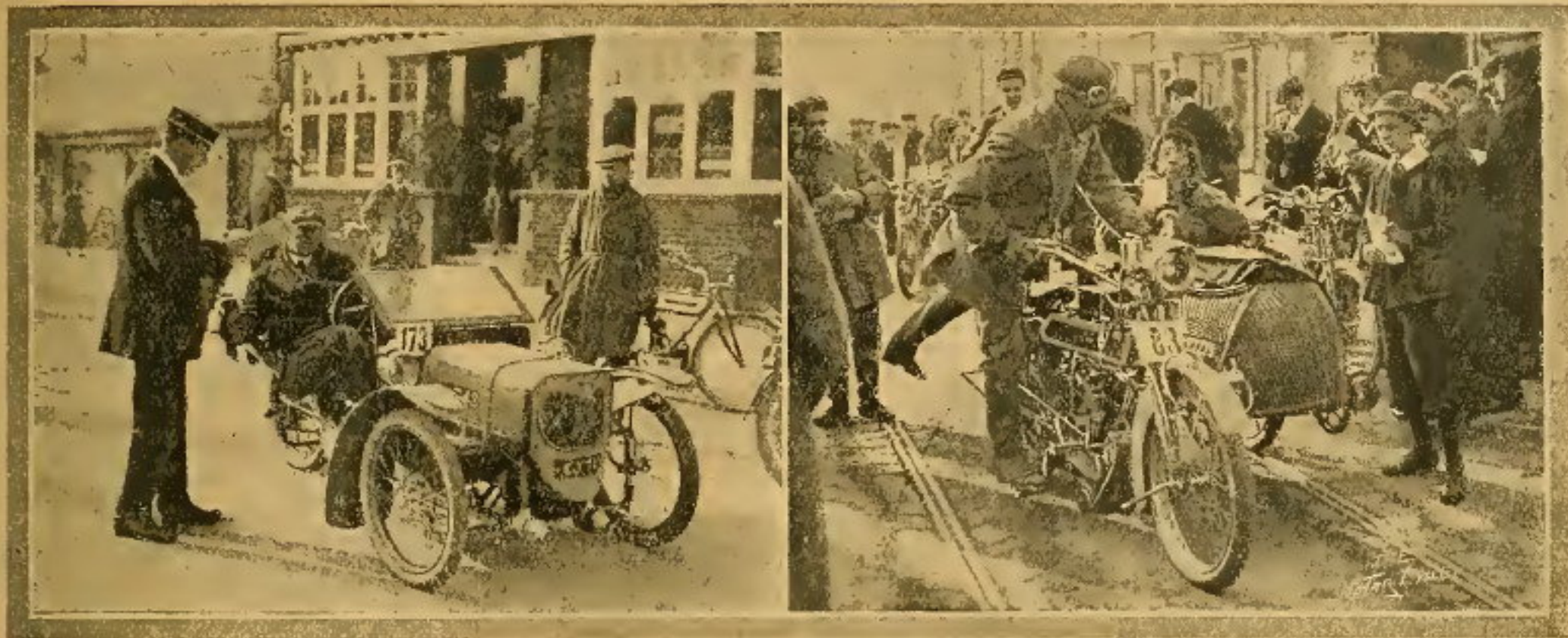


C. R. Cellier (8 h.p. Matchless-Jap), winner of the 1,000 c.c. race, starting.



THREE ENTHUSIASTIC MEMBERS OF THE DONCASTER AND DISTRICT M.C.C.

E. Goult, the club secretary, is in the centre, F. H. Dunstan and J. Wilkinson to the left and right of him. The trio rode from Doncaster and took part in the Middlesbrough M.C.C. flexibility hill-climb at Yearby Bank the same evening, J. Wilkinson (5 h.p. Matchless-Jap) making fastest time, and Goult (3½ h.p. Rudge) being fastest of the single cylinder riders.

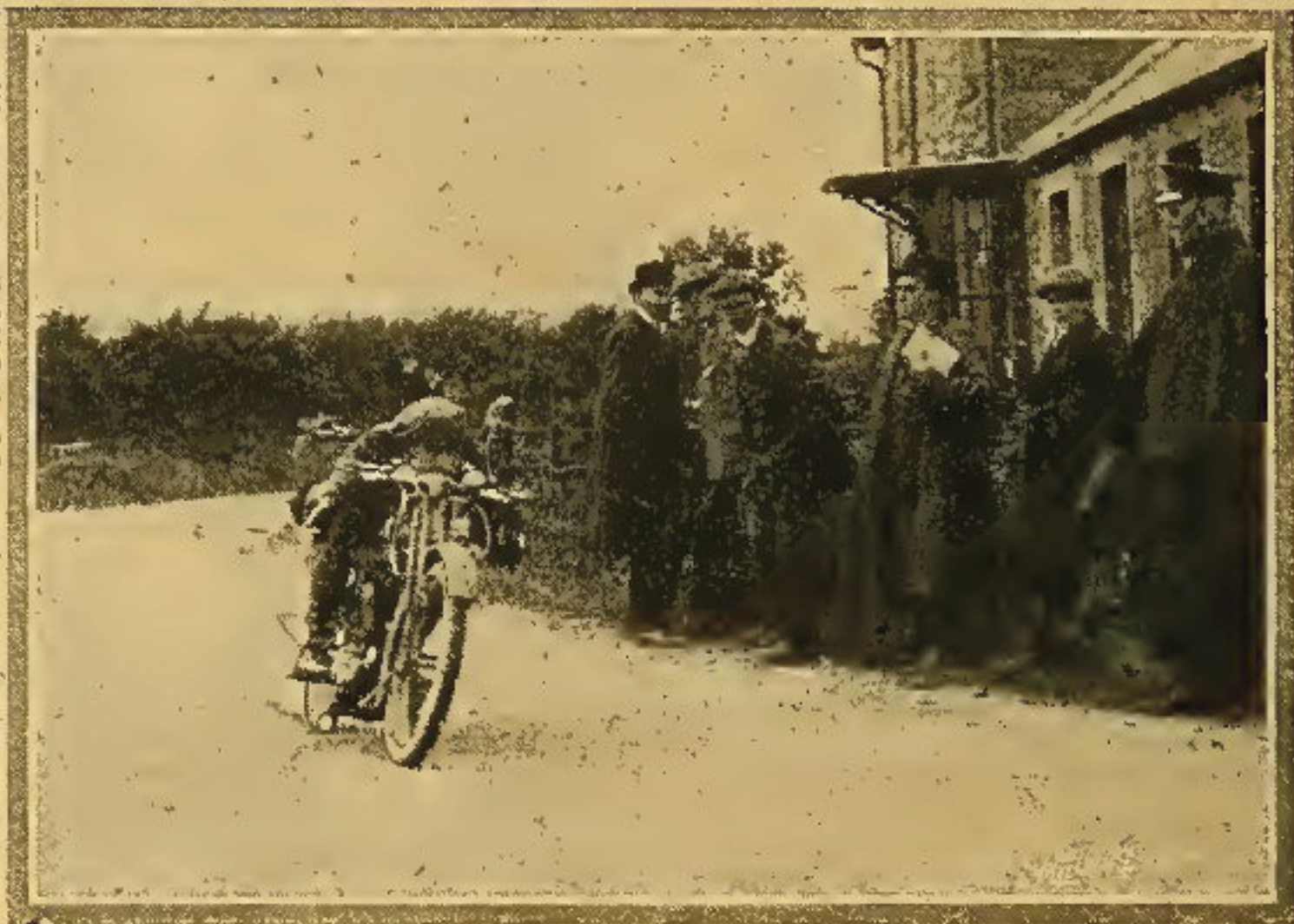


M.C.C. ANNUAL LONDON-EDINBURGH RUN.

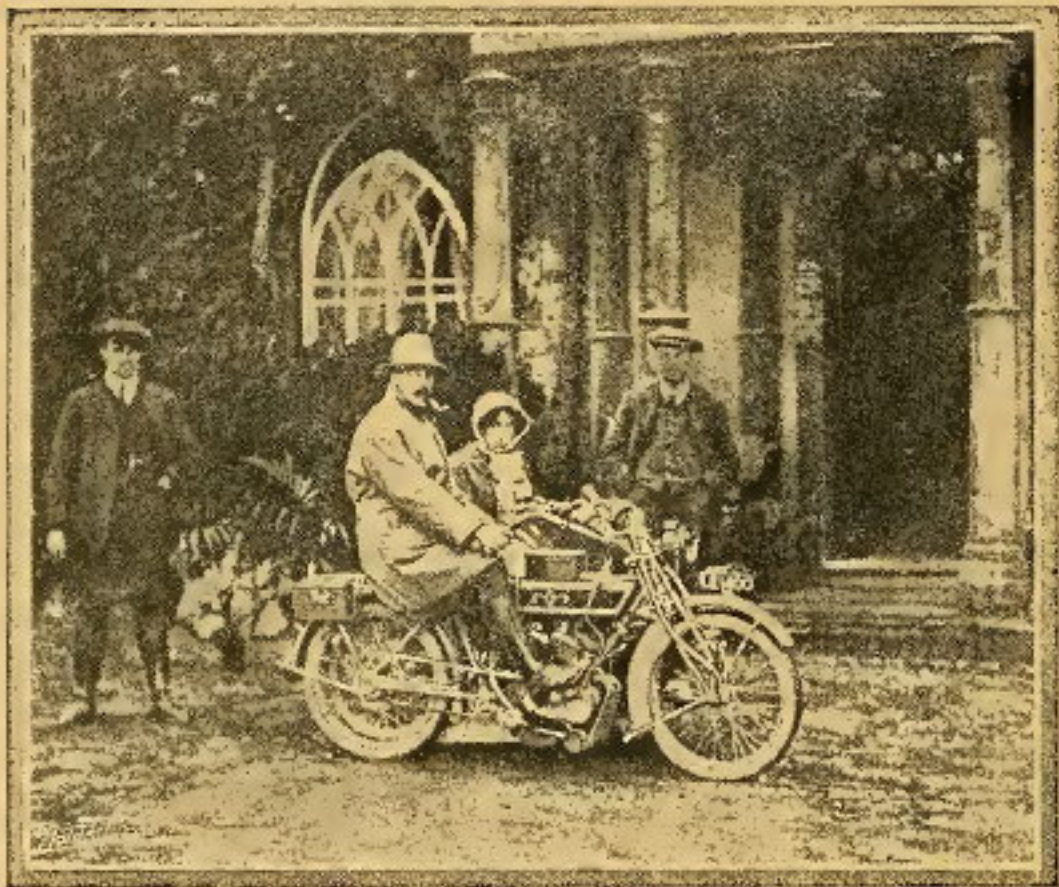
H. F. S. Morgan (8 h.p. Morgan runabout), the first cyclocar driver to arrive in Doncaster.

R. E. Guest (8 h.p. Matchless sidecar) leaving the Doncaster check. This private owner has been most successful in competitions of late.

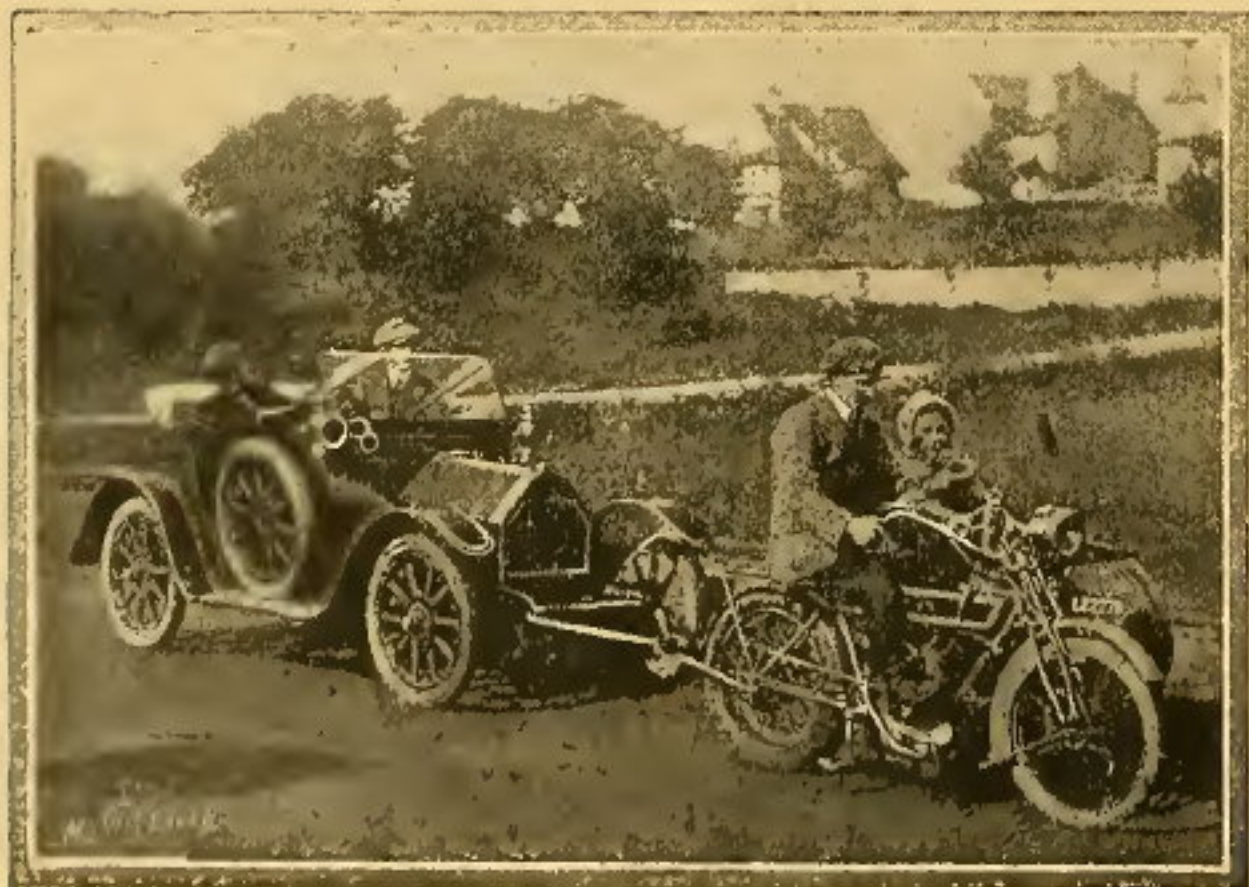
Inter-team Hill-climb. S NARROW WIN.



A. J. C. Lindsay, Scotland (Matchless), full speed at one of the bends.



Mr. and Mrs. T. W. Loughborough (8 h.p. Matchless sidecar) outside Clark's Hotel, Taunton. The new A.C.U. secretary has been over the Six Days' Trials route.



R. E. Guest acting the part of the Good Samaritan by towing a stranded car behind his Matchless-Jap sidecar.

A.J.S.

M.C.C. London-Exeter-London Winter Run.

A. J. Stevens, riding a 5 h.p. Two-Speed A.J.S. with Sidecar and Passenger, completed the journey in schedule time, winning

GOLD MEDAL

This was its **FIRST OFFICIAL APPEARANCE.**

The ride was made with no mechanical adjustment, with the exception of tightening the back chain on one occasion

PRICE - - 60 Guineas.

Write for List—

A. J. STEVENS & CO., LTD., Retreat Street, Wolverhampton.

London: H. Taylor & Co., Store Street, Tottenham Court Road

new machine.
dealer that I
number, and that
perfect right to
the number, and
a 1912 or 1913
still use the same
right, why did the
enter the number to my

and the power to cancel the
of his machine if he liked.
he sold the machine with-
ing the number, the authori-
a perfect right to transfer this
to you on your paying the
fee. On the other hand, the
man has no right to use the
er for a new machine unless he
the authorities' permission. In
case of a machine being sold, both
rchaser and vendor should inform the



erry. This avoids as much
traffic as possible. We do not say
you will not meet some traffic, but you
do not have to traverse the heart of
London.

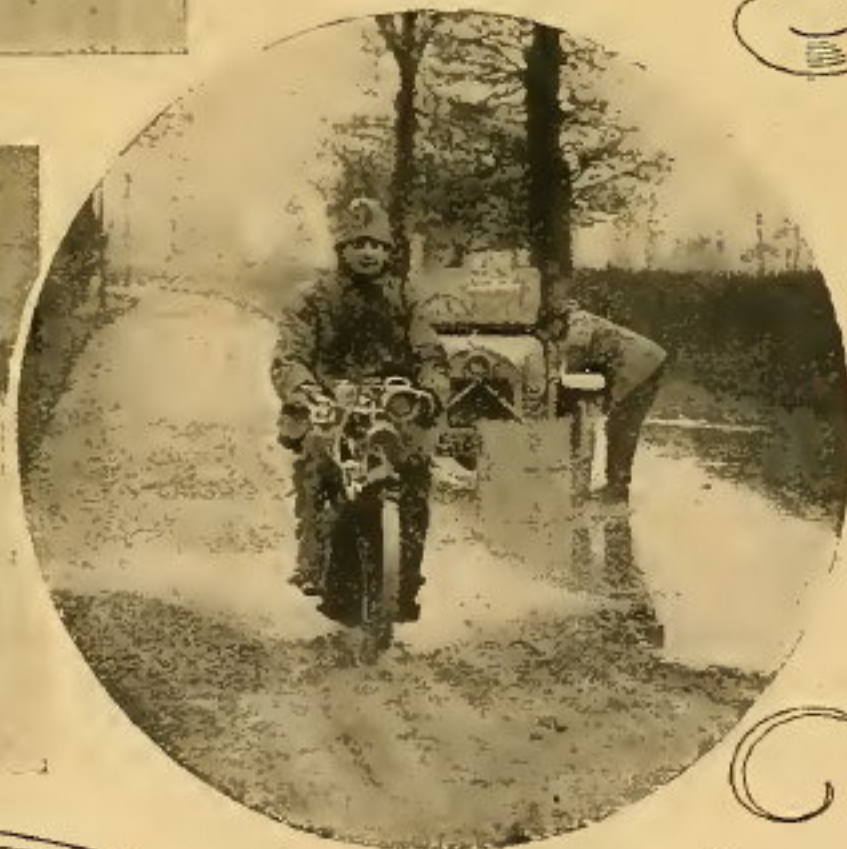
EXPERIENCES WANTED

C.C. (Hove).—Two-speed Douglas and
sidecar. Is the frame strong enough?

H.T. (Edmonton).—5-6 h.p. Clyno and
sidecar.

R.W.M. (Whalley, Lancs.).—5½ h.p.
New Hudson, Rover, and Singer.

If C. E. Brownlow will send his correct
address and note the rules at the head of
this feature, his query will receive atten-
tion.



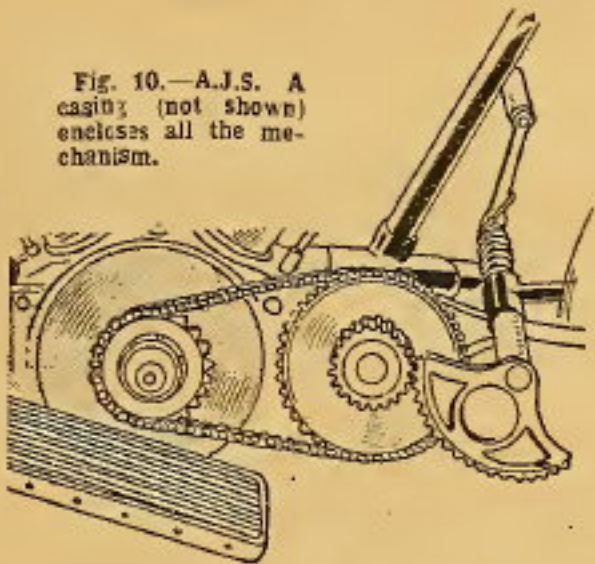
LONDON-EXETER-LONDON WINTER RUN. SCENES EN ROUTE.

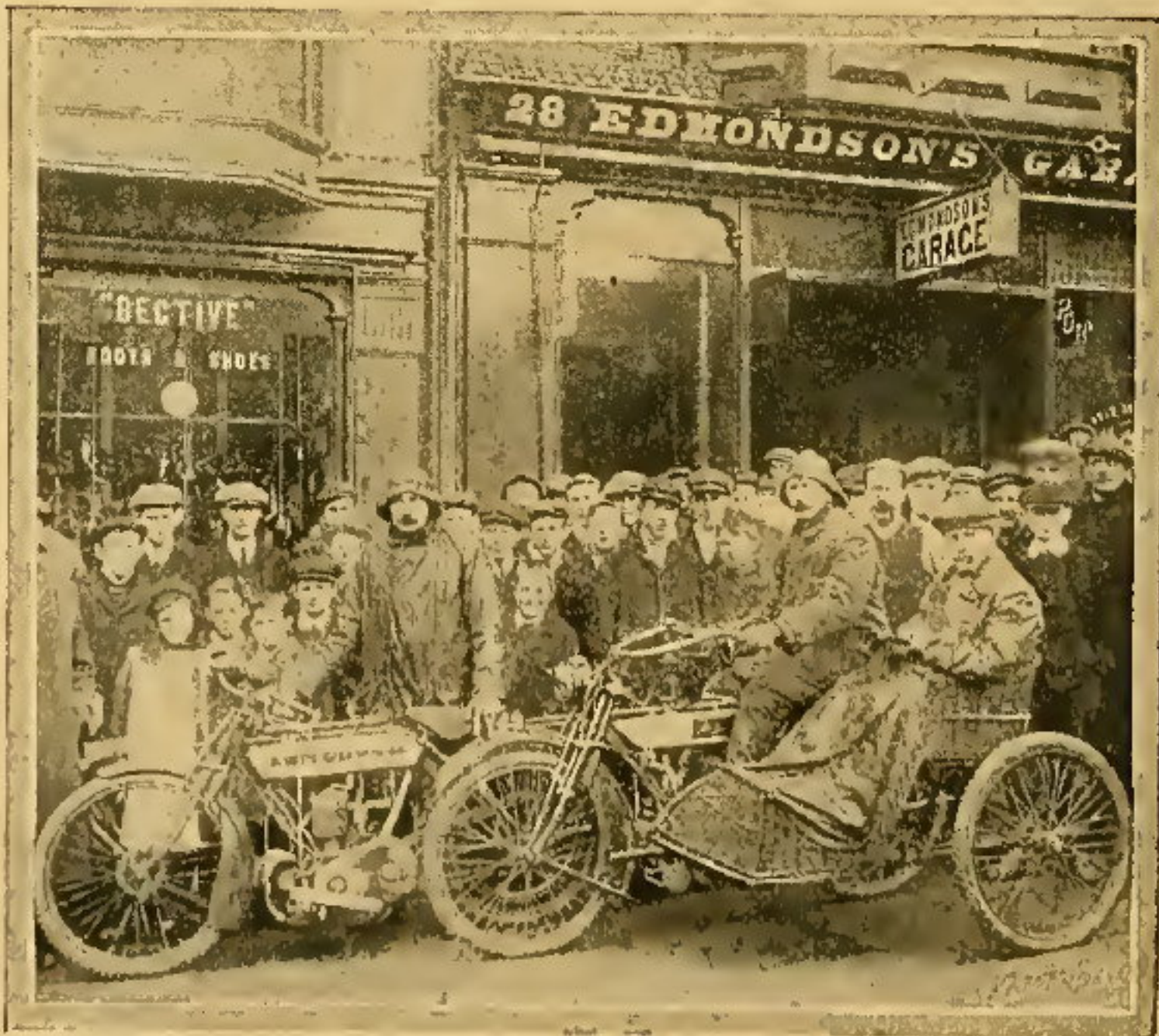
(1) Cyril Patteson (Zenith sidecar) with George King as passenger passing through Chard.

(2) G. Stevens (5 h.p. A.J.S.-Canoelet) on arrival at Salisbury on the return journey. (3) Eli Clark at the water splash between Shaftesbury and Sherborne. He was one of the seven Douglas riders to obtain the maximum award.

THE MOTOR CYCLE

Fig. 10.—A.J.S. A casing (not shown) encloses all the mechanism.





Starting for Honister from Edmondson's Garage. Hugh Gibson (8½ h.p. two-speed Bradbury) and B. Haddock (2½ h.p. two-speed A.J.S.)



Miss Mina Spiers, of Dunedin, New Zealand, who is a keen rider of a 2½ h.p. two-speed A.J.S. Miss Spiers is the first lady motor cyclist in southern New Zealand.



The first lightweight to ascend Honister
—the 2½ h.p. two-speed A.J.S., ridden by
B. Haddock.

the summit has been reached, but after running slightly downhill for half a mile one encounters the most difficult stretch of the climb. This portion is known as "The Struggle," and consists of a zigzag road, the gradient averaging approximately 1 in 6 for half a mile. One of the Westmorland members—L. Pierce (F.T. Rudge)—made the only non-stop ascent from Ambleside to the White House at the top on a single

An excellent point of vantage.



success which Smith, Taylor, and Haddock had achieved on the Honister Pass climb was again their lot. This is not surprising, as Honister is admittedly the most severe test to which a motor cycle can be put. Red Bank is very steep



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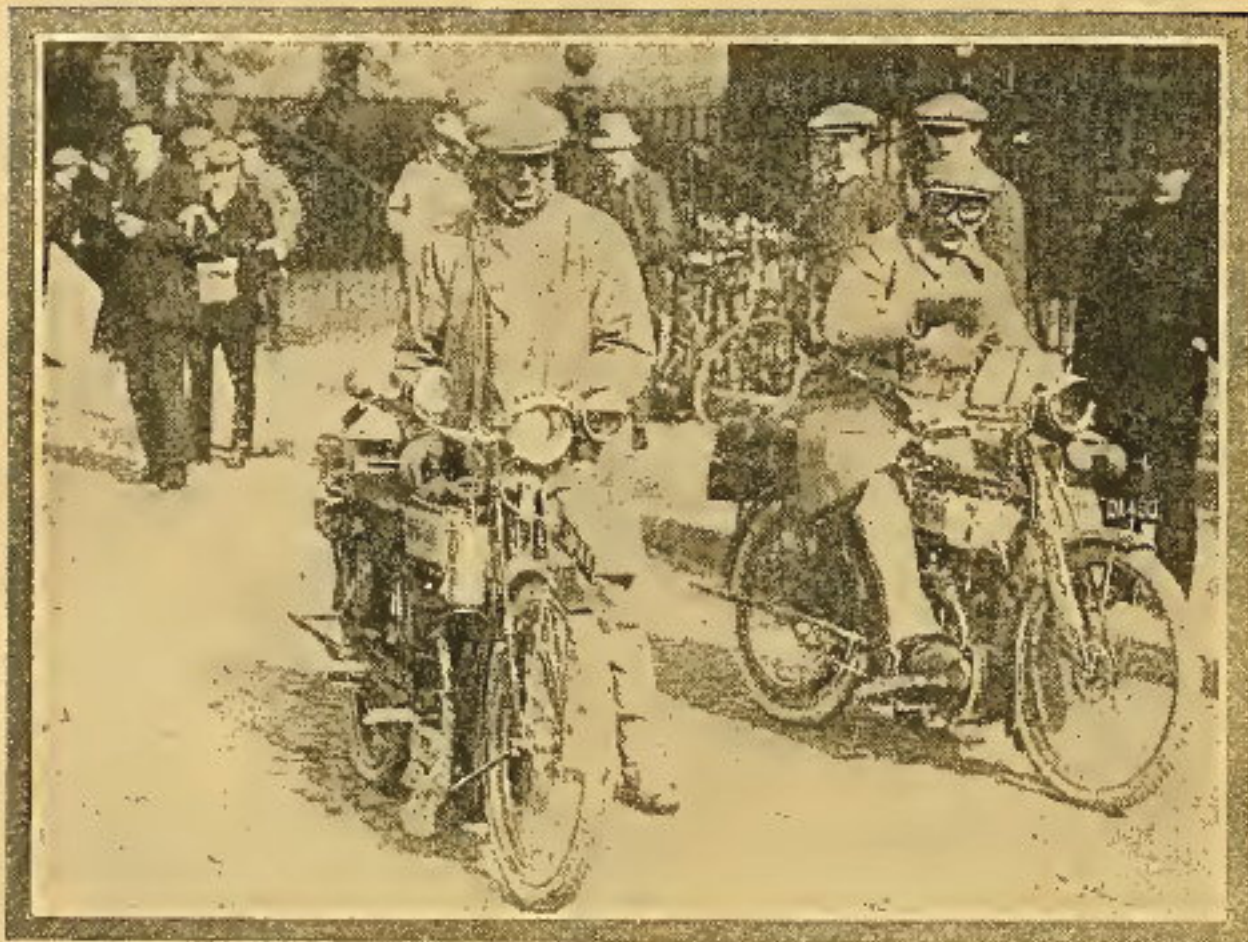
Frank Smith (5 h.p. Clyno),
with R. H. Bell as passenger,
starting for Honister.

RED BANK,
GRASMERE &
KIRKSTONE PASS
from Ambleside.
A WEEK-END IN LAKELAND



B. Haddock (2½ h.p. A.J.S.) at the top
of the steepest pitch on Honister.

The London to Edinburgh Run.—



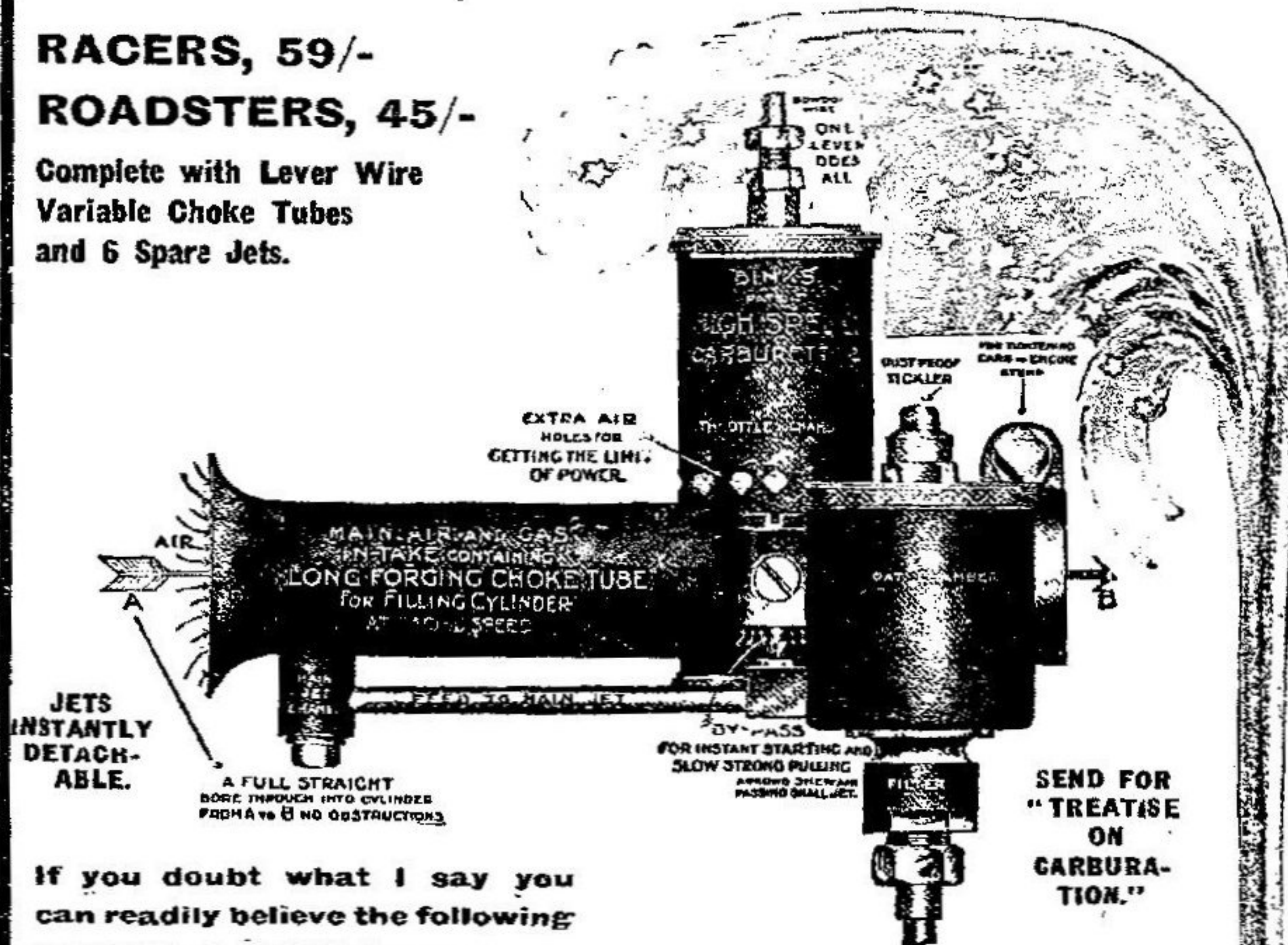
Com. Sir R. K. Arbuthnot, R.N. (3½ h.p. Triumph), and T. H. Haddock 2½ h.p. (A.J.S.) about to leave York.

A REVOLUTION IN CARBURETTERS

RACERS, 59/-

ROADSTERS, 45/-

Complete with Lever Wire
Variable Choke Tubes
and 6 Spare Jets.



If you doubt what I say you
can readily believe the following
unsolicited TESTIMONY:—

H.M.S. "Cynthia,"
Sheerness.

Jan. 29/12.

Dear Sirs,

I am writing to thank you for your advice re fitting a two-jet carburettor to my 5/6 Bat-Jap two-speed gear and sidecar. I have had it fitted and tried under a good variety of conditions of weather, etc., and find that every one of your claims have been fulfilled. The results were excellent, and far exceeded my hopes. I have done away with the troublesome and dangerous practice of injecting petrol in the cylinders (I have three times had a carburettor on fire through this) and can now start a walking pace without any untimely fiddling about.

I find the single lever control very easy, and the engine is now quite amenable to the slightest alteration of throttle and very sensitive to small alterations of the spark lever, enabling the engine to be kept just ticking when free, as you claim. I have never been able to do this with a high powered engine before, although I think I am gifted with the average amount of common sense. On top gear the machine will climb hills with a passenger that it wouldn't look at before except on low, and the pace on long moderate hills has increased in a most gratifying way. In short, your carburettor has transformed a really good machine into a far better one, and I cannot myself understand why makers send out expensive machines not fitted with a carburettor that will give these results, when for a few shillings extra such a one could be fitted. Surely the machines are worth it? Please send me three spare springs for keeping the choke barrels in place, and let me know the cost. I might mention that I heard of your carburettor quite by chance.

Yours faithfully,

The original of this letter will be shown
at the works.

If you will call on me I will show you scores
of similar letters, which I greatly prize.

C. BINKS, Ltd., Eccles,

Near
MANCHESTER.

**GENTLEMEN, this is what you
MUST HAVE to get
EASY START, a
SLOW PULL in TRAFFIC,
PERFECT FLEXIBILITY,
UTMOST POWER, and
A TICK ROUND when
STANDING or DECLUTCHING**

and
**VIOLENT
ACCELERATION.
GREAT ECONOMY.
ONE LEVER
DOES IT ALL.**

I GUARANTEE
THESE CLAIMS.

Beautifully
made in
Modern Factory.

LONDON.

SERVICE CO.
keep stock.

AGENTS
WANTED.



THE TESTIMONY of Advertisers.

Two extracts from letters received
by "The Motor Cycle."

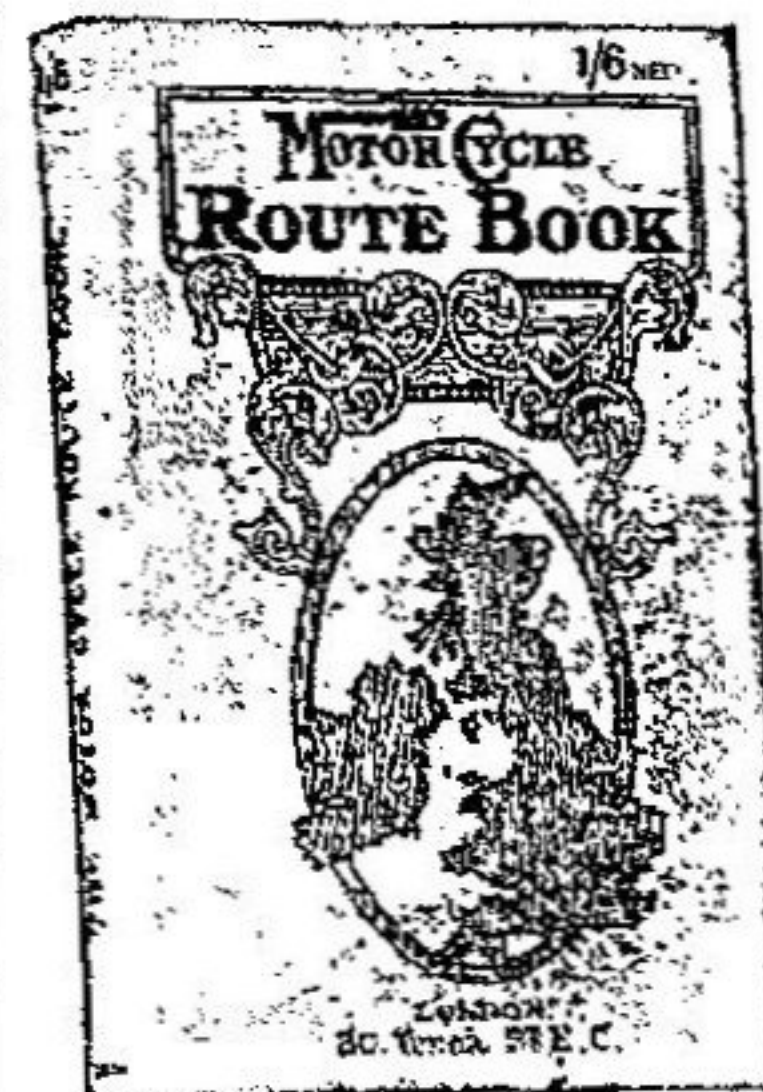
"We are glad to say that our previous advertisements in your well-known paper have given us the greatest satisfaction. We have had enquiries from all parts. . . .

The Haven Motor Cycle Works,
Old Kent Road, S.E.

"Last Thursday I advertised a 1912
not a new machine, in
'The Motor Cycle,' £50. I sold the
machine the same day."

A.F.D.

"The Motor Cycle" can
be relied upon to bring
satisfactory results to
advertisers.



When
Touring
or
Planning
a
Tour
use

"THE MOTOR CYCLE" ROUTE BOOK.

It contains descriptive main routes for the
whole of the United Kingdom; speed
limits; forty-five maps (Bartholomew);
and copious index.

Price 1/6 net. By post, 1/9.

Obtainable of ILIFFE & SONS Ltd., 20 Tudor Street,
London, E.C., and leading Booksellers.

(Remittance must accompany all post orders).

KERRYWEAR

For Perfect Style



HOLLAND DUST SUIT

For Summer Wear.

Complete .. 15/-
Jackets only .. 9/-

Have you had our
48 PAGE LIST? If
not, write for one. We
send it post free.

THE "KERRY IDEAL" SUIT (WATERPROOF).

Price with ordinary overalls	£1 13 6
" " trouser overalls, without seat ..	£1 16 0
" " trouser overalls, with seat ..	£2 0 6

COMPLETE OUTFIT (WATERPROOF).

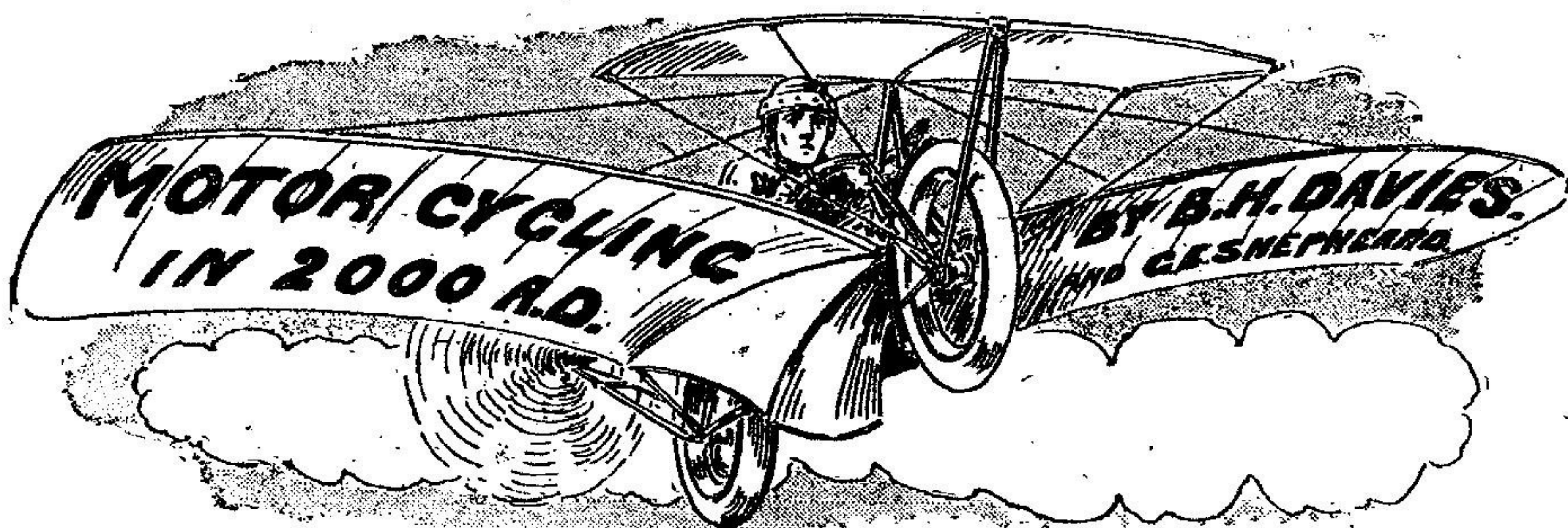
FOR LADIES WHEN SIDE-
CARING. Includes Raglan
Jacket and Skirt.

Price:
£2 12 0.

"KERRY WEAR" combines utility with style, lightness with strength. In every respect it is ideal.

EAST LONDON RUBBER CO.,

LONDON: 29, 31, and 33, Great Eastern St., E.C.
BRISTOL: Kerry House, 150, Temple St.
SHEFFIELD: Kerry House, Farnival St.



THE *Morning Post* asserts that a French professional has "flown" a distance of 3ft. 7in. at a height of 8in. on a "winged bicycle" or "aviette." I ejaculate with Dominie Sampson "pro-deegious!" I have "flown" much further on a push bicycle utterly devoid of wings. My best flight on a motorless bicycle up-to-date measured about 20ft. horizontally, and about 15ft. vertically, and any aspiring rider can easily equal it if he has the pluck. Suitable apparatus consist of a steep hill, a blood mare, a boulder, a bridge, a ravine, and a butcher's boy. Arrange the bridge over the ravine, and set both at the foot of the hill. The size and location of the boulder depend upon the limits of the desired "flight." When I set up my record, the boulder was about 1ft. in diameter, and was placed by the side of the road about 8ft. from the bridge. The blood mare and the butcher's boy are not absolutely essential, but in case the aviator's nerve fails him at the crucial moment when the take-off approaches, they have their uses. In my case the butcher's boy drove

the blood mare furiously up the hill. The blood mare shied at my machine. In attempting to dodge the blood mare my bicycle hit the boulder, which was suitably concealed in brambles, and in company with my machine I described a graceful arc over the parapet of the bridge, landing somewhat heavily in the stony bed of the torrent beneath.

Even as practised



"I have flown . . . on a push bicycle."

with a push bicycle the sport is a trifle expensive. Here is my bill for the solitary flight:

New Beeston Humber roadster, fifteen guineas.

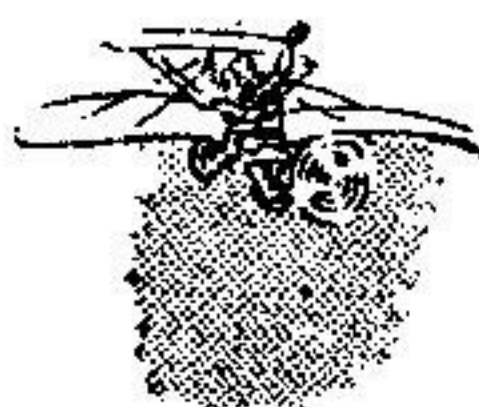
Surgeon's bill, five guineas.

Loss of salary for four weeks, £20.

Owing to a limited income I have not yet essayed the sport on a motor bicycle, but I estimate that its

costliness will rise in a ratio depending upon the speed and price of the motor cycle employed.

Many expert aeronautical engineers assert that the muscular powers of a human being cannot be so applied as to produce the horse-power requisite for sustained flights without the aid of at least a lightweight engine. These doubters would, of course, describe my own record and the French professional's petty *vol plané* as a "hop"; but the fact that the French Aero Club has offered a prize of 2,500 francs for the best flight, and that 198 entries have been obtained, looks as if two opinions on the subject were tenable.



The Auto-aviette.

I commend the notion to British designers, as

possessing certain obvious advantages, and lest these should escape general notice, I beg to draw attention to one or two obvious superiorities of the winged motor cycle, which may be provisionally christened the auto-aviette.



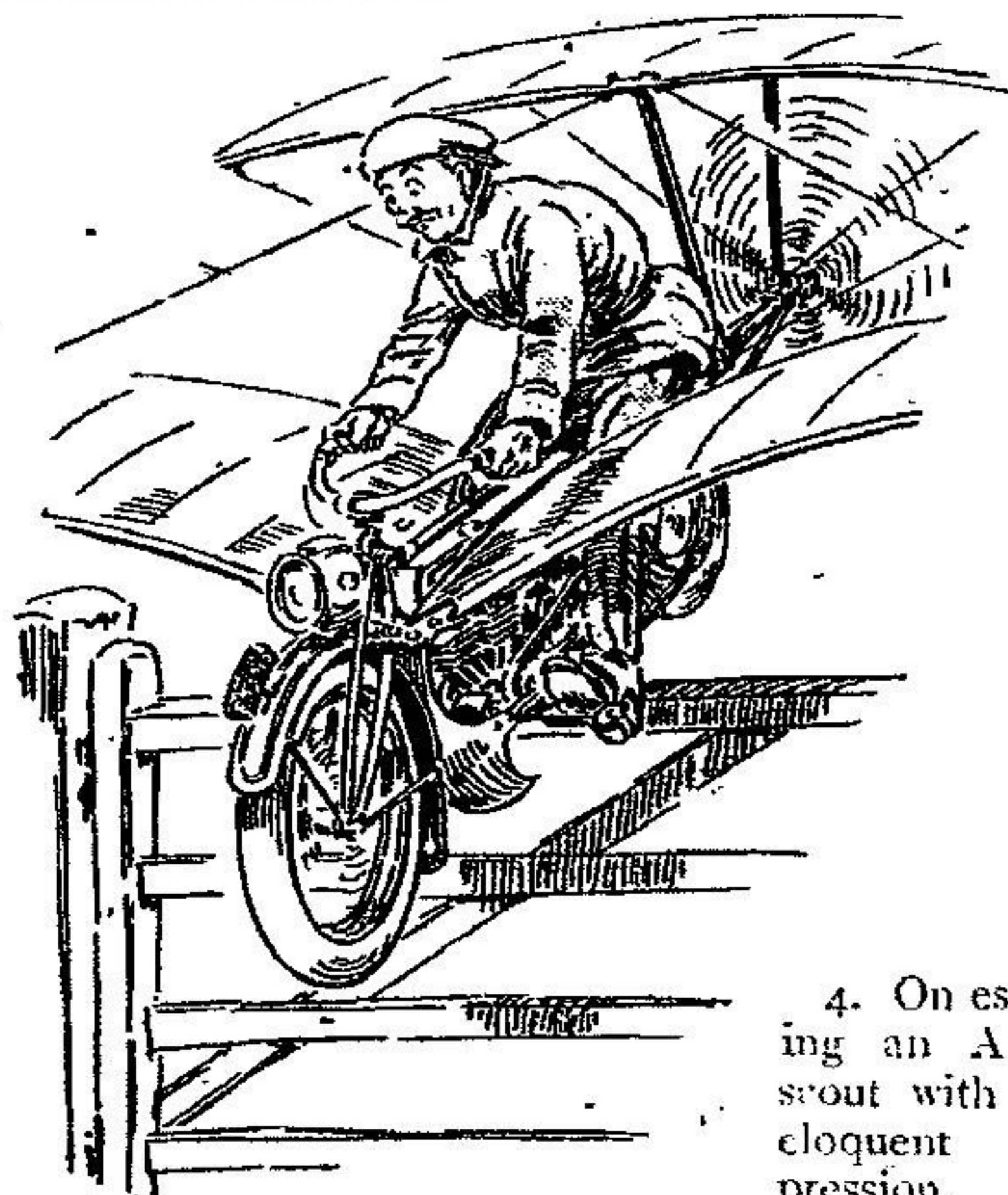
"The machine will pass over the police trap."

1. On sustaining a puncture, the auto-aviette's wings will be unfurled by operating a Bowden lever, and the machine will fly gracefully to the next garage.

2. On encountering a patch of dangerous grease or a stretch of unrolled metal, a short flight will instantaneously surmount the obstacle.

3. Hairpin bends will lose their terrors; instead of risking the dangers of "leaning the machine in and the body out," a hop of not more than fifty yards will land the machine on the straight immediately above the bend.

Motor Cycling in 2030 A.D.—



"A short hop will nullify a tiresome obstacle."

the machine will pass over the police trap at such a height that its registration numbers shall be undecipherable.

5. If, when taking your second-best girl out in the sidecar, you sight a female in the distance who looks suspiciously like the best girl, the entire outfit may be raised sufficiently high for the planes to conceal the sex and lineaments of your passenger; this procedure will avoid exhausting and tearful recriminations.

6. The opening of gates on the villainous mountain roads lately so popular with trials organisers will be completely unnecessary. A short hop on quarter throttle will nullify a tiresome obstacle.

7. A new rule of the road may be required to avert novel possibilities of accident under the new conditions, for should two auto-aviettes meet round a blind corner, and both simultaneously rise to the same height, a very pretty smash would follow. A precautionary rule could, however, simply be arranged. I am advising the Local Government Board to rule that "auto-aviettes going south or west hold the road in emergencies, auto-aviettes going north or east lift." Perhaps the new secretary of the A.C.U. will give the matter his best attention. I am ardently looking forward to the decrease of the cattle nuisance when I get delivery of my machine. Traffic stops in non-stop trials will no longer be a cause of friction.

8. No sane motor cyclist will in future trouble to thread city traffic. Without doubt each municipality

4. On espying an A.A. scout with an eloquent expression, the elevator will be tilted, and



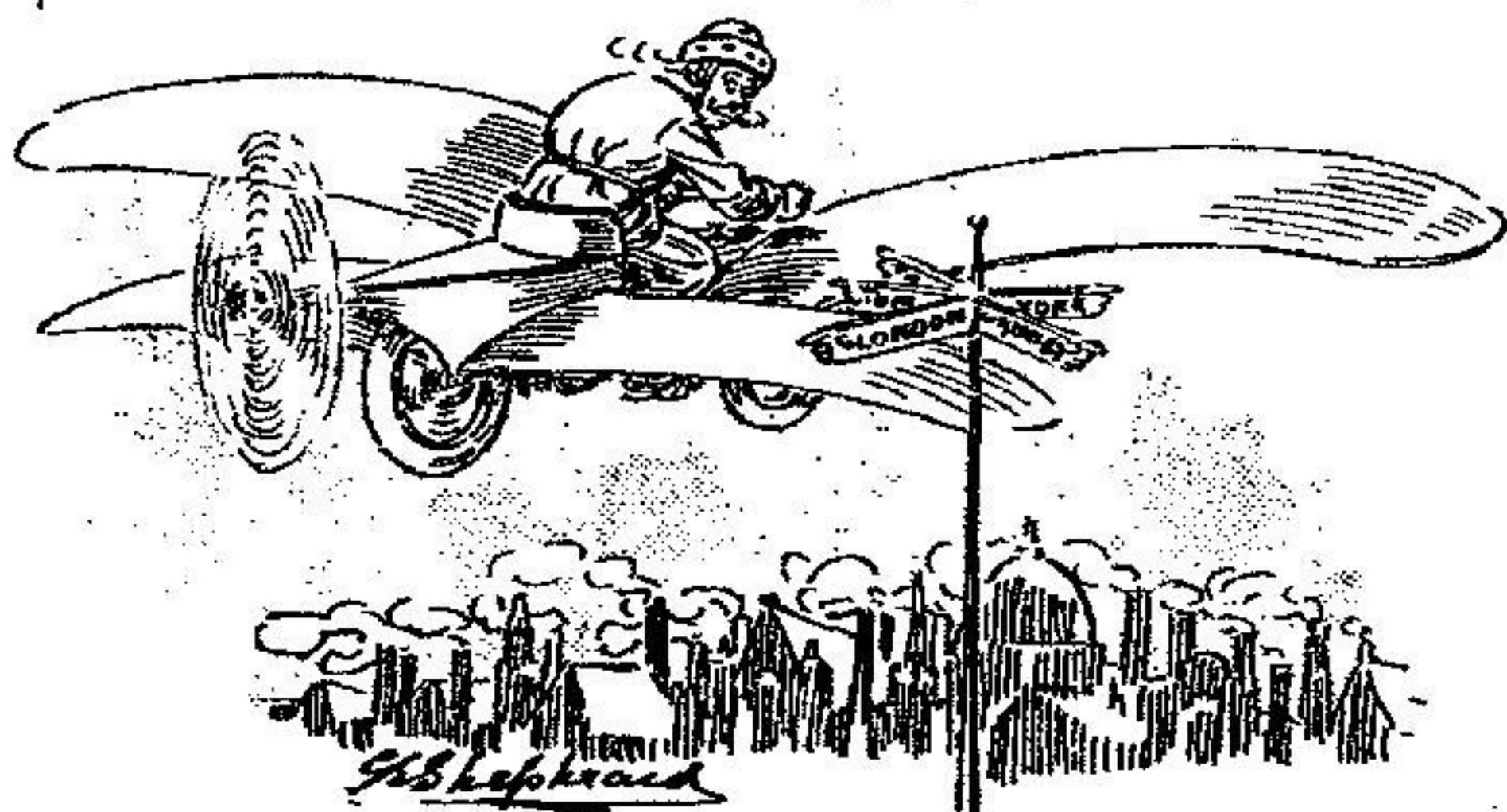
"A very pretty smash."

will erect goft. finger-masts in some central position, and on approaching a centre of population we shall "lift," and flying over the centre of the town consult the finger-mast *en passant* as to our route onward. Tramlines may now be multiplied *ad lib.* without any opposition from us. Street improvement—a costly burden on the rates—may be abandoned, and historic cities may retain their narrow and picturesque streets without a tremor, for the benefit of American tourists and other back numbers. As motor cyclists will now eschew town riding, country inns and garages will profit and thrive on new custom, and the "back-to-the-land" movement will receive a great impetus, even if motor cyclists whose belts break in mid-air will interpret the phrase in a fashion quite their own.

9. This last consideration suggests certain warning counsels to the novice. While the auto-aviette removes many inconveniences which have hampered the development of the sport, it introduces a few novel perils. A fouled sparking plug, broken valve or slipping belt is a mere bagatelle on the road; in the air it is a breath-stopping calamity. Riders will be well advised not to utilise their soaring gear unless they are absolutely convinced that the machine is in perfect tune from A to Z. In the near future low flying will doubtless become the rule, when the results of a slight mechanical derangement will be limited to a gentle return to the adjacent earth. But until all telephone and telegraph wires have been relaid in underground pipes, low flying must be regarded as no-

less dangerous than moon-brushing, and it will further be necessary to render all barbed wire hedges illegal. The small red boards erected by hunts to signal the presence of wire are scarcely sufficiently obtrusive to safeguard the low skimming motor cycle, and for the present our motto must be "the higher, the better." In conclusion I foresee a great slump in the stock of Burberry and other aquascuta. Instead of donning gaudy and odorous oilskins at the commencement of a heavy shower, we shall simply rise above the

clouds, and descend on entering a fresh climatic zone, where the sun is shining brightly.

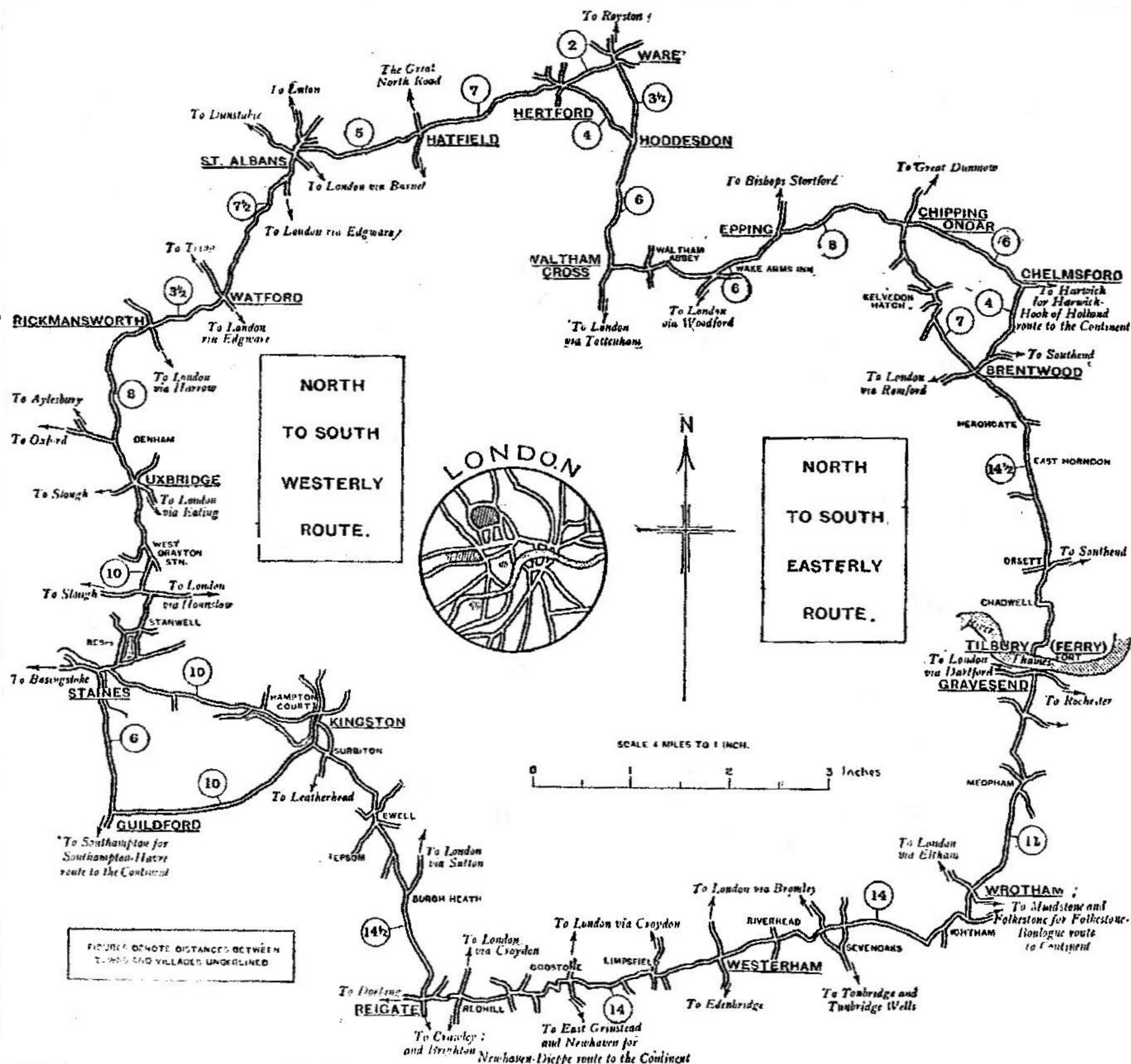


"Flying over the centre of the town consult the finger-mast"

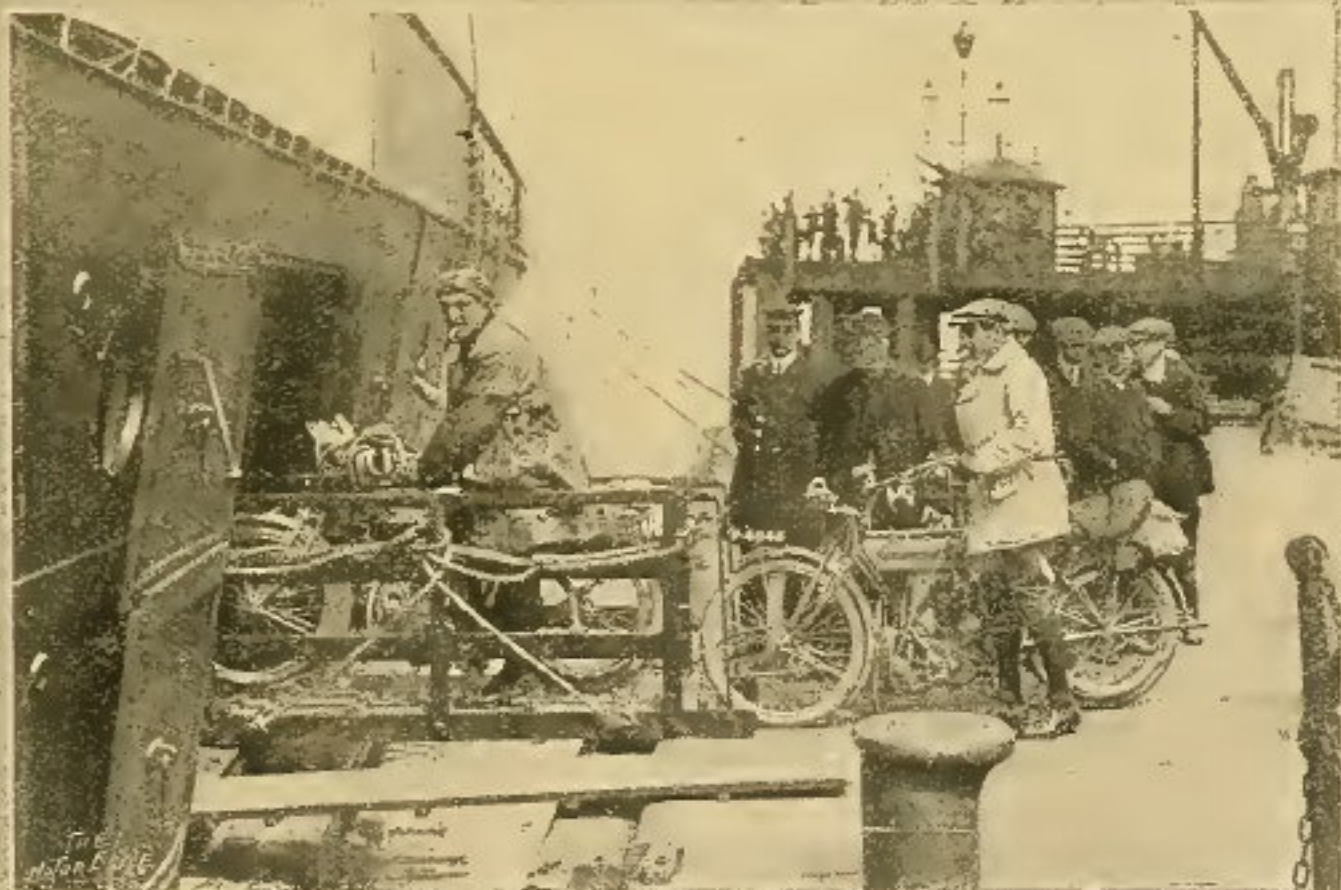
Newspaper Distribution.—

which is quite a pleasant jaunt, for there is not the mental anxiety, and should anything go wrong I have time to put it right. In the intense cold, clothing is an important matter, and the hint published some time ago in *The Motor Cycle* I have found of service, viz., a pair of silk socks under a pair of football stockings to keep the feet warm, and a silk handkerchief between the neck and an ordinary linen collar to retain the heat of the body. For overalls I prefer the Burberry. I have found them waterproof after hours of rain, and their lined treble-breasted coat is also very warm. A short time ago I recollect a discussion in the columns of *The Motor Cycle* re the sooting of plugs, but this difficulty I have never experienced with the L.M. plug, although I give the engine liberal doses of oil. Riding throughout the night, it is hard

to judge the rate of travelling, and one is apt to take corners at a dangerous speed, but since fitting a Jones speedometer this danger is overcome, and you can slow down to a safe speed when cornering. Riding in the fog is the only thing I object to; rain and snow are bad enough, but fog! I have not yet found a lamp that is any use in fog, and if any reader knows of one he will greatly oblige by letting me know. I do not think I have had any experiences worth relating, for beyond once seeing a tramp being searched by a constable I rarely meet anyone. I cannot conclude without a word of praise for the Whittle belt; at first I thought I should experience belt trouble, but it has gone through untouched in all weathers. It was only about a week before I started my weekly trip that I had ever driven a sidecar, and it is wonderful how simple it is to master. A.B.

**HOW TO AVOID LONDON.**

We are continually being asked how to avoid the traffic of the Metropolis by readers who wish to travel North, South, East, and West, and who do not wish to pass through the centre of London. The above map, which has been prepared from two sketch maps issued by the R.A.C. Touring Dept., shows how this can be done. Incidentally, the routes prove how the R.A.C. gives valuable road information to its members and associates, including members of the A.C.U.



THE MECCA OF MOTOR CYCLISTS.

Hardly a day has passed this month without motor cyclists crossing to the Isle of Man. Above may be seen a Rudge and Triumph rider wheeling their machines aboard the "Viking" at Liverpool. They had ridden from the Midlands.

MOTOR ROLLER SKATES FOR ROAD AND TRACK.



A French production fitted with a V type two-cylinder engine of $\frac{1}{2}$ h.p. It is said to be capable of 20 m.p.h. The accumulators and spare wheels are carried in a case attached to the waist of the skater.

Before Olympia

we were convinced that the Victoria value would cause a mild sensation—and it did.

After Olympia

we hold the proof, for motor cyclists far and wide have not only shown appreciation, but filled our order books with practical evidence thereof—and when you think of it—when you study the specification of the

VICTORIA MOTOR BICYCLE

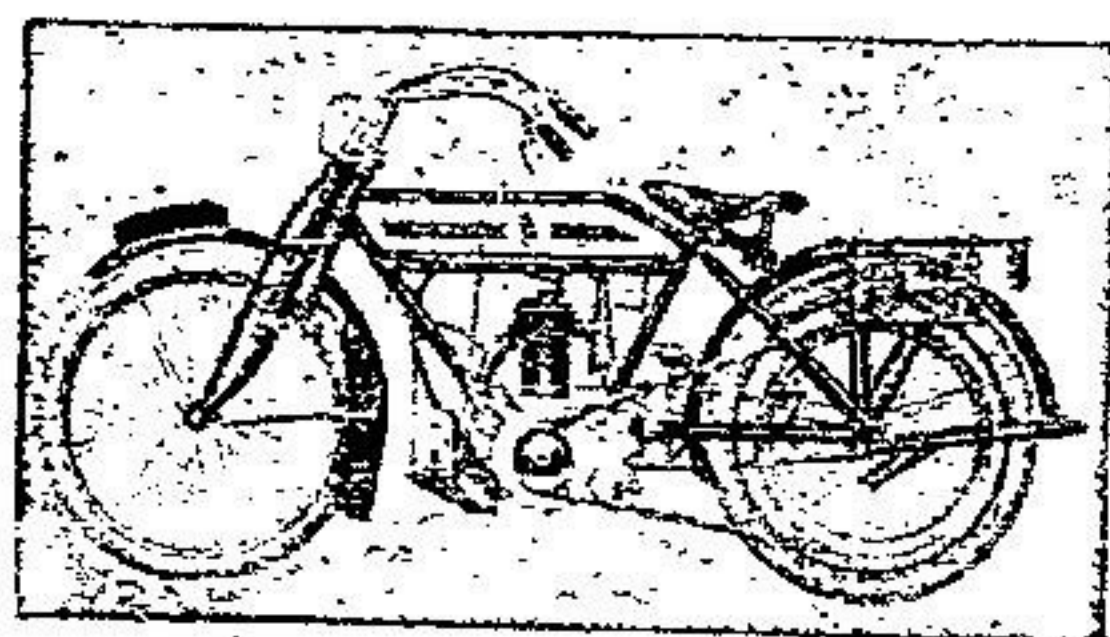
which is as under—

Precision engine, single cylinder, 85 m/m bore x 88 m/m stroke, with mechanically-operated side-by-side valves, and variable pulley; specially designed Druid patent girder spring forks; Bosch high-tension magneto; chain driven; Brown and Barlow carburetter, with handlebar control; Dunlop rubber belt; Dunlop heavy rubber-studded tyres; Brooks B170 saddle, and an exceptionally full equipment—

When you know its price—£38—you, too, should be convinced.

Anyway, we're here to fill that purpose, and we ask you to let us tell you more about "Victoria" value—write us.

Victoria Motor and Cycle Co., Ltd., Victoria Wks., Dennistoun, Glasgow.



Price £38 0 0 complete.



of every machine we make is placed our Trade Mark

As will be seen, it is not a peregrinating placard of the MATCHLESS name, but a mark by which our machines are known from others, just as their behaviour distinguishes them from the rest.

Riders of the famous MATCHLESS MOTOR CYCLES

are proud of that mark because it indicates the possession of a machine that has made history. We are proud of that mark because it has been associated with performances in the motor cycle world that have never been equalled.

You can read about Matchless successes in the new art catalogue, which can be obtained free from the manufacturers—

H. COLLIER & SONS, Ltd.

Offices and Showrooms:
44, Plumstead Road, London, S.E.
Works—Burrage Grove.

My Most exciting Ride: No. 6. CHARLES COLLIER.

Interrogated by L.C.

CHARLIE COLLIER did not take long to fix upon his most exciting ride, for one race of his stood out from all others on the score of excitement, and he at once brought to mind the races of 1906 between himself and George Barnes, otherwise known as "Cannon Ball" Barnes. Barnes had expressed his confidence of beating any motor cyclist in the world at a purely speed contest, and he challenged whosoever cared to meet him in *The Motor Cycle*. Charlie, to whom Barnes especially directed the challenge, took up the gauntlet, and an hour race was therefore soon arranged between him and Barnes. Charlie rode the same 6 h.p. Matchless twin which had just been built for the international race of that year, while his opponent had an 8 h.p. Buchet. There had been a deal of controversy as to the respective capabilities of the two riders, but Collier easily won the event. Not to be thus easily accounted for, Barnes offered to meet Collier in short distance races, and a series of three, over distances of one mile, three miles, and five miles respectively, was arranged for decision at Canning Town.

"In the first event, over a mile," said Collier, in relating his experiences. "I got away at the start and finished first, but the second race—distance three miles—was the most exciting ride I have ever had. I knew it was a case of the man who first got going properly winning, and to my horror I saw Barnes getting off the mark first. Before he had fully accelerated though, I was passing him, and I settled down to the ride. I have never travelled at such a dangerous speed before or since, and even now I look back and marvel at the wonderful time I made. The second mile was covered in $57\frac{4}{5}$ s.,

so that I was doing over a mile a minute on that little track. I hardly realised the danger I was running, so anxious was I to win, and I sped round as fast as my machine would take me, keeping as near the edge as I could. I had little fear that Barnes would overtake me, for it was impossible to do so at that speed on the Canning Town track, but I could not dream of slowing down, and so I went on, apprehensively, but with my blood up. It was over in a little more than three minutes, and the rubber decided, for I had secured the first two events. That second mile will never be beaten on that track, for in the condition it is now such a speed would be impossible, and even then it was stupendous."

"How did you feel when it was over?" I said.

"Feel! Why, I just thanked my lucky stars that it was finished, and, after cooling down, I realised that I had won and began to forget that I was feeling dazed. In the third race I let Barnes have matters all his own way, for I could not ride any more that day, and after doing a short distance I stopped, and Barnes finished alone. I have never been so keen about any-

thing as I was to beat Barnes then, and possibly my anxiety contributed to the excitement I felt; in any case, I have never been so thrilled before or since, and do not wish to be, either. Following on the match, I took the same machine away to compete in the eliminating trials for the International Cup, and won."

"Were you not excited over the match with De Rosier last year?" I queried.

"No," said Collier. "Brooklands is not Canning Town." I agreed with him, and marvelled at that sixty miles an hour sprint over the little track in the East of London.

NEXT SATURDAY'S BROOKLANDS MEETING.

The following are the entries for the Tenth Short Handicap ($5\frac{3}{4}$ miles) at Saturday's B.A.R.C. meeting:

A. E. Pontin (1-cyl. Rudge)	...	85 x 88mm.
Scott Aitken (1-cyl. Rudge)	...	85 x 88
L. Straker (1-cyl. Jap)	...	85 x 85
H. H. Square (1-cyl. Robin-Minerva)	...	69 x 69
K. Yano (2-cyl. Bat)	...	85 x 58
S. Day-Timson (1-cyl. Rudge)	...	85 x 88
P. Newbold (2-cyl. Zenith)	...	76 x 85
James Gibbs (2-cyl. Humber)	...	60 x 60
Basil Collier (1-cyl. Rudge)	...	85 x 88
A. G. Walker (1-cyl. Rudge)	...	85 x 88
J. A. Manners-Smith (1-cyl. Triumph)	...	85 x 88

H. Jepson (1-cyl. Zenith)	...	85½ x 85
J. Cocker (1-cyl. Singer)	...	69 x 80
G. E. Stanley (1-cyl. Singer)	...	69 x 80
P. Schmidt (1-cyl. Puch)	...	76 x 77
H. Martin (1-cyl. Martin)	...	76 x 59
H. Belcher (A. G. Fenn) (2-cyl. Humber)	...	60 x 60
B. C. Remington (1-cyl. Rudge)	...	85 x 88
F. H. Hannis (1-cyl. Jap)	...	77½ x 90
R. L. Printz (2-cyl. Bat)	...	85½ x 65
E. B. Ware (2-cyl. Zenith)	...	76 x 55½
D. R. O'Donovan (1-cyl. Singer)	...	69 x 80
C. Pressland (1-cyl. Rudge)	...	85 x 88
L. L'E. Edwards (1-cyl. Rudge)	...	85 x 88
E. Remington (2-cyl. Jap)	...	90 x 77

My Most exciting Ride: No 9. HARRY MARTIN.

Interrogated by L.C.

"DARE DEVIL MARTIN," as the famous pioneer is called, has been a winner since the inception of the motor cycle movement, and won the first open race promoted by the M.C.C. at the Crystal Palace in February, 1902.

Since that time he has won over 250 first prizes, and was the first Britisher to cover a mile in a minute. His best work has been done on saucer or grass tracks, although he has also ridden conspicuously at Brooklands. His experience is related by him as follows:

"My most exciting ride? Well, I have no hesitation in stating that out of the 400 odd races and record trials I have been engaged in during the past ten years, one ride alone stands out as the most exciting and hair-raising experience of my racing career.

"On April 13th, 1908, I decided to go out for world's three lap records for single-cylinder machines up to 200 miles, and continue up to six hours if conditions were favourable. The machine selected was a single-cylinder Matchless-Jap with a cylinder bore of 85 mm. and a stroke of 75 mm. The brothers Collier, in company with Colver and a mechanic, came over to the track, and like the sportsmen they are rendered me every assistance. All being in readiness, a start was made on receiving the necessary signal from the official timekeeper, Mr. A. V. Ebbelwhite, at 11.30; the machine running well I was soon inside record, only to be put out of action by a bent valve stem. Two other attempts were also fruitless from one cause and another, and it was at last decided to dismantle the machine.

A Final Start.

"The machine was finally assembled and ready for the final and last attempt about 3.50, the word to 'go' being given at four o'clock. At the start the weather was bitterly cold, with a strong N.E. wind blowing, several hailstorms also making matters worse, the general conditions being altogether quite unfavourable from a record breaking point of view. The machine ran beautifully, and with great regularity, and in accordance with my schedule I got inside record at 101 miles, time 2h. 15m. 21 $\frac{1}{5}$ s., beat-

ing previous best by 1m. 3s. From this point all three lap records continued to go with monotonous regularity, a stop being made in the meantime at 120 miles to refill tank and change tyres. No trouble was experienced with the machine beyond tightening a belt at 213 miles.

"Soon after 7.30 darkness rapidly enveloped the track, and by 8 o'clock it was almost impossible to see the bankings; a kindly signal warned me to stop. This I neglected, together with other signals, and decided to go on, if possible, for the full six hours. The darkness was so intense that the timekeeper found it impossible to see the machine crossing the line, with the exception of a 12in. long blue flame from the open exhaust of my J.A.P. engine.

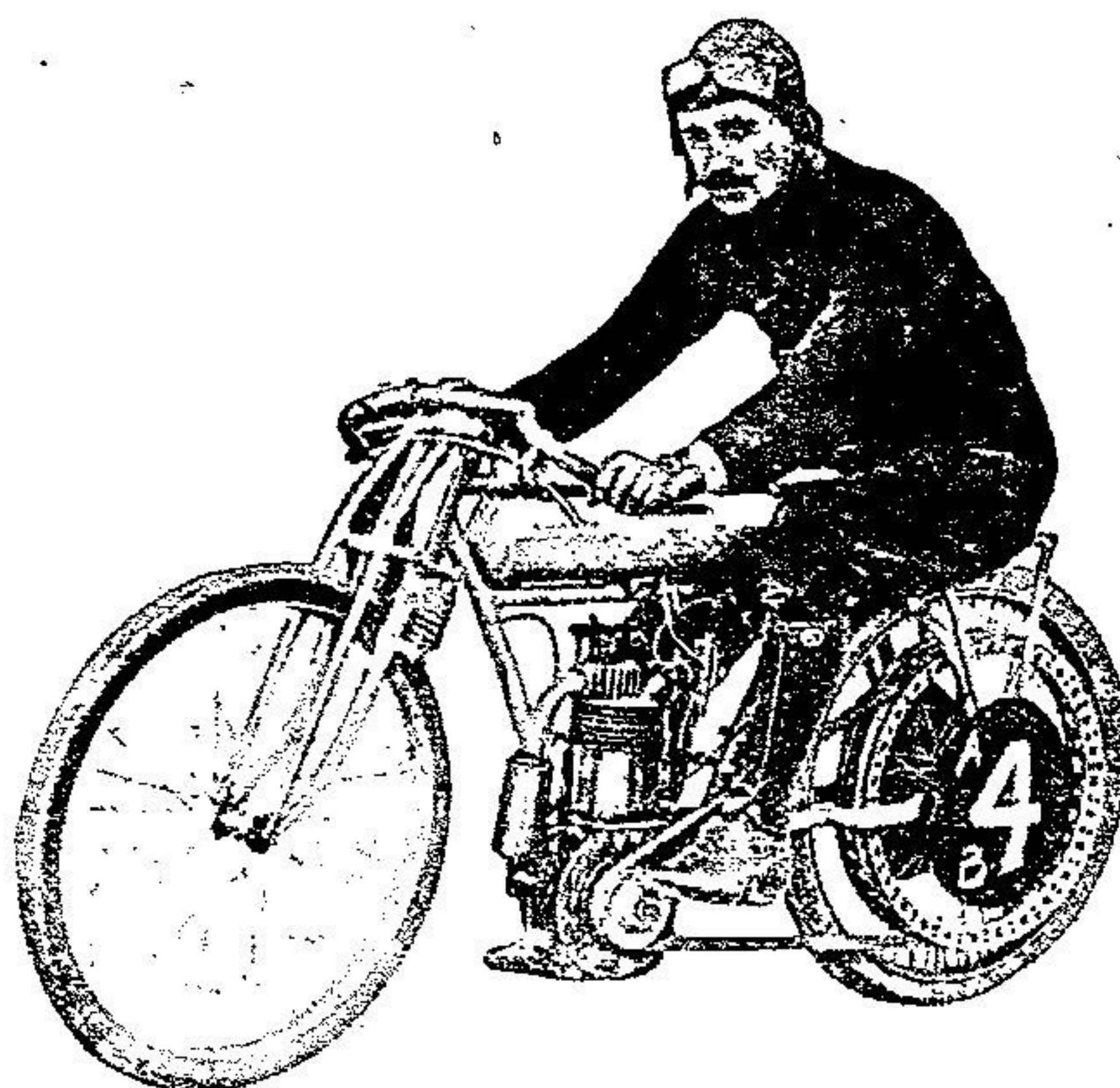
Finish in the Dark.

"Two ordinary cycle lamps were therefore brought into use, one being placed on the outside of the finishing line, and the other in the timekeeper's box for the purpose of obtaining exact lap times. Speed on the banking by this time was a matter for extreme care. The lights shot by me each lap, the bankings

being taken at an angle automatically without actually seeing them, and this for nearly two hours!

"I had the satisfaction, however, of also learning from the timekeeper that I had beaten Anzani's continental three lap record by 25 miles and British record by 17 miles, the figures from 200 miles still standing for single-cylinder machines on a three lap track."

In the judges' report of the tyre trials in the 1,000 miles the set of Rom tyres fitted to R. C. O. Wells's 3 $\frac{1}{2}$ h.p. Bradbury were omitted. These were a 26 x 2 $\frac{1}{2}$ in. cover for the back wheel, fitted on a 2 $\frac{1}{4}$ in. rim, and a 2 $\frac{1}{4}$ in. tyre on the front wheel. The type of tyre used was the combination non-skid. The judges report that the tube was changed owing to a puncture, reason not known. The cover on the back wheel was weighed at the end of the trial, and showed a gain of $\frac{1}{8}$ oz., and in the case of the front tyre $\frac{3}{8}$ oz. loss. The tubes were both in good order. The front cover was in excellent order, and the back cover showed a slight wear on the tread, but otherwise was in excellent condition.



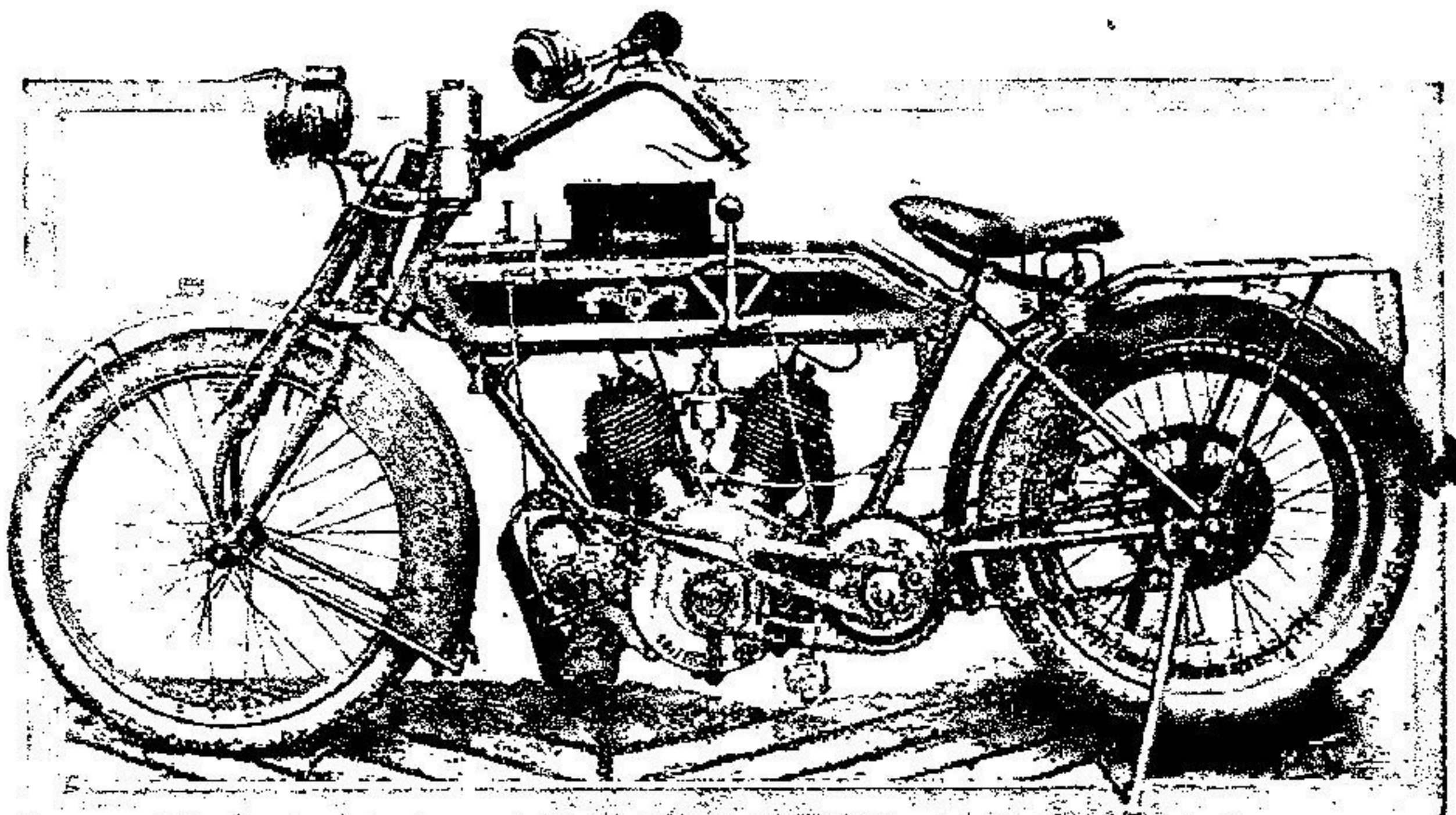
THE MATCHLESS.

A RECENT visit to Messrs. Collier and Sons' Works, Plumstead Road, Woolwich, revealed a good deal that was of interest. The successful 8 h.p. passenger machine with double belt drive and epicyclic gear in the rear hub will be retained, while a few detail improvements will be added. An innovation, however, will be an 8 h.p. chain-driven passenger model. The drive is by chain to the counter-shaft, and thence by two chains to the rear wheel. The change-speed is in a small gear box in the bottom bracket containing dog clutches, which engage the low or high speed chains as required. Also, on the counter-shaft, there is mounted a friction clutch, consisting of two internal expanding wedge-shaped rings, the wedges having an angle of 90°. Oil from a bypass from the main supply to the engine lubricates the clutch, and any excess, therefore, is directed on to the front chain, which runs in an aluminium case; guards are provided for the back chains. A segment type kick-starter is used. The rear brake is of the internal expanding type, and is lined with Ferodo. The machine is of thoroughly practical design, but it must be remembered that the particular one illustrated herewith is an early model of the new type, and the chain case and guards have been removed.

Another new model will be the 3½ h.p. twin with overhead valves. The transmission from engine to counter-shaft will be by enclosed chain, and thence by belt to the rear wheel which will be built on to an Armstrong three-speed hub. The six-speed model with expanding pulley gear and sliding back wheel to preserve an even belt tension will be retained.

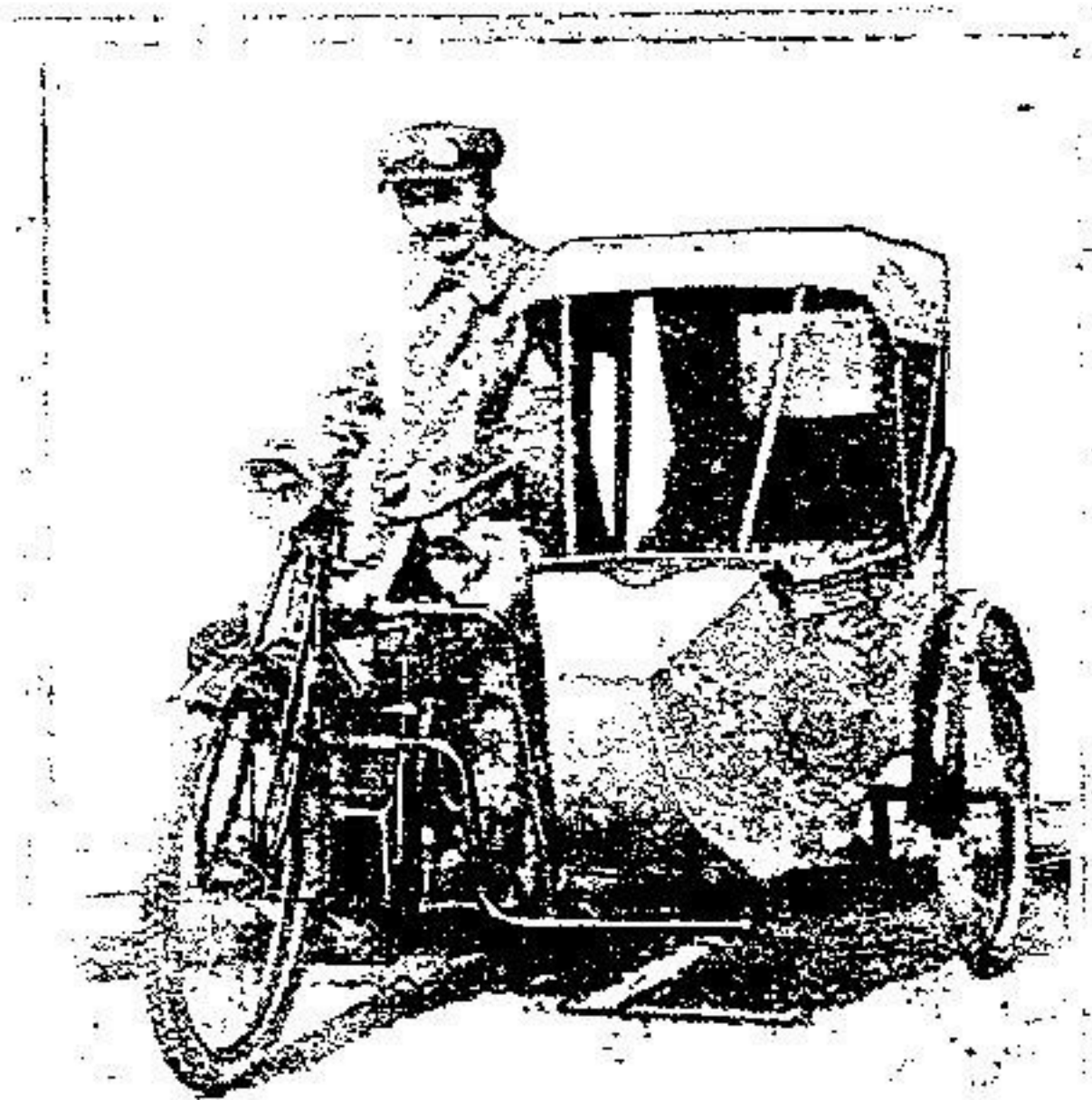
The Matchless Cyclecar.

Quite a novelty, which has been awaited for some time, will be the 9 h.p. Matchless cyclecar, which is the result of two years' careful experimenting. It is now approaching completion, but will not be ready till just before the Show. Belt drive was tried in the early models and found wanting, and the final type is now a three-wheeled vehicle. The motive power will be a 90° J.A.P. 85 x 95 mm. engine fired by Bosch magneto. The



The new two-speed Matchless-Jap, with chain transmission throughout.

clutch will be of the leather-faced cone type. Long bolts extending through the



Garrard Maxfield 1913 model sidecar, with hood complete.

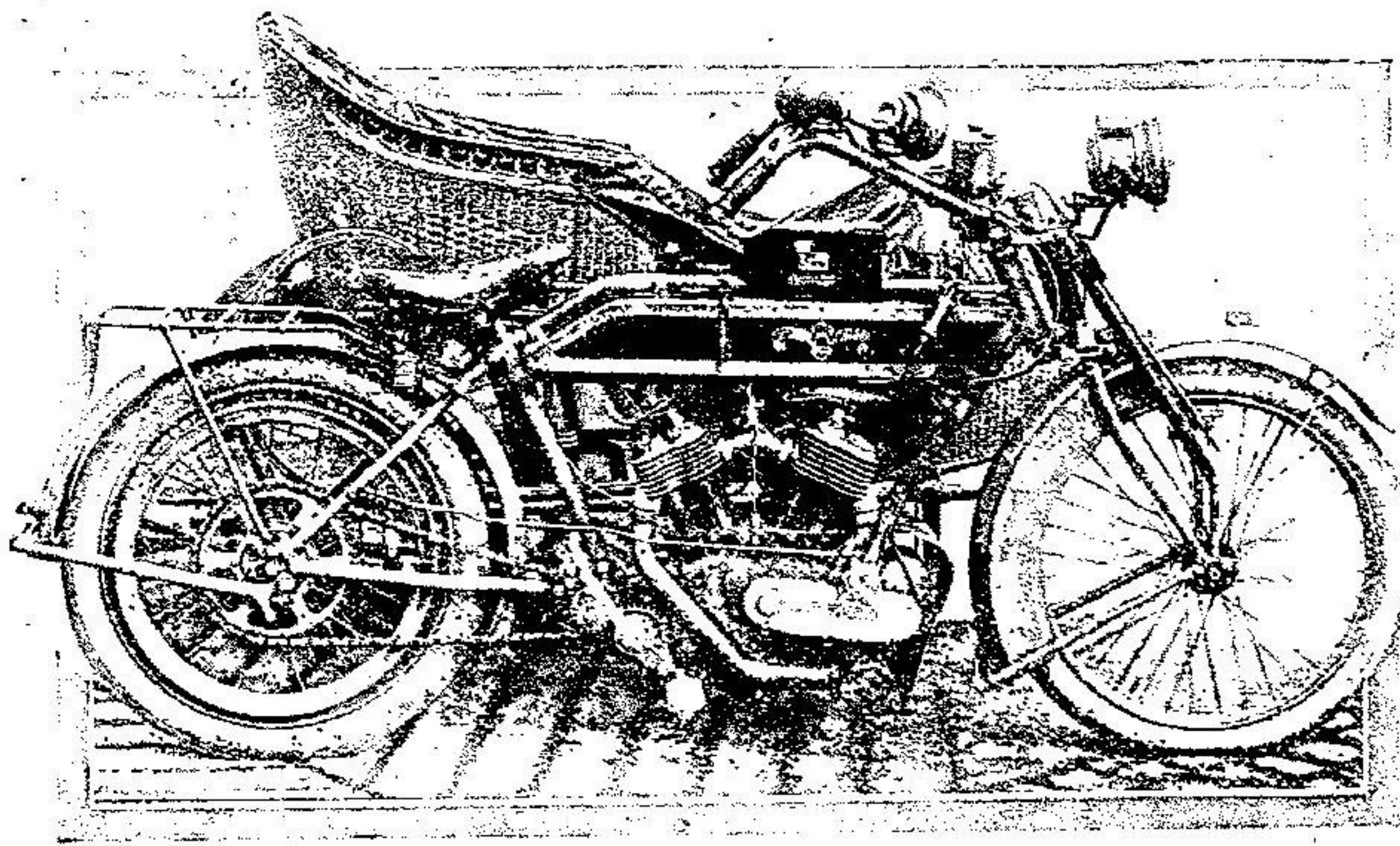
crank case also hold the gear box, rendering engine, clutch and gear box one unit.

Behind the gear box will be a well-made De Dion type universal joint with a grease-retaining cone. From gear box to the rear wheel the drive will be by propeller-shaft, while the final drive is by bevel. The chief bugbear of the three-wheeler, the inaccessibility of the back wheel, will be absent, as the latter will be detached almost instantly by merely withdrawing the spindle. The back wheel is then free to drop out, leaving the driving mechanism and the brake drum *in situ*. These two portions are connected to the main hub by means of dog clutches. Geared steering is fitted, the gear box being situated on the top of the steering column immediately beneath the wheel. The frame is of channel steel, while the rear wheel is carried in a tubular sub-frame, and is connected to the main frame by leaf springs attached to the latter at their after ends. The centre of the front axle is curved, and serves as a cradle for the engine, which is mounted longitudinally. Laminated springs extend from each extremity of this curve to vertical plungers, supporting the stub axles and running in guides on the main frame, thus ensuring good springing and ample lateral stability. In a word, the springing is somewhat after the system in vogue on the Sizaire-Naudin car. The track is 56in., and the wheelbase 7ft. The cylindrical petrol tank is carried over the engine and possesses a compartment for oil. The gear box contains two speeds, and the top gear ratio is 4½ to 1. 650 x 65 mm. voiturette tyres are to be fitted to the front wheels, while the rear wheel will be shod with a 700 x 85 mm. combination cover. Altogether, the Matchless cyclecar will be one of the most up-to-date three-wheeled vehicles on the market.

SIDECARS A SPECIALITY.

Hoods for sidecars are manufactured by the Garrard-Maxfield Motor Manufacturing Co., Ltd., 5-6, Aston Road, Birmingham. We illustrate the 1913 pattern sidecar made by this firm complete with Cape hood. These sidecars are also fitted with side curtains and front celluloid screen to order. The company have already supplied a number to France.

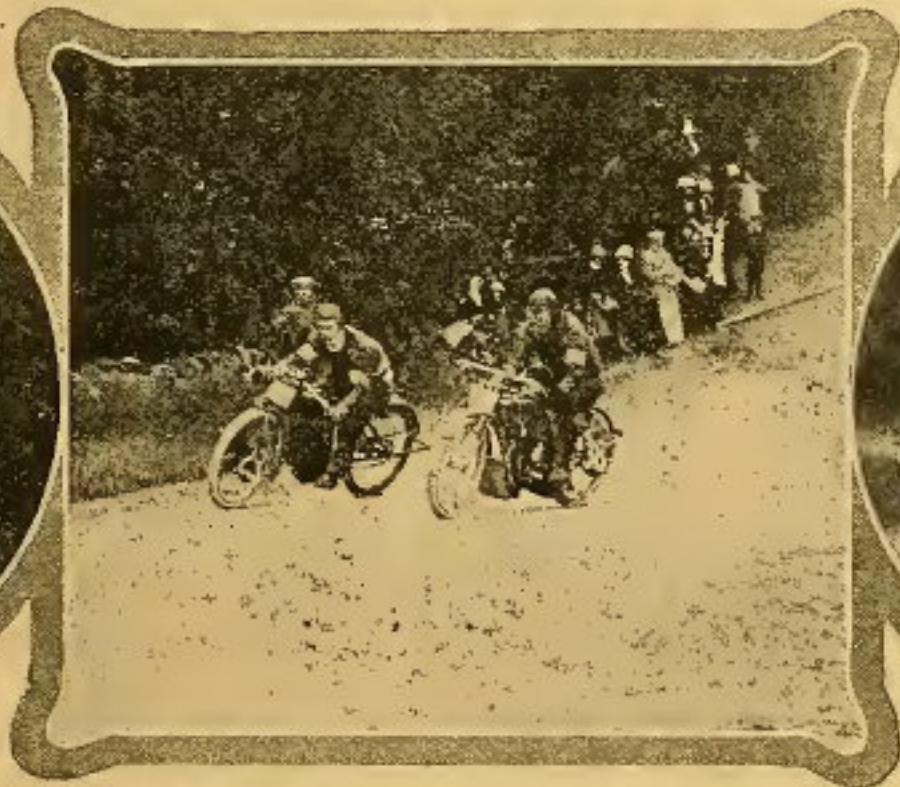
Instantaneous sidecar-couplings are also a feature of the Garrard sidecar.



The 1913 8 h.p. chain-driven Matchless sidecar combination.



J. A. Hoffmann (Triumph) rounding the corner on the Gooseneck, which is half a mile above the hairpin.



ON THE SNAEFELL MOUNTAIN CLIMB.

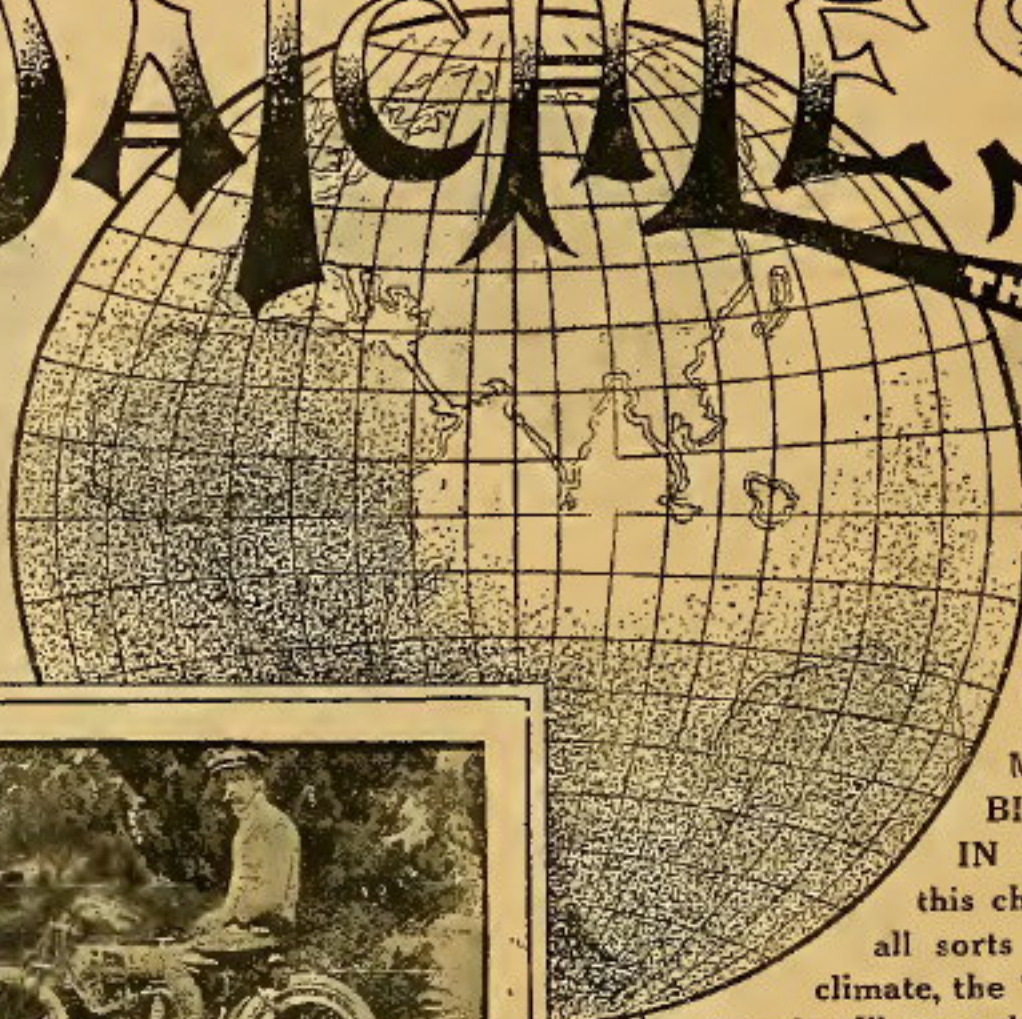
A. H. Alexander ($3\frac{1}{2}$ h.p. Indian) and H. A. Collier ($3\frac{1}{2}$ h.p. Matchless) negotiating the corner close together.



A view from below the Ramsey hairpin, showing S. L. Bailey ($2\frac{1}{2}$ Douglas).

'MATCHLESS'

THE WORLD OVER



Wherever motor cycling is followed, the name "MATCHLESS" is known and respected.

Matchless SPEED, Matchless RELIABILITY, and Matchless SATISFACTION IN USE, are the unequalled attributes of this champion motor cycle. For hard work on all sorts of roads, and under all conditions of climate, the "MATCHLESS" is pre-eminent. Write for the Illustrated Catalogue.



Telephone:
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Offices and 44, Plumstead Road,
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Grove,
Plumstead.



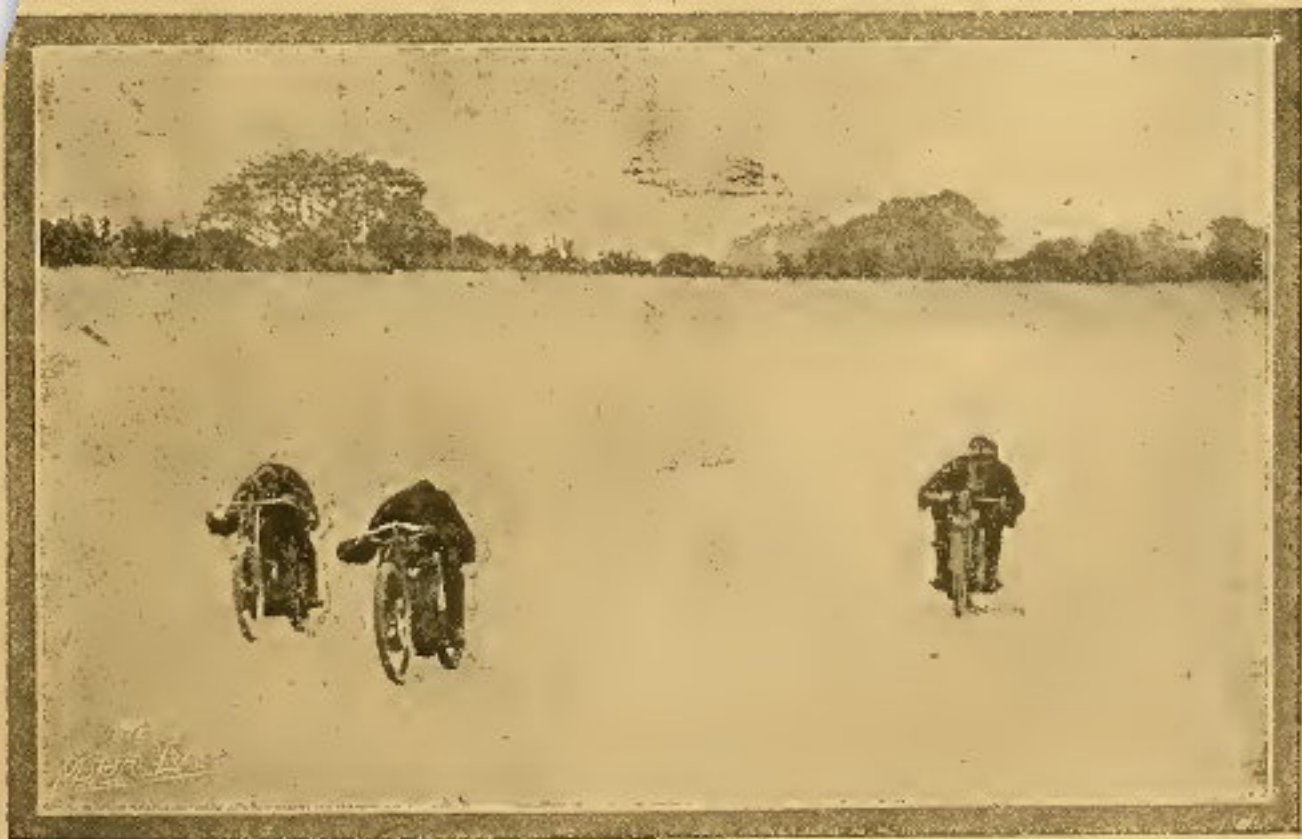
Streatham and District, and Woolwich, Plumstead and District M.C.C.'s inter-team trial. H. A. Collier is seen in a new role, starting the competitors.



Frank Smith (three-speed Clyno) passing unsuccessful competitors on Lynton Hill. It will be remembered that Smith was the first to climb Lynton on a sidecar.



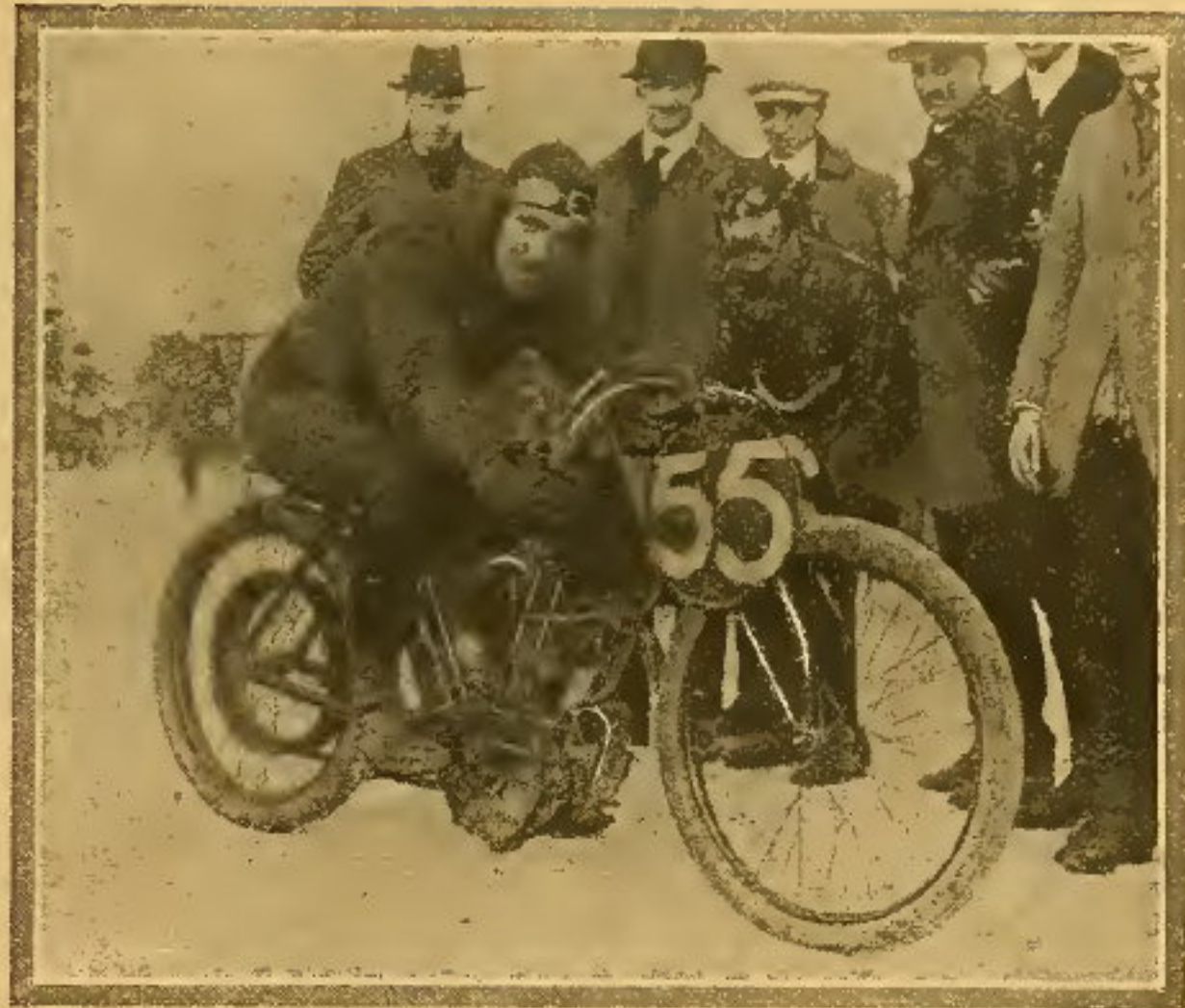
C. R. Collier (Matchless) hugging the wall on Lynton Hill. His back tyre refused to grip on the steepest part.



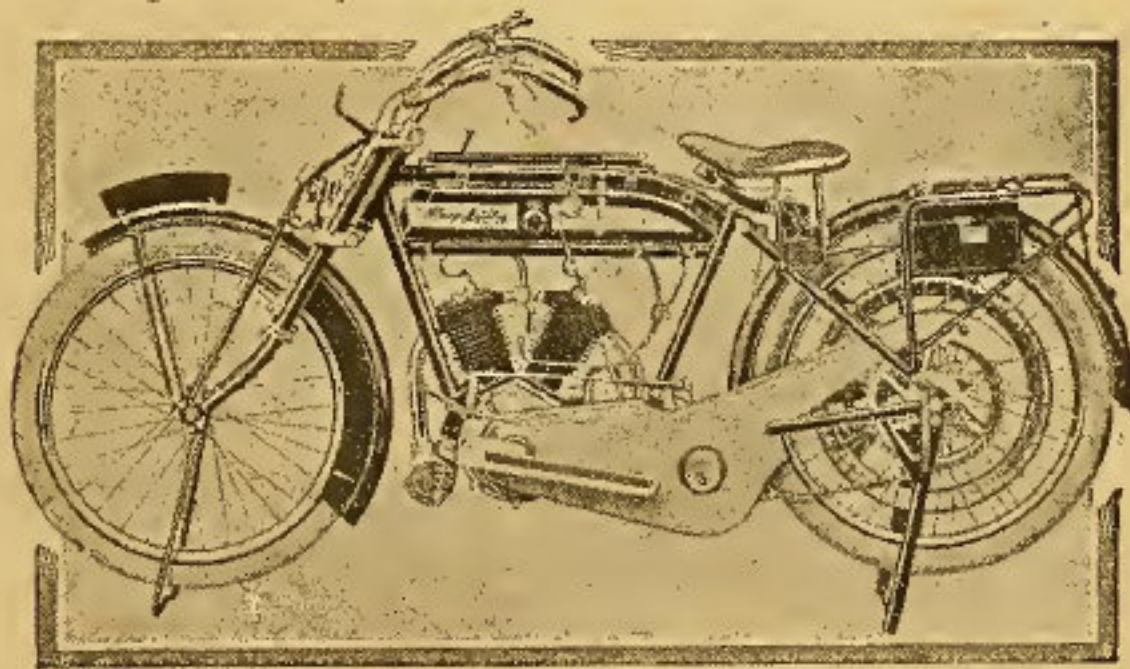
NECK AND NECK IN THE SENIOR T.T. RACE AT BROOKLANDS LAST SATURDAY.

1.—The two competitors are C. R. Collier (Matchless). 2.—O. C. Godfrey (Indian). The third rider is a competitor in the Junior event.

B23



C. R. Collier (8 h.p. Matchless-Jap), winner of the five lap race.



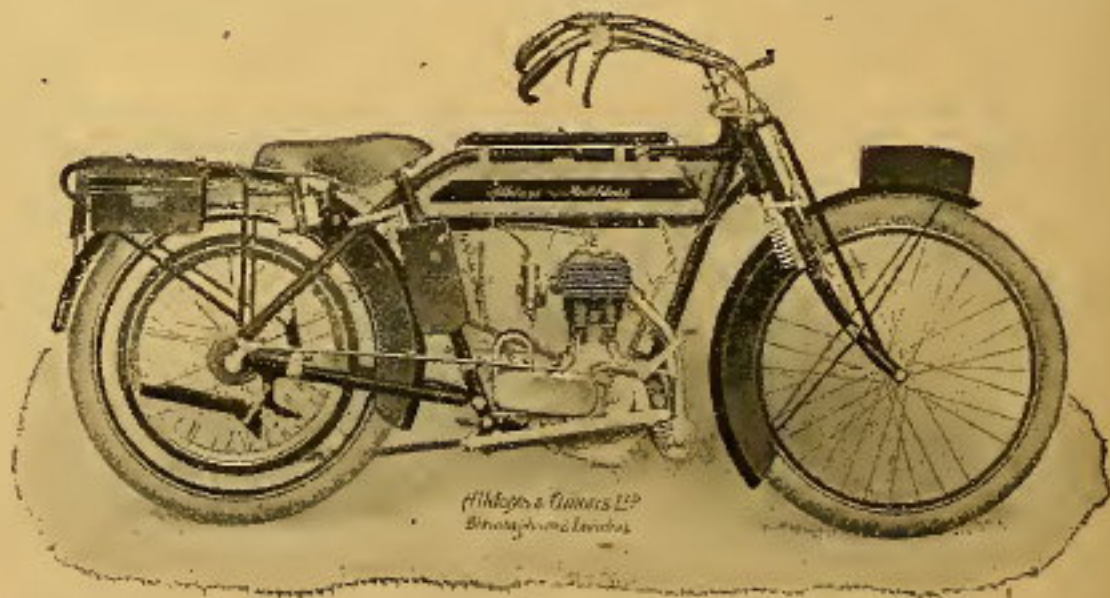
6-8 h.p. twin Alldays-Matchless which has chain drive and three-speed gear. The efficient chain guards will be noticed.

ALLDAYS

MATCHLESS MOTOR CYCLES.

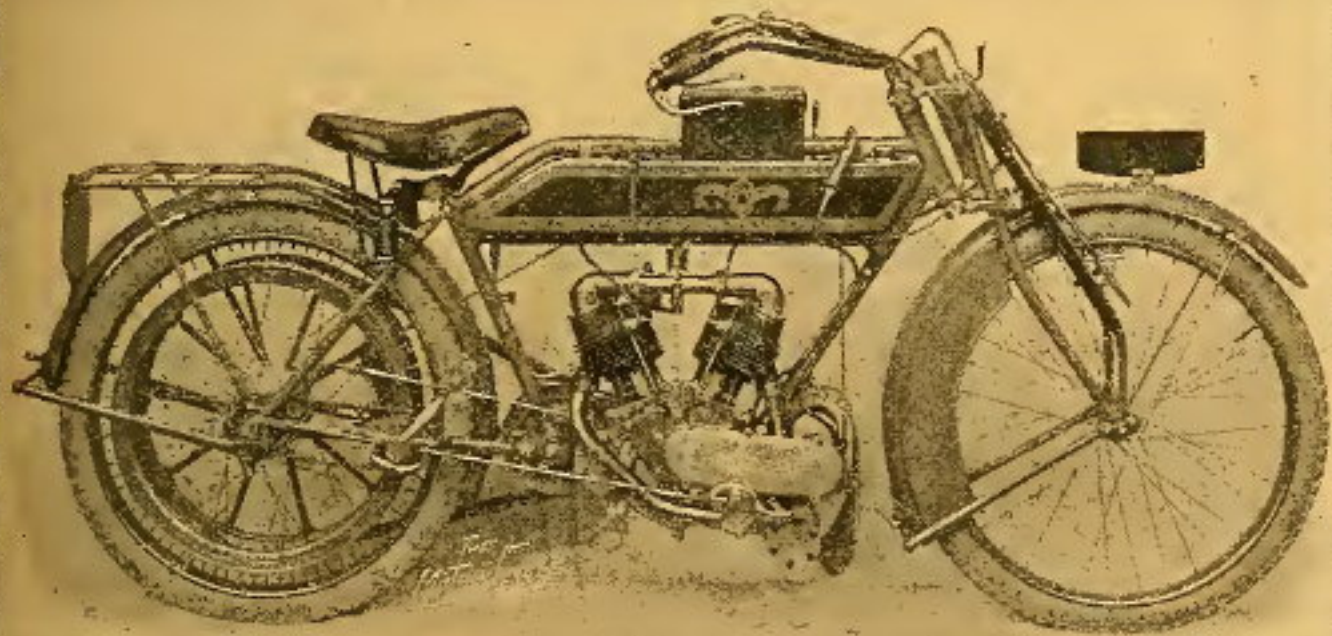
Olympia Cycle Show, Stand 106

- 2 h.p. Lightweight Single Cylinder, Belt Drive.
- 3 h.p. Twin Cylinder, Belt Drive.
- 3½ h.p. Countershaft Chain Drive, Single Cylinder, 3-speed.
- 3½ h.p. Belt Drive, 2-speed Hub under Roc Patents.
- 3½ h.p. with Belt Drive, Clutch Hub.
- 6-8 h.p. Twin Cylinder, 3-speed, Countershaft Chain Drive. For Sidecar work.

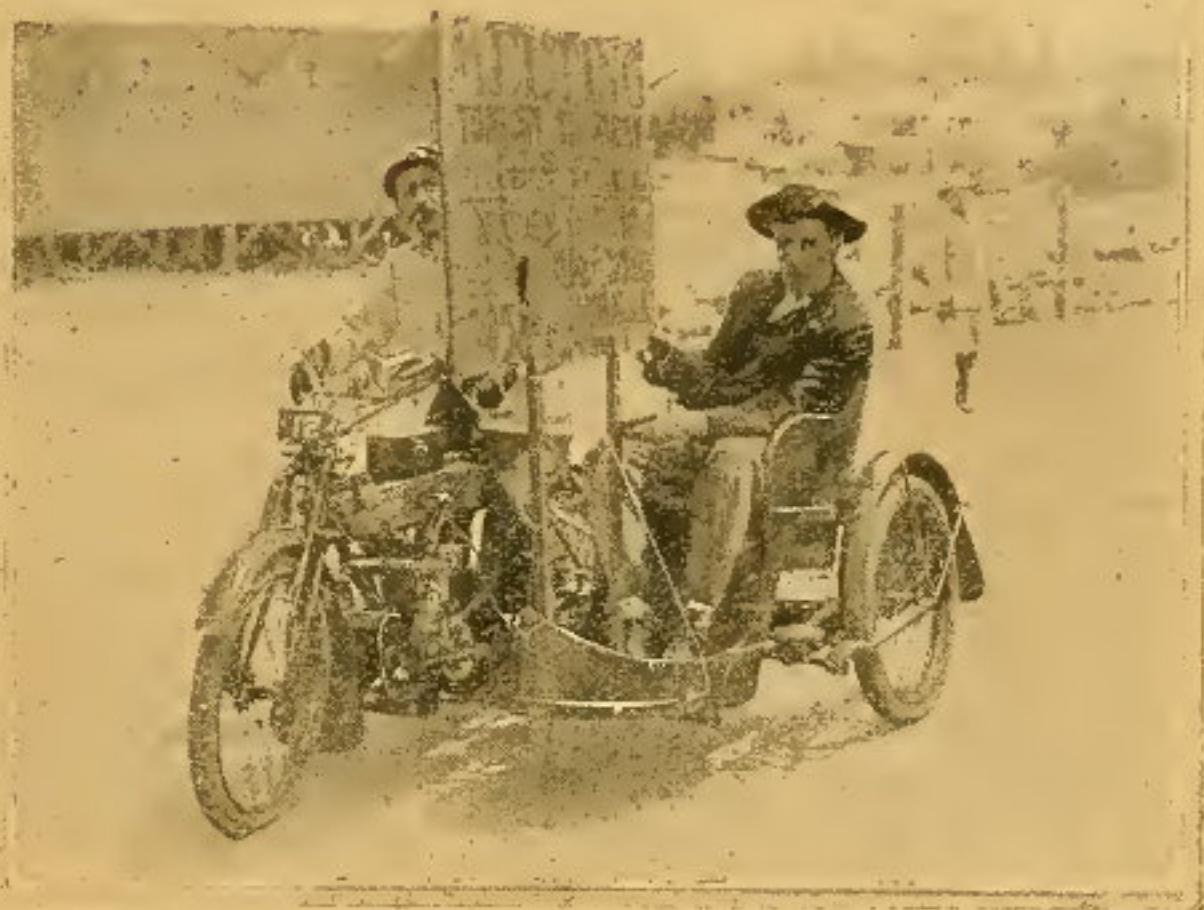


ALLDAYS & ONIONS PNEUMATIC **CO., LTD.,**
ENGINEERING

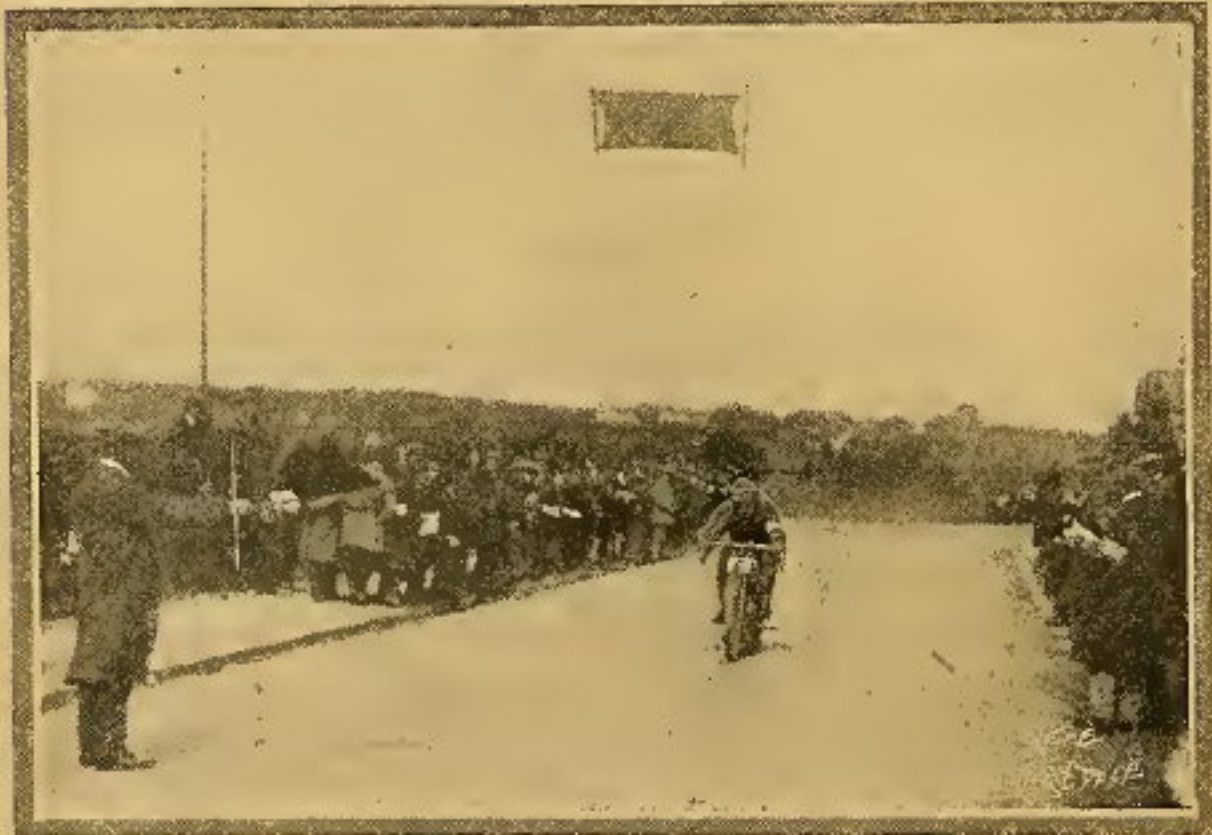
Matchless Works, BIRMINGHAM, and 58, HOLBORN VIADUCT, LONDON, E.C.



An entirely new Matchless. This model is a 3 h.p. twin. It has a new type J.A.P. engine with overhead inlet valves, chain and belt drive and Armstrong hub gear.



A 6 h.p. Matchless and sidecar, used by Mr. J. Van Zwieten in the city of Pretoria and suburbs, for advertising purposes. We are told that the machine was run for long periods at almost walking pace.



H. A. Collier (Matchless) finishing in third place, average speed 46.5 m.p.h

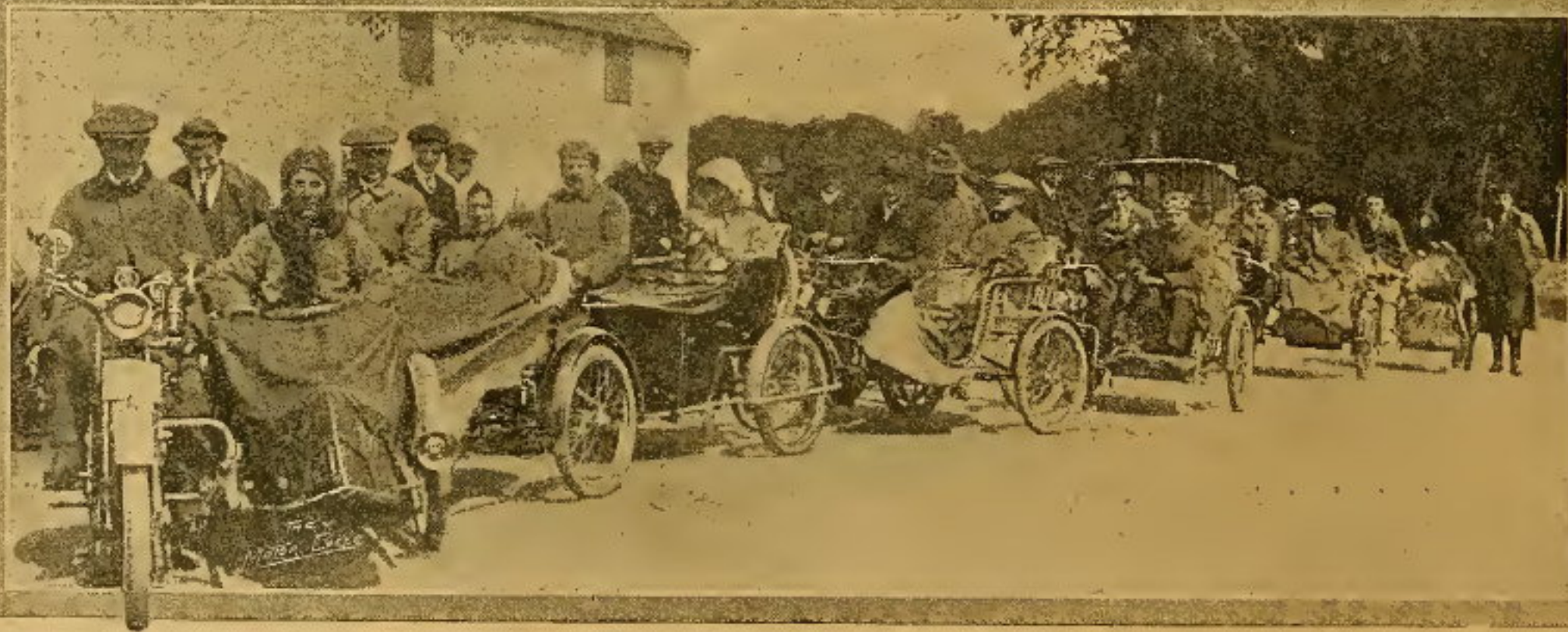


H. A. Collier (Matchless-Jap), third in order of speed.



Fourth, Charles R. Collier (Matchless-Jap).

T.T. TRIFLES.



THE POPULAR SIDECAR.

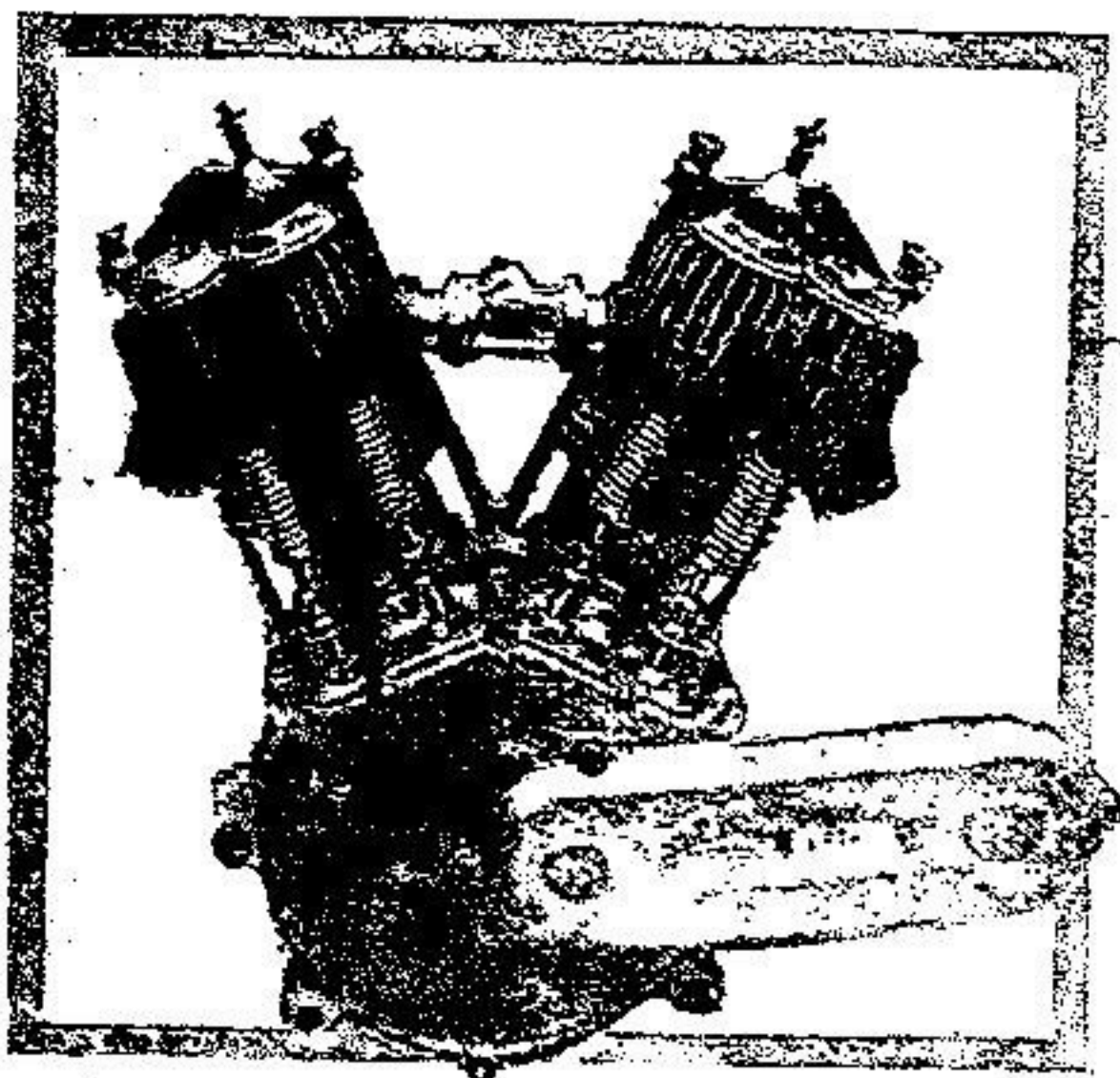
The above group was photographed in the Stockport M.C.C. Reliability Run on the 23rd ult., and shows some of the competing sidecarists at Monk's Heath—the second control. Matchless and Clyno outfits are conspicuous.

A.J.S.

MESSRS. A. J. Stevens and Co. will confine themselves to two models during next year—a 6 h.p. twin and a 2½ h.p. single. As the 6 h.p. model is almost a twin-cylinder replica of the 2½, a description of it will suit both types.

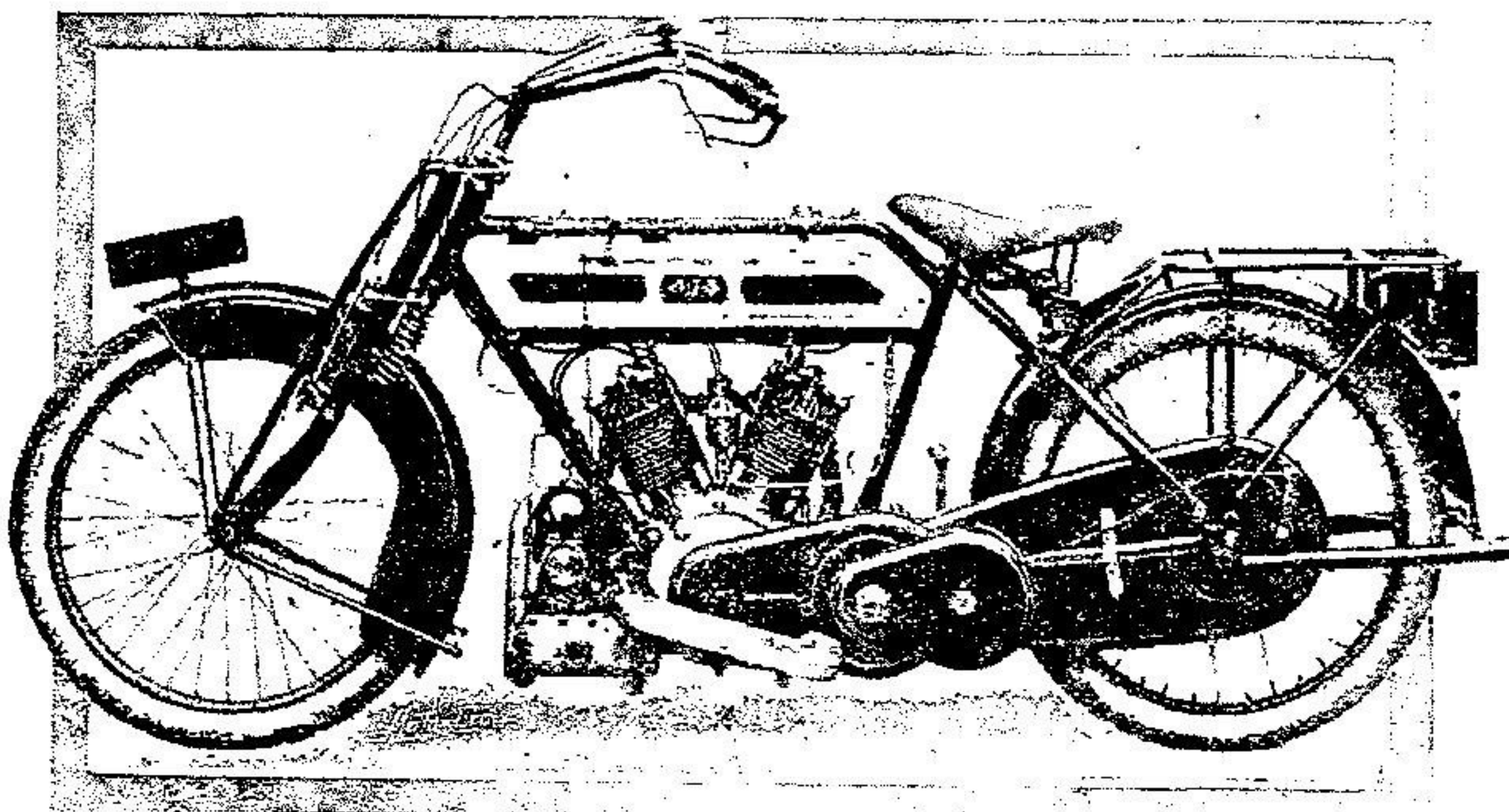
The engine has a bore of 74 mm. and stroke of 81 mm., the cylinders being set at an angle of 50°.

A steel piston is now employed having two top rings and a broad spring steel ring to retain the gudgeon pin; this pin is hollow and is prevented from rotating in the piston boss by a set pin. Although the new piston is both of greater diameter and length than last year's, it is considerably lighter. Adjustable tappets are fitted as standard. To render the machine quieter a smaller valve lift is given, but the valves have been greatly enlarged so as to give an even freer port opening. Heavier flywheels are fitted so as to give very smooth running. A chain transmits the power to a clutch on the counter-shaft. This clutch is of the plate type, having cork insets. In the 1912 models it will be remembered that the sprocket



Valve side of the 6 h.p. 1913 A.J.S. engine, showing method of holding down cylinders.

carried the insets, and was gripped between two plates, but in the new model the number of plates has been doubled. The gear box provides three speeds and is a particularly neat piece of work; the sliding member consists of a single gear wheel and two dogs, and provides a direct drive on top. Both gearshafts are mounted on ball bearings, an oil catcher is fitted round the open end of the shaft which leads any leakage down an overflow pipe to the base of the box, thus



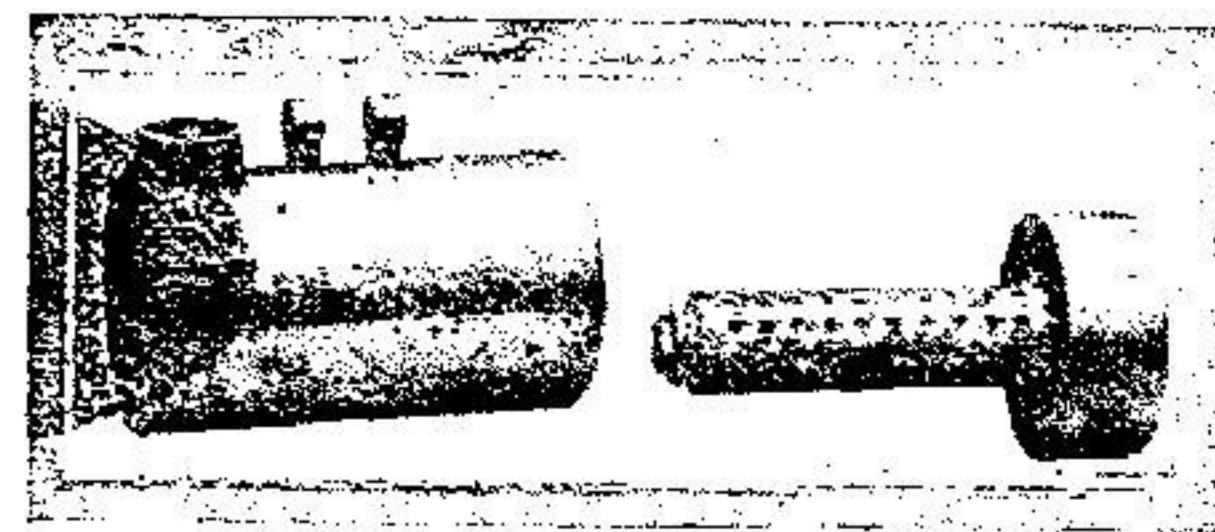
New 6 h.p. A.J.S. passenger model with three-speed bottom bracket gear and enclosed chains.

avoiding the unsightly mess which is only too common on counter-shaft gears.

The clutch is operated from the handlebar and the gears by a lever on the top tube. The gear ratios obtainable are 4½, 7½, and 12½ to 1. A single chain drives the rear wheel, and both this and the engine chain are entirely and effectively guarded. Silence has been studied in an unusual degree, and to prevent any sound from the chains the cases are made of two layers of metal with packing interposed, and to dismantle either gear box, or clutch, or chains it is not necessary to remove the main portion of these cases. The kick starter is also enclosed, and its adjustment is not affected by the position of the gear box. A powerful internal expanding brake is fitted to the rear wheel, and is carefully mudproofed. Amac carburettors and chain-driven U.H. waterproof magnetos are used. Disc-adjusting hubs are now fitted.

The tank, which has a capacity of two and a quarter gallons, has rounded edges, and is held from below, a glass-topped filler cap taking the place of the usual petrol gauge. Both front and rear wheel stands are supplied, and the tool bag is covered with sheet metal. All the carrier joints are welded. Comfortable footrests are supplied having good sized heel plates. All wheels are shod with 650 x 65 mm. tyres, and a large aluminium silencer is placed under the magneto platform. The 2½ h.p. type, as has already been mentioned, is on the same lines as the twin, but has only one cylinder. On this model a slipping clutch is mounted on the

engine-shaft, and a neat spring compensating device is fitted to the gear control rod to avoid damage to the gears. Either a two or three-speed gear can be supplied with this model.



New design silencer on the 1913 4 h.p. engine.

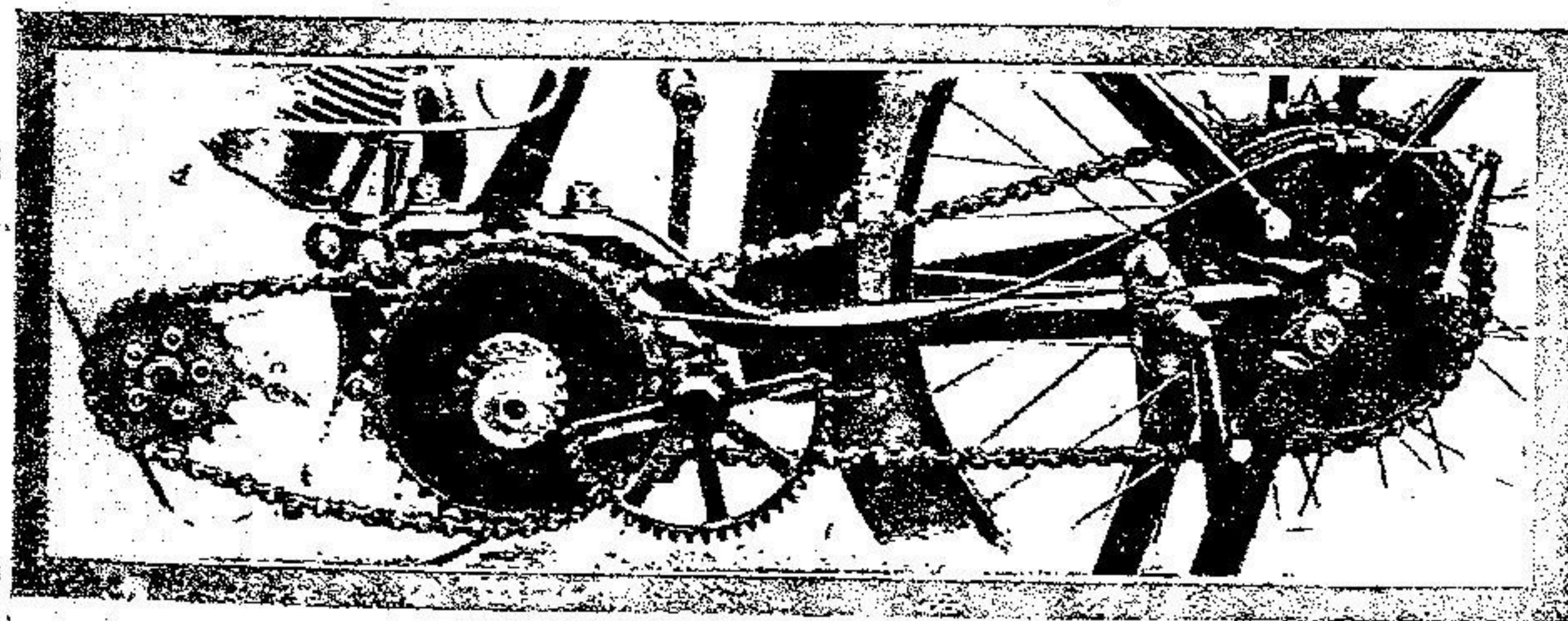
L.M.C.

THE following models will constitute the L.M.C. group for 1913: 3½ h.p. L.M.C., two-speed, chain and belt gear; 3½ h.p., Auto Varia gear; 4 h.p., Sturmey-Archer gear; 4 h.p., Roc gear; and the 3½ h.p. T.T. model. The engine sizes are: 3½ h.p., 85 x 88 mm.; 4 h.p., 89 x 92 mm. Improvements are in detail only.

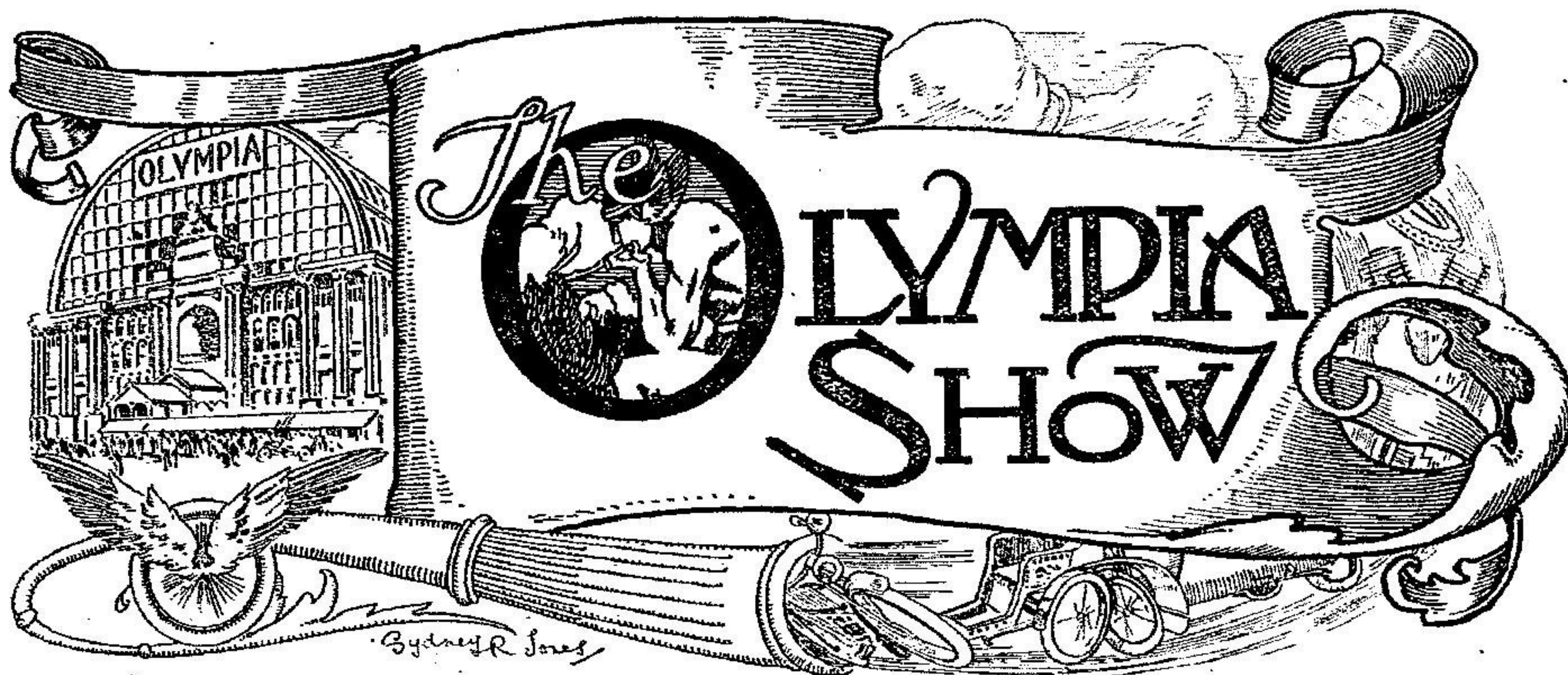
The L.M.C. chain and belt two-speed gear will be provided with a new control, and the chains, instead of being on opposite sides, will be both on one side, with the belt drive on the other.

Mr. W. J. Lloyd has designed a new half-compression device; the lever for operating this is attached to the top rail. New pattern side wing mudguards have also been adopted.

The Auto-Varia gear has been improved by fitting the coil springs in holes bored in the solid part of the pulley instead of using a separate cage as this year. The front fork has been redesigned, and will have coil and recoil springs instead of the springs being in tension alone. The exhaust valve lifter, which is of the outside type, will be so fitted that the cylinder will be easily removable. A hinged rear mudguard will enable the rear tyre to be easily manipulated in the case of tyre repairs, and a kick starter is an addition. The tank has been improved by the fitting of larger filler caps. The new kick-starter and other details are shown in the illustration on page 1261.

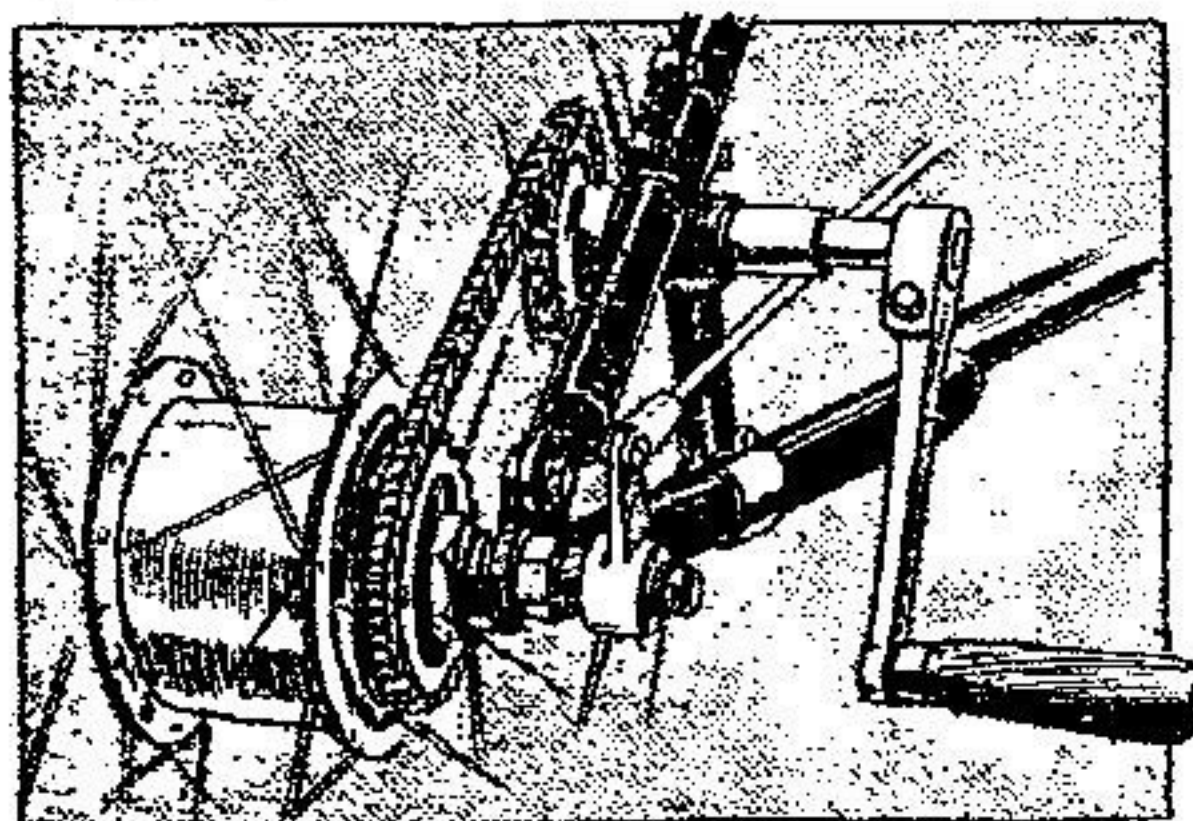


The A.J.S. method of transmission, showing kick starter and internal expanding brake on back wheel.

**ALLDAYS, No. 106.**

3½ h.p. MODEL: 85 x 88 mm.; m.o.i.v.; Amac; V belt; two-speed hub and free engine.

ALLDAYS AND OXONS, LTD., Birmingham.—Most models on view are of the 3½ h.p. size, but the new twin is the attraction. In 1903 models a new steering head is adopted, also a new design of spring forks and front stand. Care has been taken in mudguarding both front and back wheels, side flaps being fitted to the guards in both cases. A new guard over the belt rim should be noted, while on the type fitted with two-speed Roc gear a neat aluminium cover over the band brake and clutch is provided. The luggage carrier tool-cases are metal housed. On the two-



Alldays handle-starting mechanism.

speed model the chief points in the power plant are waterproof magneto, placed behind the crank case and driven by chain, and spring plunger drip feed pump. Neat aluminium footboards are well supported at both ends, and on the right-hand side heel and toe pedals are provided for the brake and the low-speed control. On the left side is the high gear pedal held in place when required by a pedal trigger. A hand-starting device enables the engine to be started with the back wheel raised. A new sidecar frame is being adopted. The 8 h.p. twin engine has already been described. This is fitted to the Alldays sidecar machine, and also to the Alldays Midget, a cyclecar which is described elsewhere in this issue. The bore and stroke of the 8 h.p. twin-cylinder engine are 85 x 88 mm.

BIGGER, more complete and better arranged than hitherto, the third annual Olympia Show of Motor Cycles and Accessories cannot fail to prove an immense attraction. The doors are open at 10 a.m. each day, and remain open until 10-30 p.m. Admission 1/-. We deal elsewhere with the tendencies of design for 1913, but the outstanding feature of the Show is the large proportion of passenger motor cycles exhibited. This is not only due to the new rule admitting light four-wheelers which come within the definition of cyclecars, for sidecars also have undoubtedly increased in numbers. Even the casual observer must be moved to pay a tribute to the exquisite finish of most of the machines which include the best that British workmanship can produce.

The gallery is packed with ingenious accessories made for greater convenience and to reduce time and trouble. No motor cyclist or prospective rider of a motor cycle should fail to visit the exhibition.

The descriptions of 1913 models in this issue have been written by our own staff, who are all motor cyclists of long experience, after a stand to stand tour of the Show.

NOTE.

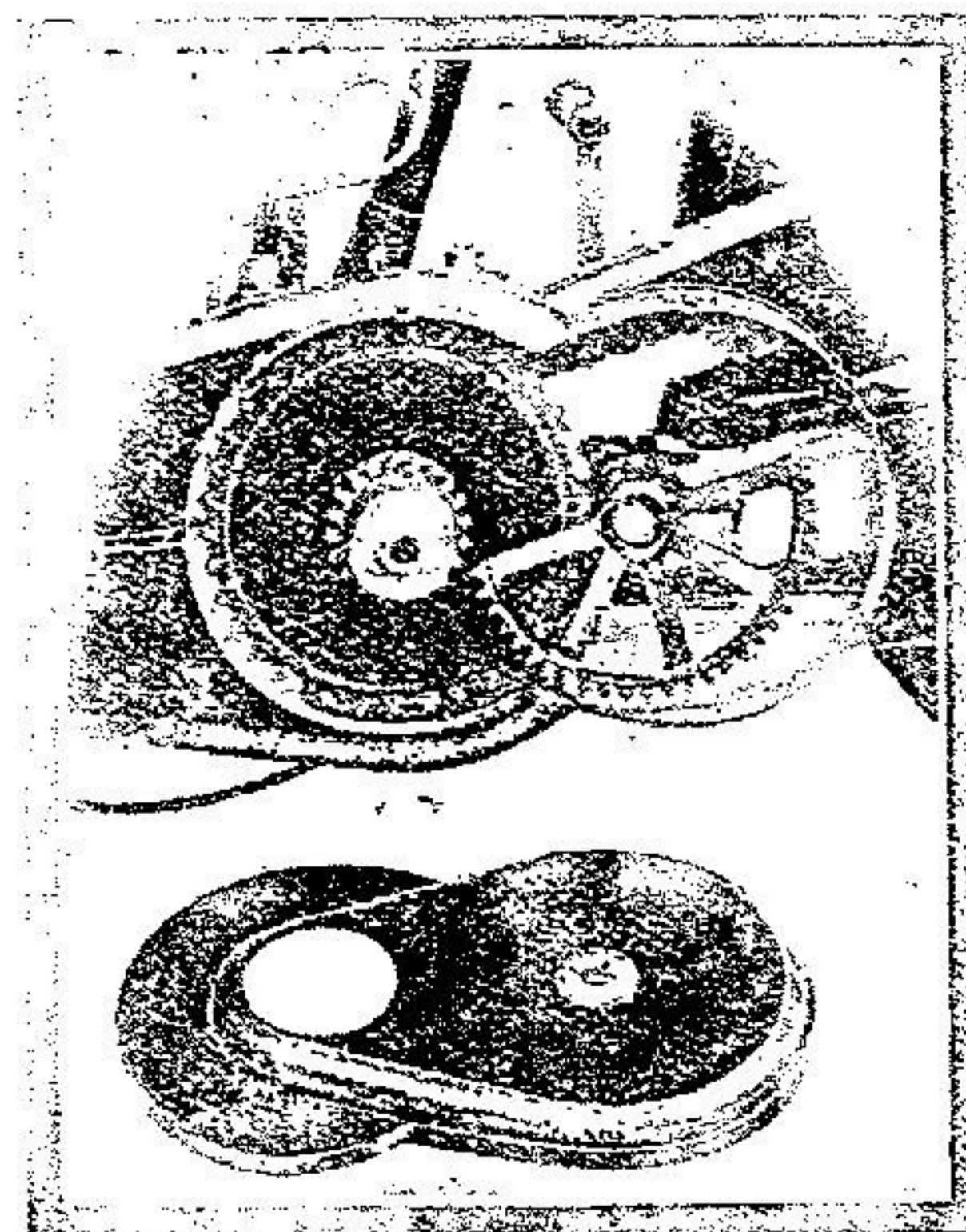
Our last few issues have contained advance reports of many new models; for detailed descriptions and illustrations of such machines we append the following reference table:

- | | | |
|----------|---------------|--|
| Oct. 10. | Cyclecars. | Humberette. |
| Oct. 17. | Cyclecars. | Premier. |
| Oct. 24. | Motor Cycles. | Rudge, Humber Zenith. |
| Oct. 31. | Motor Cycles. | Rover, Calcott, Matchless, Rex, Stella. |
| | Cyclecars. | Alldays Midget, Crescent. |
| Nov. 7. | Motor Cycles. | James, Indian, Enfield, Clyno, P.&M., A.J.S., Henderson. |
| | Cyclecars. | Swift. |
| Nov. 14. | Motor Cycles. | Williamson, Douglas, Swift, Bradbury, Brough, N.S.U., Triumph, Rex-Jap, Calthorpe, Hazlewood, Sunbeam, Ivy, Corah. |
| | Cyclecars. | L.M., Gordoo, A.C., Crescent, Chater-Lea, Autotrix, Bedelia, G.N., G.W.K. Invicta, Autocrat, Leo, Day-Leeds. |
| Nov. 21. | Motor Cycles. | Chater-Lea, Torpedo, Trump, New Imperial, Star, S.I.A.M.T., Bat, Pope, Excelsior, Auto-wheel, Moto-Reve, Motosacoche, B.S.A., Monopole, Premier, Stella, Lincoln Elk, L.M.C. |
| | Cyclecars. | Sherwin, Perry, Eric. |

A.J.S., No. 29.

2¾ h.p. MODEL: 74 x 81 mm.; side by side m.o.i.v.; Amac carburettor, chain transmission; two-speed A.J.S.; countershaft sliding.

A. J. STEVENS AND CO., Retreat Street, Wolverhampton.—This is one of the most successful medium weight machines, which was entered in competitions this



A.J.S. kick starter mechanism, showing how a portion of chain case can be removed to gain access to kick starter, also front and back chains.

year. In this and other A.J.S. models the latest type of waterproof U.H. magneto is fitted. The company has wisely decided to confine its attention to two models only. The chains are entirely enclosed in dust, mud, and waterproof casings.

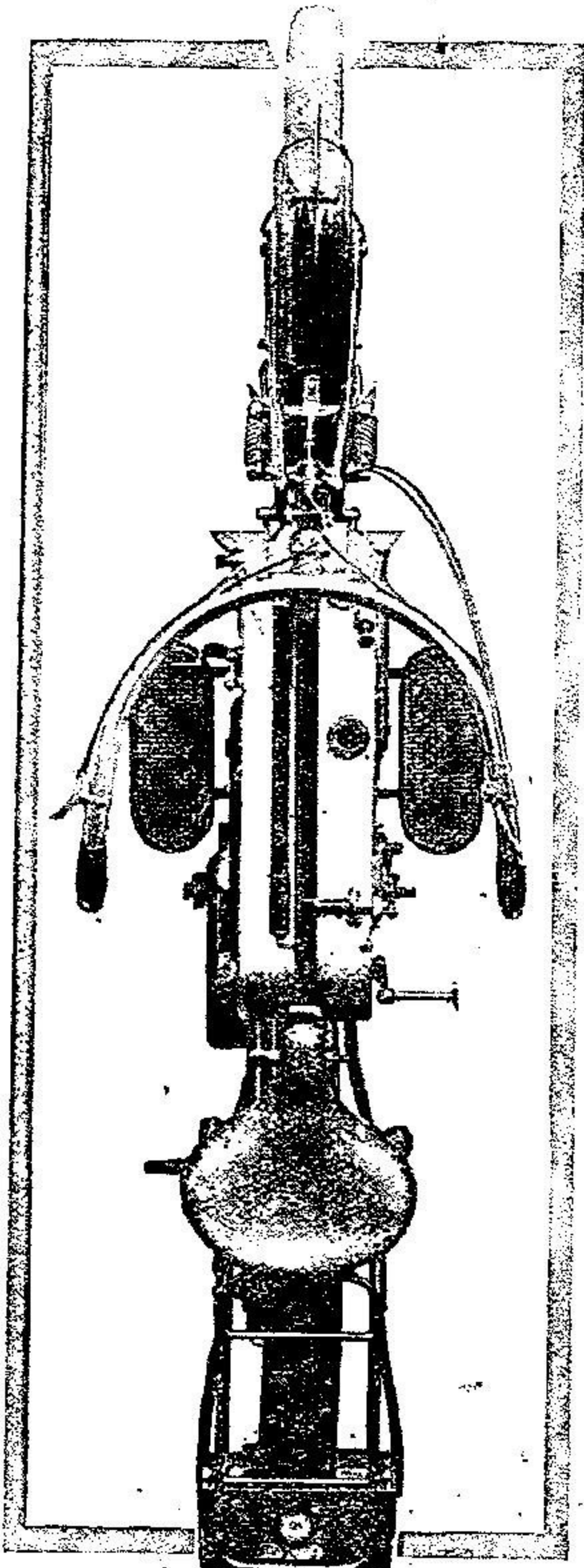
It is interesting to note that the back wheel, gear box, clutch, sprocket, chains, and kick-starter can all be removed without dismantling the chain cases. The internal expanding brake on the rear wheel is also well worthy of inspection. The clutch has five plates, two of these being provided with cork insets, which allow the drive to be taken up

The Olympia Show.—

very sweetly. This model may be had with a three-speed gear at a slight extra cost.

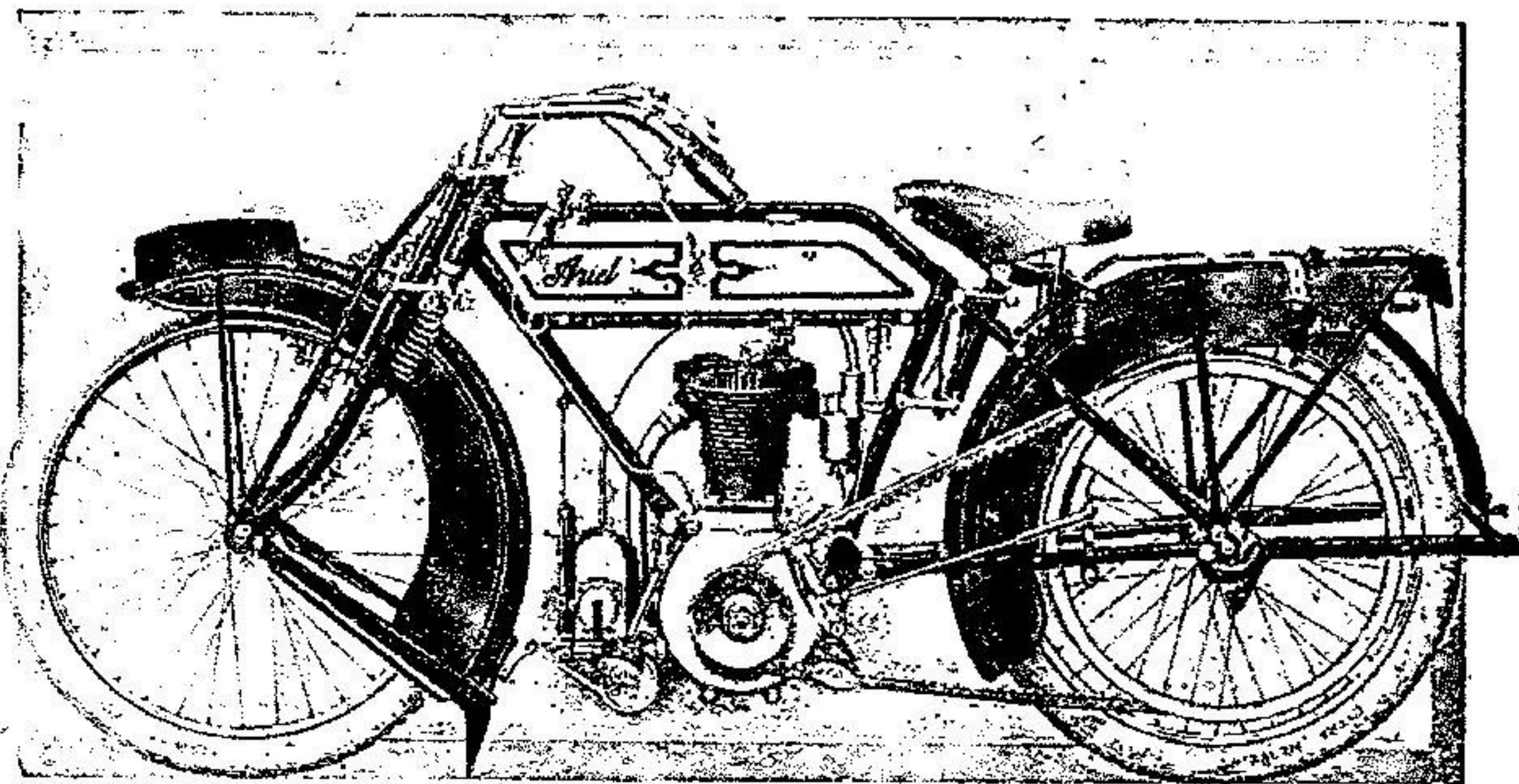
6 h.p. MODEL (twin): 74 x 81 mm.; side by side m.o.i.v.; Amac carburettor; chain transmission; A.J.S. three-speed sliding.

The 6 h.p. A.J.S. sidecar model is one of the most successful passenger machines of the year, and in the main closely resembles the smaller model we have just described. It is fitted with stronger chains and is quite up to the work for which it is intended. All the tappets are held down by springs which keep them pressed against the



Plan view of 6 h.p. 1913 A.J.S.

cams, thus reducing noise. Two of these machines are shown fitted with the new A.J.S. sidecar, the panels of which are of sheet steel, following a practice adopted in motor car building. The back is well padded, and at the rear there is a locker for a spare tyre cover. It will also be noticed that the leg room is ample. An advantage is that the engine, motor cycle, and sidecar are made in one factory.



Ariel T.T. roadster with spring seat pillar. The mudguarding is a good feature of this make.

ARIEL, No. 91.

3½ h.p. MODEL: 86.4 x 85 mm.; side by side valves; B. and B. automatic carburettor; belt; Armstrong V. or VI.

COMPONENTS, LTD. (Ariel Dept.), Bournbrook, Birmingham.—The Ariel Co. still retain the detachable tank and lower rail as a standard feature; the tank has rounded corners, petrol sump, and filter. Lubrication is by a semi-automatic drip feed oiler. The frame may be obtained with either dropped tube or straight top rail, both are used in conjunction with the Ariel spring seat-pillar. The front wheel has wide side extensions for its full length and specially made splashers attached to the front wheel stand. The rear guard is fitted with a long wide flap extending to the belt rim and low enough to protect the belt from mud.

The spring forks are made somewhat wider so as to accommodate the new mudguard, and an improved water-tight front hub is fitted. The front brake acts on the rim in the usual way, but the fork carrying the shoes lies outside the guards, and takes its bearing in special lugs brazed to the frame.

Pannier bags are fitted below the level of the carrier, and are enclosed in a sheet steel housing. The Ariel engine remains practically unaltered. It is notable for its simple and effective form of decompressor and the extra width between the valve chests. This model may be obtained with the Ariel free engine and variable gear, also with a fixed engine and a T.T. model. The free engine model is fitted with neat aluminium footboards. All the three-speed models are fitted with a kick-starter.

7 h.p. MODEL (two-cylinder): 85 x 88 mm.; side by side valves; B. and B. carburettor; chain; two-speed counter-shaft gear.

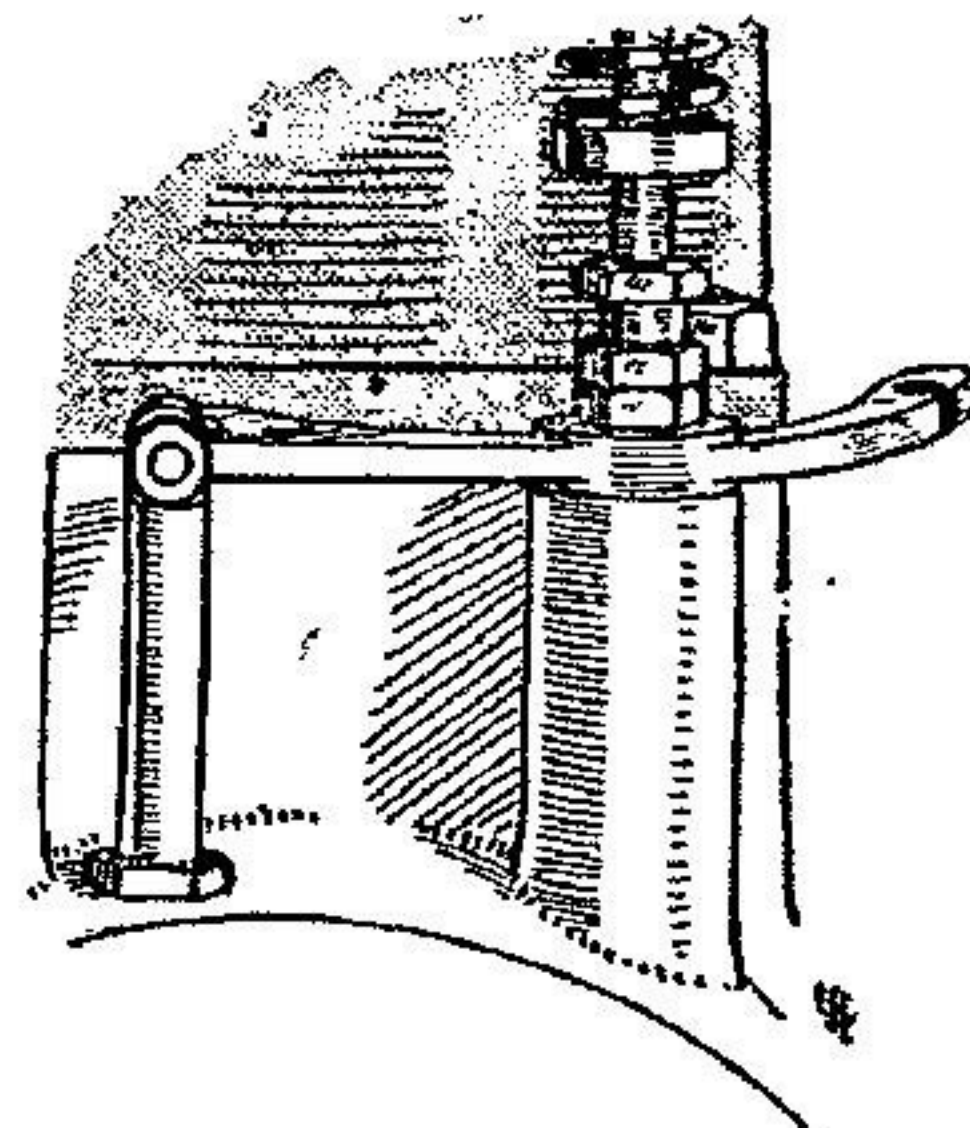
This is quite a new model for 1913, and is made either for solo or sidecar work, sidecar lugs being incorporated in the frame. The engine is a neat piece of work, and drives to a counter-shaft by two chains, and thence by chain to the rear wheel. The gears are engaged by means of expanding clutches, which lock one of two front chains to the counter-shaft. A slipping clutch is fitted

on the engine shaft. The frame has a dropped top tube, and is built on the same lines as the 3½ h.p. frame. Handle starting is fitted to the engine, and very long footboards. The rear brake is of the internal V-type acting on a dummy belt rim. No decompressor is fitted to this model. The company also construct a special sidecar, the chief feature of which is the low chassis position.

ARNO, No. 43.

3½ h.p. MODEL: 84 x 89 mm.; side by side m.o.i.v.; B and B. carburettor; belt; Sturmey-Archer three-speed.

THE ARNO MOTOR CO., LTD., Coventry.—One of the features is the attachment of the engine to the frame. The crank chamber is furnished with two horizontal plates resting on platforms brazed to the down tubes of the frame. The attachment is made by four bolts, upon removing which the whole power unit slides out sidewise. In the T.T. model the ordinary type of silencer gives place to a long rearward tube. The frame is

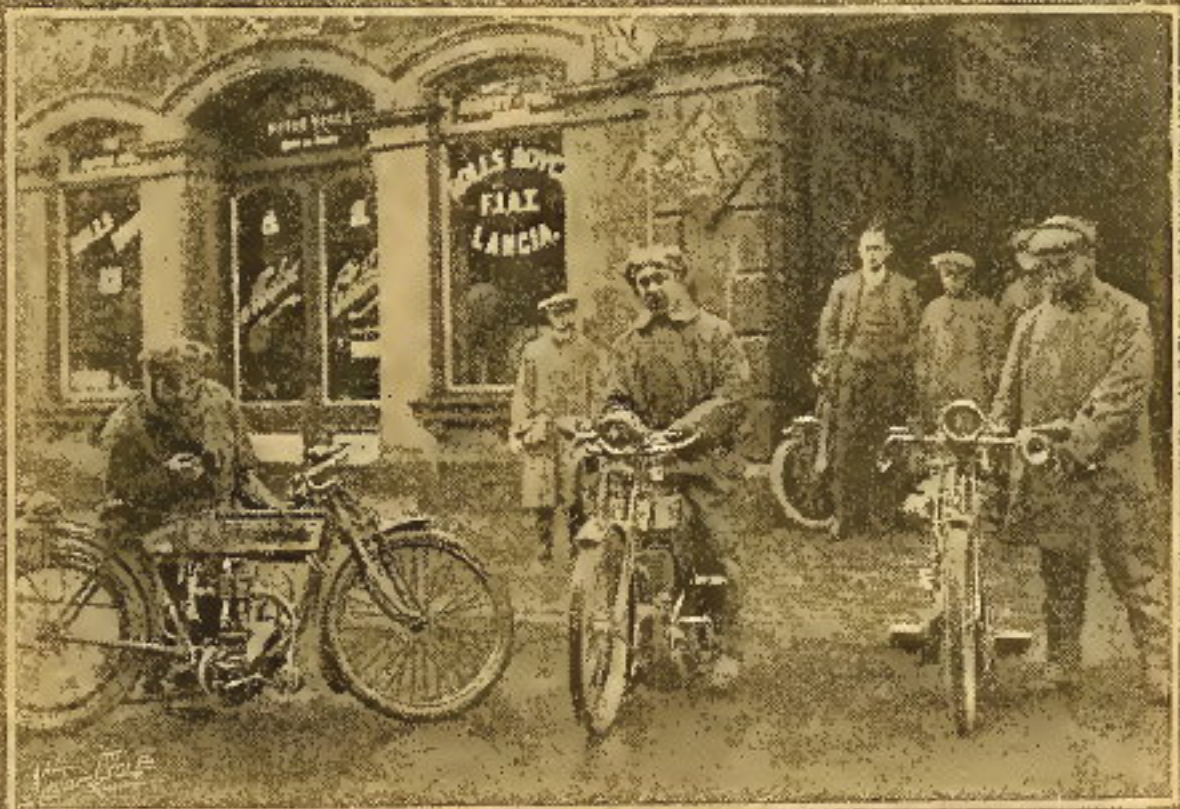


Arno external exhaust lift and adjustable tappet.

dropped considerably, and careful attention has been paid to making it extremely rigid.

The magneto is gear driven, and is placed behind the cylinder, being located on one of the crank chamber plates to which we have already referred.

The 2½ h.p. 77 x 81 mm. and the 2½ h.p. 65 x 70 mm. machines conform



NEWCASTLE AND DISTRICT M.C.C. TWO DAYS' TRIAL.
T. Cooper (Triumph), G. W. Roper (2½ h.p. A.J.S.), and S. Dodds (Singer),
waiting for the word to start on the second day at Harrogate.

AUGUST, 22nd, 1912.

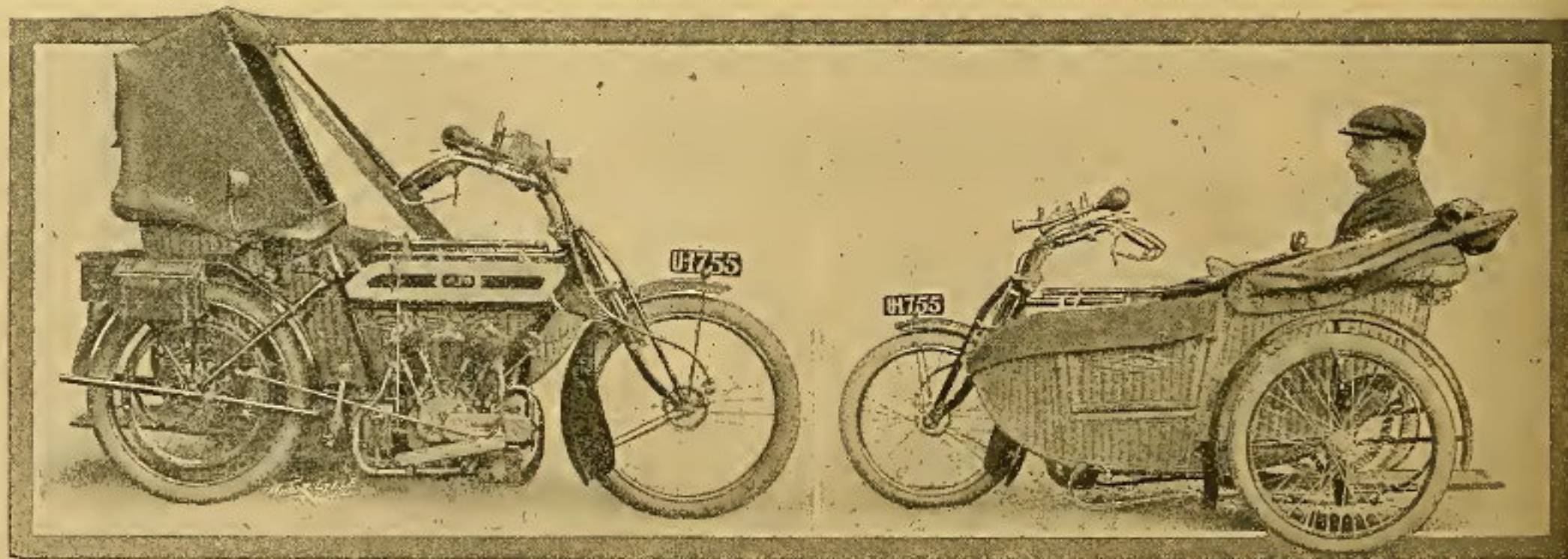
THE
MOTOR



(Left) Frank Philipp (Scott), (right) W. Heston (A.J.S.) at top of Chellia Gorge.



A. J. Stevens (5 h.p. A.J.S. sidecar) in a check.
He was one of the gold medal winners.



An efficient sidecar hood designed by a Yorkshire reader. See letter signed "A.J.S."

B6

Avon Motor Cycle Tyres.

Suitable for all climates.



Tricar.

Made in 24", 26", and 28".

2 1/2" - 40/- each.
2 1/4" - 42/6 "

Tube, No. 2 Qual.
2 1/4" 9/6; 2 1/2" 10/3.

Tube Lx36.
2 1/4" 8/3; 2 1/2" 9/-



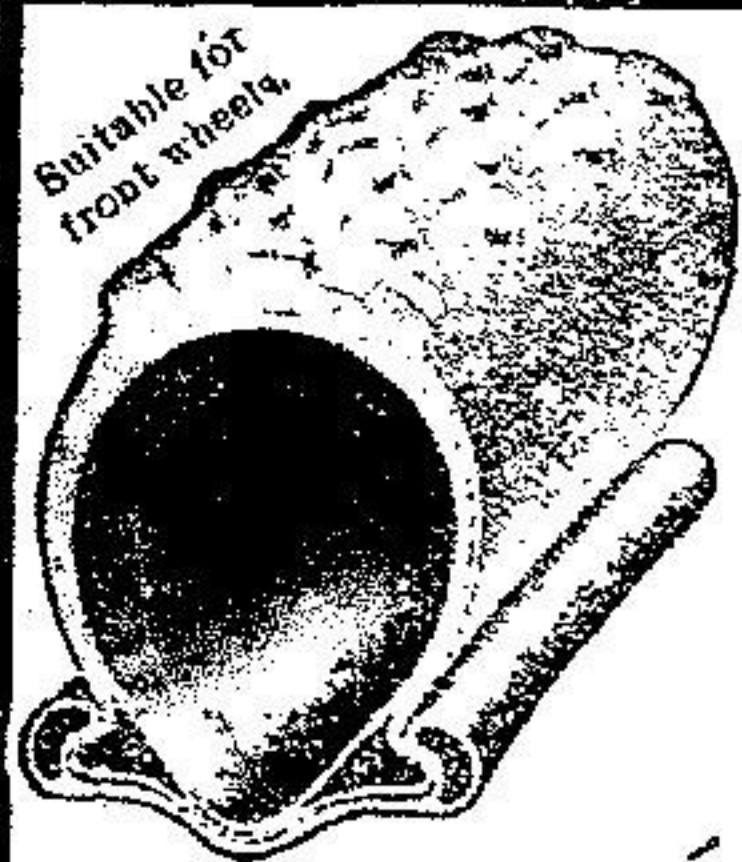
Stonehenge.

Made in 24", 26", and 28".

2" - 25/- each.
2 1/4" - 26/9 "
2 1/2" - 28/6 "

A most popular cover at a popular price.

Extra strong casing.



Lightweight A.

Made in 24", 26", and 28".

2" - 17/9 each.
2 1/4" - 19/- "
2 1/2" - 20/3 "

As a cheap cover this cannot be beaten.



Combination.

Made in 24", 26", and 28".

2" - 42/3 each.
2 1/4" - 44/- "
2 1/2" - 45/9 "

Steel and rubber studs, an ideal all-weather non-skid.

AVON MOTOR CYCLE TUBES

fitted with motor cycle valves.

No. 2 Quality P.A. Quality
(Red or Grey) (Red or Grey)

24", 26", and 28".

2" - 8/9 ea. ALL 2" - 7/6 ea.

2 1/4" - 9/6 " GUARAN- 2 1/4" - 8/3 "

2 1/2" - 10/3 " TEED. 2 1/2" - 9/- "

All motor cycle tubes can be fitted with the Avon Dome Ends at 2/- per tube extra.



Avon Dome Ends for Motor Cycle Tubes.
Easily fitted.
TRY THESE.
Enormous Success.
Reg. No. 572,420.

Avon Dome Ends for Motor Cycle Tubes.
Enormous Success.
Easily detached.
Reg. No. 572,420.
NO TROUBLE.

AVON MOTOR CYCLE BELTING.
3/4 in. -- 1/5 per foot. 3/4 in. -- 2/1 per foot.
7/8 in. -- 1/9 per foot. 7/8 in. -- 2/4 per foot.

AVON MOTOR CYCLE COVER RETREADS.

Size 26" or 28" x 2 1/4", 2 1/2", and 2 3/4".

Steel Studded - - - - - 29/6

Avon Combination (1910) - - - - - 25/-

Extra Heavy Rubber Stud or 7 line pattern - - - - - 13/6

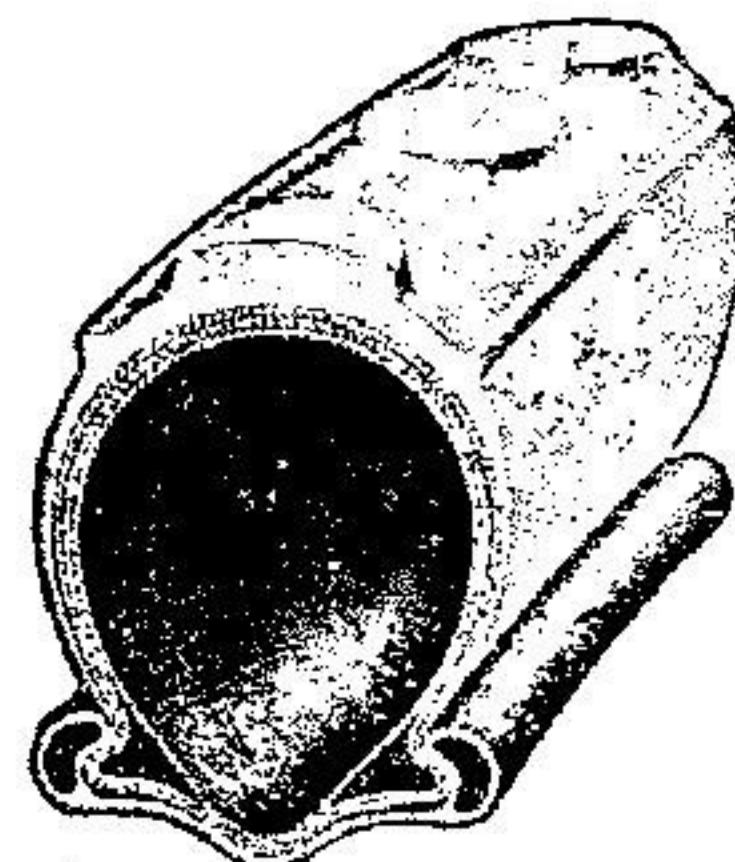
Medium A. Rubber Stud, or 7 line pattern - - - - - 11/6

Bicar.

Made in 24", 26", and 28".

2 1/2" - 32/6 each
2 1/4" - 34/3 "

Suitable for 3 1/2 to 5-6 h.p.

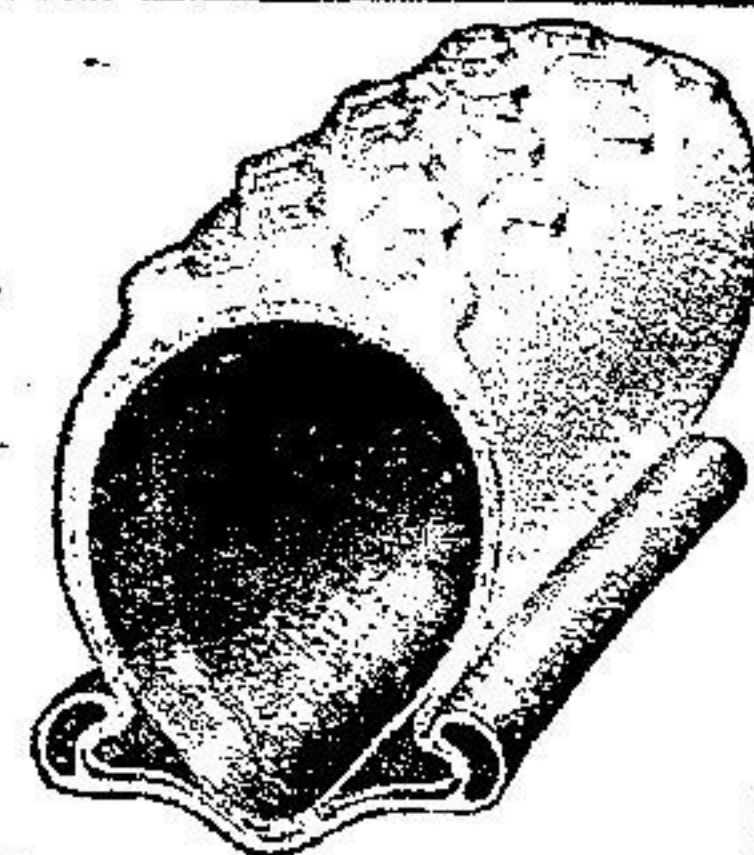


Druid.

Made in 24", 26", and 28".

2" - 21/- each.
2 1/4" - 22/9 "
2 1/2" - 24/6 "

Suitable for 2 1/2 to 3 1/2 h.p. and Sidecar wheels.

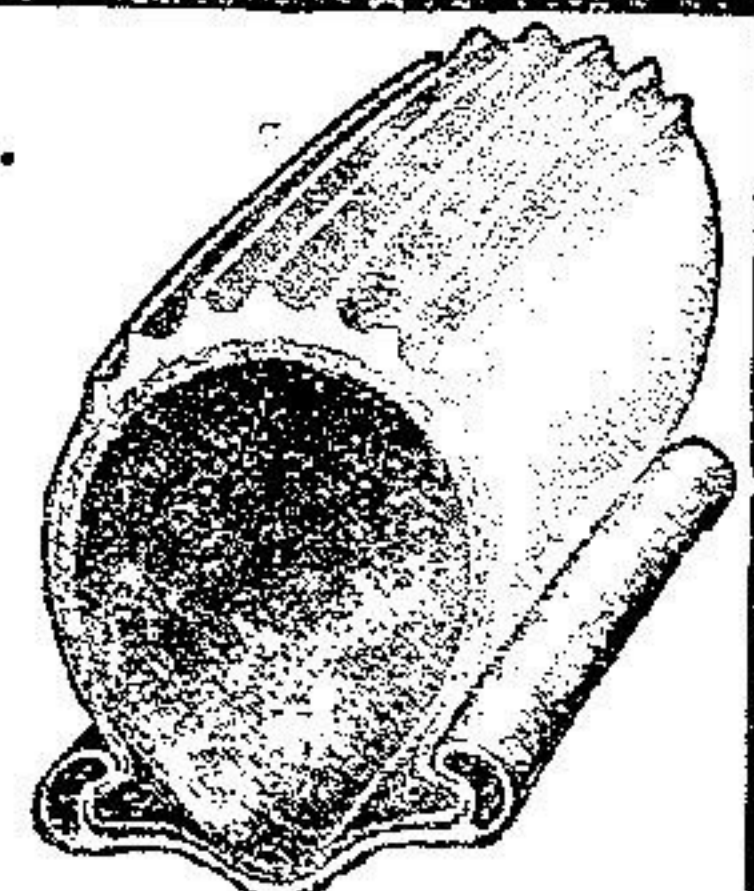


Lightweight B.

Made in 24", 26", and 28".

2" - 15/6 each.
2 1/4" - 16/3 "
2 1/2" - 17/- "

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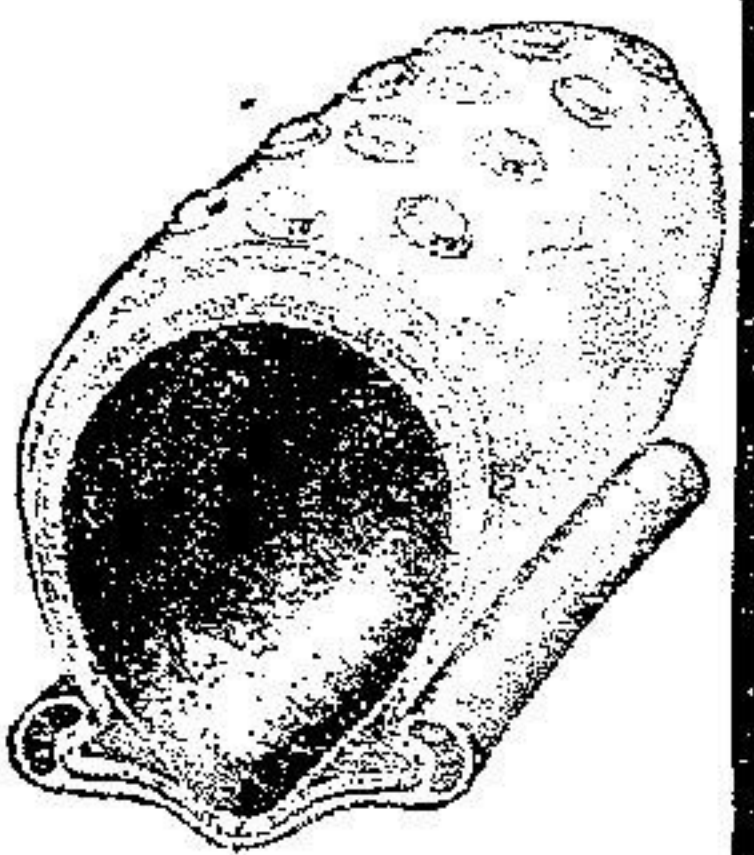


Steel Studded

Made in 24", 26", and 28".

2" - 45/9 each.
2 1/4" - 47/6 "
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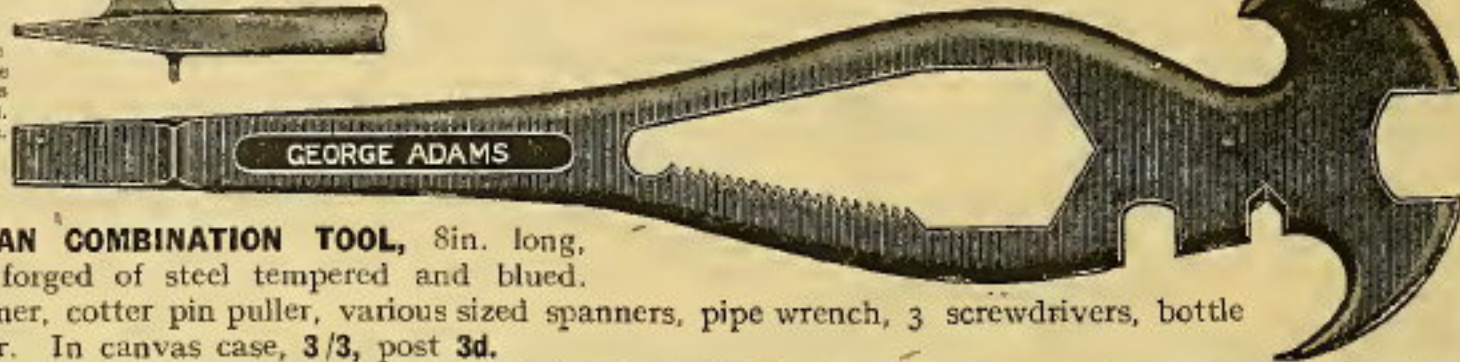
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