SEPTEMBER 24, 1936

FIRST AERO WEEKLY IN THE WORLD

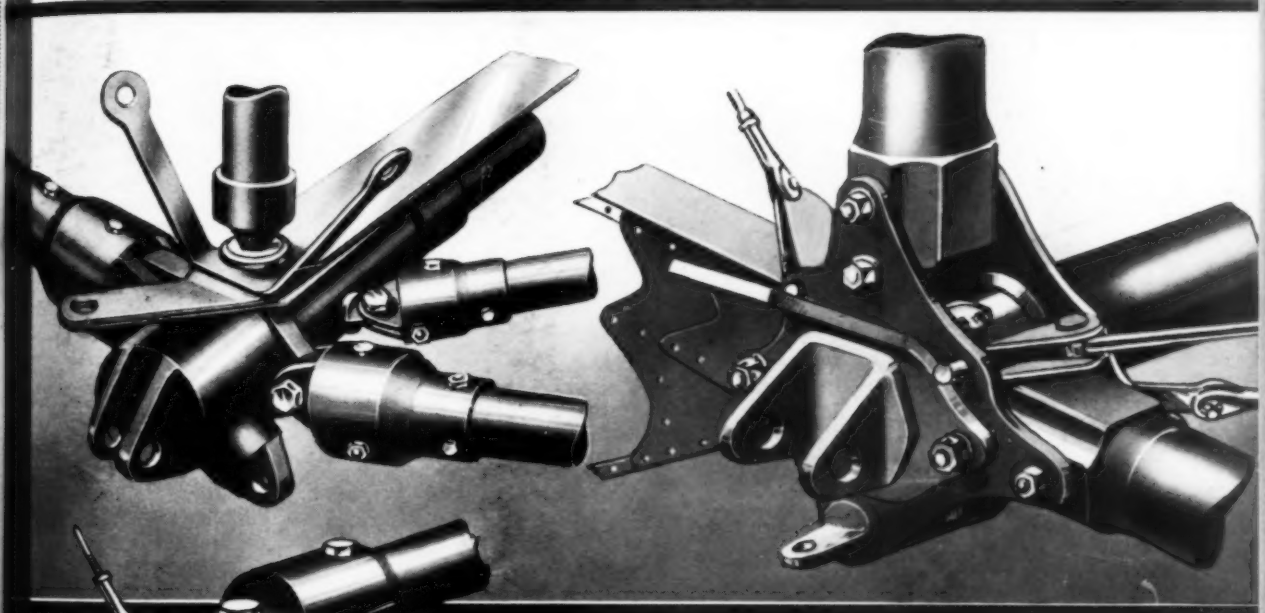
REGD. AT THE G.P.O. AS A NEWSPAPER

FLIGHT

6D.

The AIRCRAFT ENGINEER AND AIRSHIPS

England–Johannesburg



S.80 STAINLESS STEEL MACHINED FITTINGS

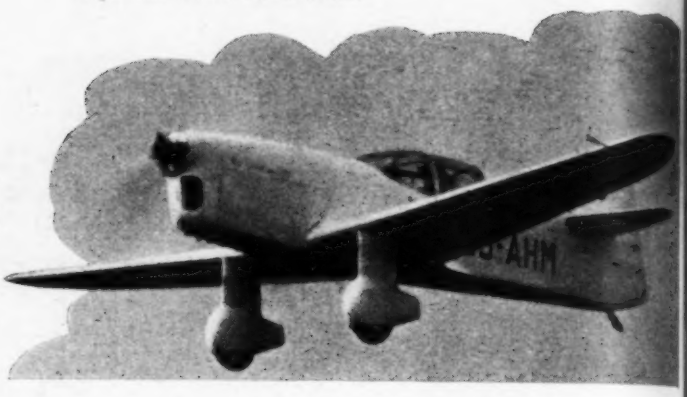
IRTH, VICKERS

STAINLESS STEELS LIMITED

YBRITE WORKS SHEFFIELD

THE FIELD

Capt. Miller's Mew Gull in action.



Some Notes on the Machines which will Race to Johannesburg Next Week

(Illustrated mainly with *Flight* photographs and drawings)

TECHNICALLY the Schlesinger Race has brought forth nothing vitally new in aircraft design, what little novelty there is being in engines and airscrews. But the machines do represent much of what is best in modern British practice in the construction of light civil aircraft, and for that, at least, we may be thankful, though four manufacturers only are represented. Three of these—Percival Aircraft, Ltd., Phillips and Powis Aircraft, Ltd., and the British Aircraft Manufacturing Co., Ltd.—have built some of the most successful small civil types of recent years, and, though themselves keen competitors in the light aircraft market, stand out from foreign rivals because their machines possess such outstanding performance and load-carrying ability for a modest power expenditure. The fourth, Airspeed, Ltd., has devoted its attention to somewhat larger aircraft. Its Envoy monoplane, the most popular Airspeed model at the moment, is one of the fastest transports in this country, and, for that matter, in the world. It is the only machine in the race fitted with radial engines, the remaining entries being Gipsy-powered.

The entries will hereafter be dealt with under the headings of their various manufacturers.

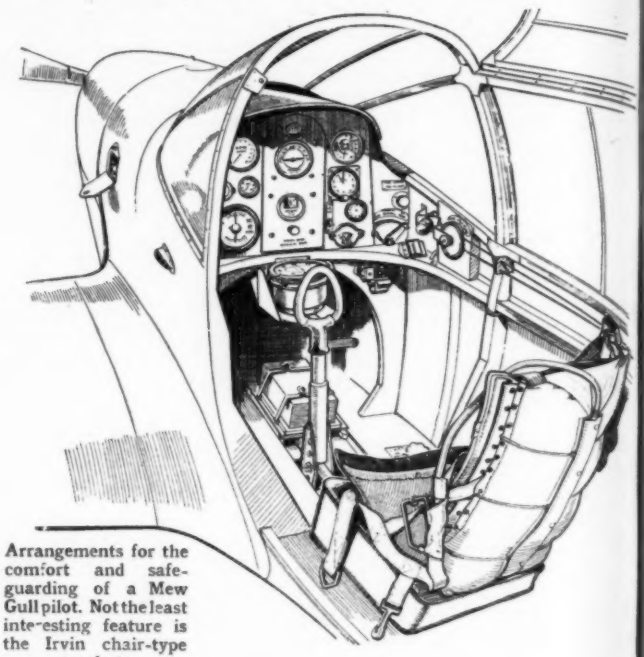
PERCIVAL

Mew Gull **Nos. 1 and 2**

If there is one type of Schlesinger racing machine which has captured the popular imagination more than another it is surely the Mew Gull, smallest and fastest of them all, and dear to the national heart as the entry of H.R.H. the Duke of Kent in King's Cup Races for three years past.

The Mew Gulls in the Schlesinger Race represent the latest model produced, having a 24ft. 9in span and mounting the new 205 h.p. De Havilland Series II Gipsy Six engine driving a D.H. variable-pitch airscrew.

Essentially, and except for a few minor items of detail, the two machines of this type are very similar, having a plywood-covered wooden fuselage and wing Flaps, of course, are necessary as the wing loading at the new all-up weight of 2,140 lb. approaches 30 lb./sq ft. and the design



Arrangements for the comfort and safeguarding of a Mew Gull pilot. Not the least interesting feature is the Irvin chair-type parachute.





Halse's Mew Gull is on the left, with Campbell Black's tragic *Miss Liverpool* on the right. The absence of spinners is unfortunate from aesthetic and aerodynamic viewpoints.



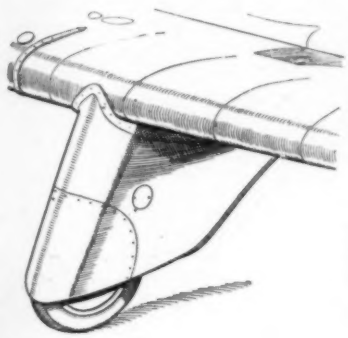


C. W. A. Scott's Vega Gull (above) has a Gipsy Six II and variable-pitch airscrew. On the right is Victor Smith with his new Miles Sparrow Hawk (Gipsy Major H.C.)

is exceptionally clean. The undercarriage is a fixed cantilever type with "trousers" over the compression legs and "spats" for the wheels.

Normally the Mew Gull is fitted with fuel tanks for 41 gallons, two of these being installed in the wings and a third in the fuselage, but for the Schlesinger Race there are two additional tanks, one for 28 gallons in the fuselage, and another of 10 gallons capacity in the luggage locker. It is expected that the range will be of the order of 1,500 miles. The oil tank holds five gallons.

Official performance figures for the new version have not yet been released, but at an altitude which lies somewhere between 7,000 and 10,000 ft. the "Mews" should cruise at over 220 m.p.h. The actual figure will depend to some extent on the setting of the airscrews, for a small margin of adjustment is



(Right): An interior view of Scott and Guthrie's Vega Gull. Note the airscrew pitch-changing lever on the left of the near-side control column.

(Left): A trouser leg on Clouston's Speed Six Hawk. This is shorter than standard and the tyres are narrower.

available at either end of the pitch range.

With its full load, including about 80 gallons of petrol (which, incidentally, is of 87 octane number, permitting full advantage to be taken of the 6:1 compression engines), and Captain Edgar Percival, the designer, at 215 lb., one of the machines while on test (actually it was Capt. Miller's *Golden City*) was off the ground in 16 seconds and took a landing run of only 200 yards.

Provision is made for Irvin "Chairchutes," and the instruments will include some of Sperry, Reid and Sigrist and Kollsman manufacture.

At the moment of writing it seems uncertain if spinners will be available for the airscrew hubs, but should these not be ready for the race it is proposed to reduce the size of the disc behind the airscrew so as to avert some of the slight loss in performance which will probably result.

One small feature of interest noticed during an inspection of the machines was the installation of the venturis for



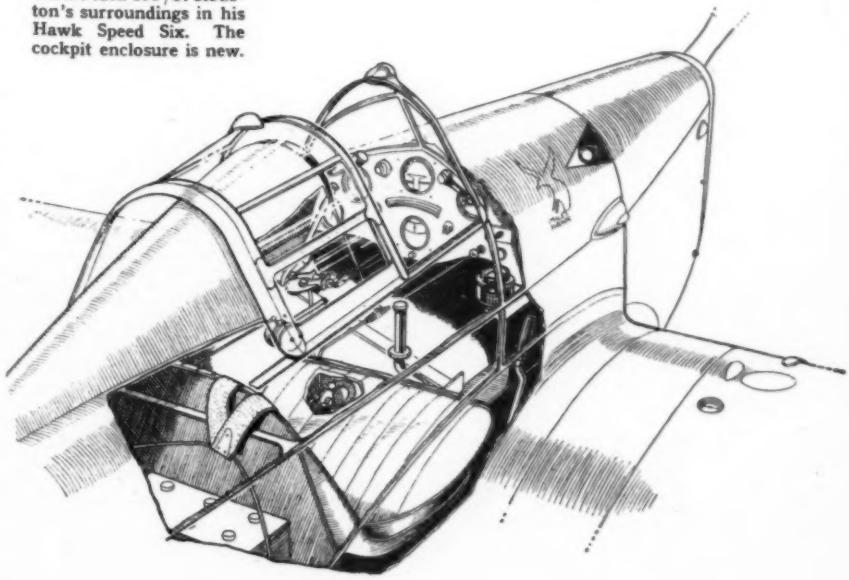
the blind-flying instruments within the cooling chute of the engine.

Campbell Black's ill-fated machine, flown by Capt. Percival, made fastest time in this year's King's Cup Race, covering two laps at over 210 m.p.h. At that time it had a standard Gipsy Six and fixed-pitch airscrew.

Vega Gull — Nos. 5, 6 and 7

Largest and latest of the Percival range, the Vega Gull is planned on similar lines to the Gull but carries four passengers. A low-wing cantilever monoplane embodying standard

This sketch gives an excellent idea of F/O. Clouston's surroundings in his Hawk Speed Six. The cockpit enclosure is new.

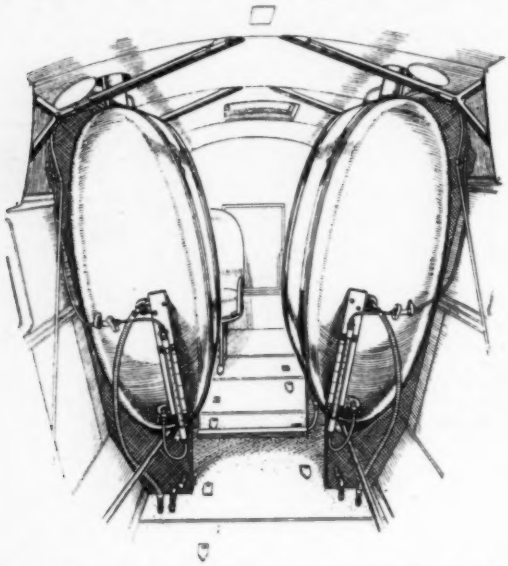




The modified Hawk Speed Six (220 h.p. Gipsy Six R) to be flown by F/O. Clouston. Its maximum speed is about 200 m.p.h.

Percival wooden construction, trailing edge flaps and a well-faired fixed undercarriage, the Vega cruises, with a standard 200 h.p. D.H. Gipsy Six and fixed-pitch airscrew at 150 m.p.h., but when equipped with the Gipsy Six Series II-D.H. variable-pitch airscrew combination this figure is increased quite considerably and, with the 94-96 gallons of fuel which is being carried in Scott and Llewellyn's machines, it can maintain it for about 1,500 miles.

There are two tanks in the outer wing panels of 20 gallons capacity each, two more in the centre section holding 14 gallons each, and a fifth, in the cabin, of 26-28 gallons capacity. It is hoped to carry 250-260 lb. of "payload" for the race.



Extra tankage arrangements in Flt. Lt. Tommy Rose's B.A. Double Eagle. The single passenger seat can also be seen.

At the moment of writing it seems uncertain if the Vega Gull entered by Lt. Misri Chand will start. This machine, which has a Series I Gipsy Six and a fixed-pitch airscrew, was flown in the last King's Cup Race by Lt. Randolph, who is listed as co-pilot with the entrant.

In its original form the Vega Gull is capable of 170 m.p.h. at full throttle, and with standard tankage is good for a range of 630 miles.

Vega Gull No. 12 will also be absent from the starting line. This is the machine on which Mrs. Beryl Markham made her recent trans-Atlantic crossing and which was damaged on landing in a bog. C. W. A. Scott's mount is actually the machine which won the King's Cup Race this year, and Llewellyn's has also had racing experience in the hands of Lt. Misri Chand in the same event.

PHILLIPS & POWIS

Sparrow Hawk — No. 3

Mr. Victor Smith may count himself fortunate in having secured a mount which, besides being quite usefully fast, has an excellent range, for, with 100 gallons at the disposal of the high compression Gipsy Major in his new Sparrow Hawk, he should be able to cover longer stretches at a session than most of his competitors.

Registered G-AELT, and coloured a royal blue, his machine is brand-new, although in all essentials it resembles the familiar "D N L" and "D W W." The Sparrow Hawk is the smallest of the current Miles designs, having a wing area of only 138 sq. ft. (the Hawk Major has 169 sq. ft. of area) and a span of 28ft. The centre section to be found on other Miles single-engined models is absent, and the trousered undercarriage has its origin on the main wing panels. The track is wide, which accentuates the squat appearance, so it should not be confused with Clouston's Speed Six Hawk which is cream in colour and has a cockpit enclosure.

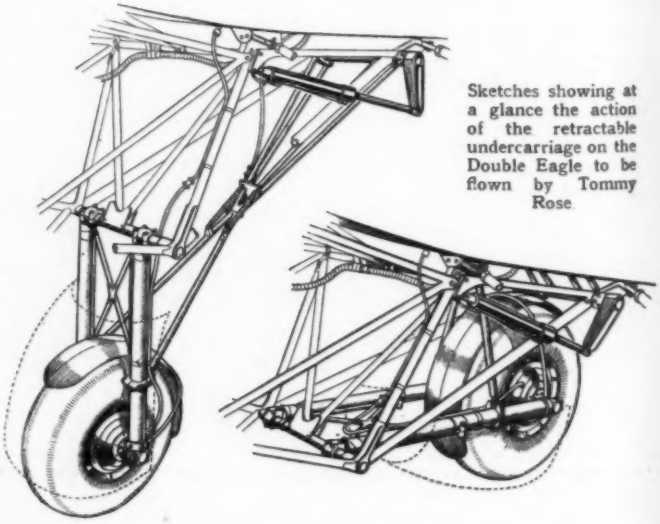
Gross and tare weights, in racing trim, are, respectively, 2,175 lb. and 1,200 lb.

Hawk Speed Six — No. 8

As racing aeroplanes go these days, F/O. Clouston's "D O D" is quite a veteran. Built, in the first instance, for, and round, Miss Ruth Fontes, who flew it in the King's Cup Race two years ago, it was flown into second place in this year's event by Tommy Rose, for whom it averaged 184.20 m.p.h. Straight and level, it was reputed to do 194 m.p.h., but refinements, chief of which is a new design of cockpit enclosure, are estimated to assist it up to the magic region of 200 m.p.h.

The undercarriage is somewhat shorter and narrower than on the Hawk Major. Flaps are incorporated and the structure is quite standard. The gross weight in South African racing trim is 2,500 lb. and the wing area is 176 sq. ft., which is about the same as on a standard Hawk Major.

A Gipsy Six R racing engine is fitted, giving about 220 h.p. at 2,350 r.p.m. The airscrew is a standard metal Fairey. Fuel of 77 octane number is specified, and provision has been made for 101 gallons, allowing a range in the neighbourhood of 1,500 miles.



Sketches showing at a glance the action of the retractable undercarriage on the Double Eagle to be flown by Tommy Rose.