

THE SAILPLANE

Price
3d.

AND GLIDER

AN UNORTHODOX CONCEPTION.



The Brant "Scud" with Mr. Marcus Manton at the controls flying at Totternhoe last Sunday.

—(L.N.A. photograph.)

TWO SCHOOLS OF THOUGHT.

We publish this week an article by Mr. Lowe-Wylde whose experience as a pilot and designer of engineless aircraft none will deny. Mr. Lowe-Wylde built and flew the first Zogling type training glider in this country and since that date (Feb. 23, 1930) has built a very large number of primary trainers of his own design. He has personally demonstrated a large proportion, if not every one, of the machines which he has sold. This means that there is probably not another man in the country who has such a wide experience of sites up and down the United Kingdom.

What he has to say as a result of such experience will be received with interest. As long ago as the Ditchling Competition of last year THE SAILPLANE was publishing authentic material about auto-towing. Since that date it has published further information as it came to hand. We perceive quite clearly that auto-towing has come to stay, and has come at a moment when it can do most possible good to the Movement. The demonstration at Hanworth last Sunday conclusively showed that power-pilots approve of the new system. It has even met with the approval of that

arch-critic of modern aerial tobogganning methods, Mr. C. G. Grey, Editor of THE AEROPLANE, who has been good enough to write an account of what he saw for THE SAILPLANE.

We can see that there will be such an interest in auto-towing that there is no need for us to wax enthusiastic about its possibilities. The proper job of a paper like ours is to look ahead. There are two outstanding dangers in auto-towing. The first is the obvious one of danger to the pupil and through the victim to the Movement, the second is that auto-towing, as has very nearly happened in America, will become an end in itself.

The Gliding Movement aims to soar. That must never be forgotten. We do not aim to make converts to Aviation by giving the hard-up cheap lessons in aeroplane control; we have done, and shall continue to do, that in our stride, but we are out to soar, to fly like the birds with no noisy vibrating expensive engine roaring away in front of us. Some want to soar because it is a sport which combines all the faculties that are required in other sports; it has all the delights of ski-ing and yet one need not go abroad

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strata where free soaring and cross-country flights should become possible.

THE ADVANTAGES.

The whole advantages to the present Club Movement are worth reiterating:—

- (1) The machine can be towed at such a speed that, while it is impossible for it to take-off, the pupil can thoroughly learn the use and operation of all controls, and therefore should never leave the ground until he has mastered them.
 - (2) The considerable reduced risk of damage to the machine justifies the purchase of a better one.
 - (3) The use of the more efficient machine permits training to be carried to a more advanced stage.
 - (4) The pilot members of a Club and operations altogether more interesting.
 - (5) The shock, or surprise, associated with catapult launching is entirely eliminated.
 - (6) Sites are easier to find and can often be located nearer a Town.
 - (7) Very little hard work is involved.
 - (8) A minimum of three persons including the pupil, or pilot, can carry on training.
 - (9) Flights of longer duration without flying off dangerous eminences or gaining great altitudes are possible.
 - (10) Gliding becomes independent of wind direction.
 - (11) The whole process can be properly reproduced under accurate conditions, as the speed of the wind and car can be measured, while the exertions of a launching team cannot.
 - (12) The requirements of a "B" licence can be complied with almost anywhere, instead of, as at present, on only a few suitable hills in the country.
 - (13) Soaring and cross-country flying is ultimately brought within the reach of almost every Club.
- To sum up, it is definitely suggested that, in auto-towing, we have the solution of all our difficulties in *ab initio* training, whereby time, money and enthusiasm are conserved for the propagation and perpetuation of the Gliding Movement.

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THE BRANT "SCUD."



—(L.N.A. photograph.)

On Sunday last, Jan. 11, a new British engineless aircraft was tried out. One hesitates to apply any of the existing phrases to it, as "glider," normally speaking, is used to describe machines of the primary training type, and "sail-plane" to engineless aircraft whose sinking speed is lower than 8 m. per sec. (2.6 ft. per sec.). This machine is called the *Scud*—and certainly looks it. The constructors are Brant Aircraft Ltd., Waddon Aircraft Factory, Croydon.

The *Scud* was taken up to Totterhoe and there tried out by Mr. Marcus Manton, and afterwards by Mr. Latimer Needham. Mr. Manton's first flight was a surprise to everybody. The *Scud* is remarkable for its extremely low weight, about 104 lbs. empty, which is just about half that of the Prufing. Mr. Manton put two men on each rope and was shot about 300 yards! Whether this extended flight was due to flat gliding angle, or rapid acceleration obtained from its low weight, nobody is sure, least of all the designer, Mr. Baynes, who believes the machine to have an angle of about 1:16. Anyway, the wing section used has a remarkably good lift coefficient, with the result that although the

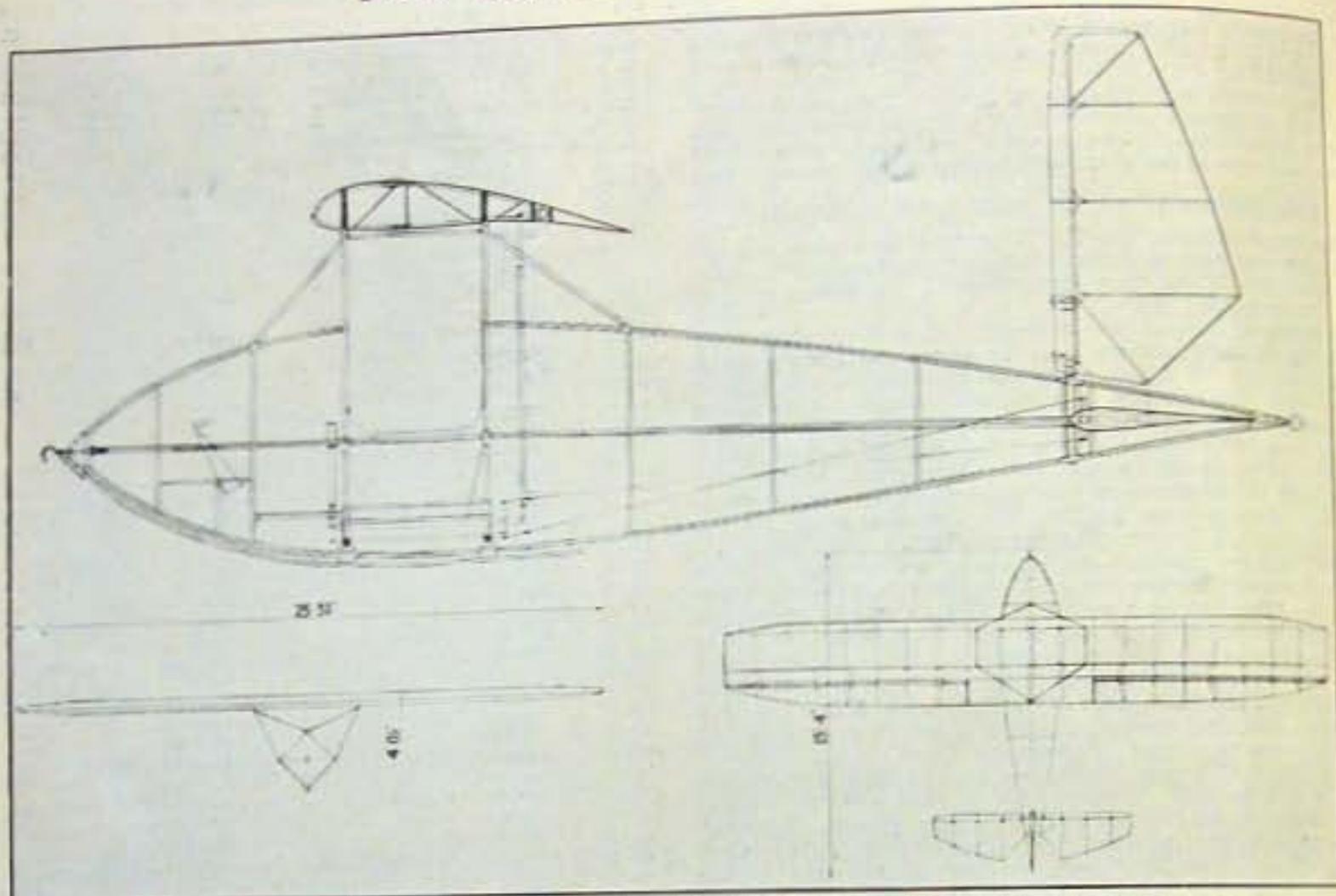
machine is heavily loaded, about 3.1 lbs. per sq. ft. with a 160 lbs. pilot, yet it lands and takes-off at low speeds.

The tests showed that certain alterations were required to obtain adequate clearance for the feet on the pedals and that the stick wants lengthening; the gearing to the elevators will also be lowered. The aileron control is reported to be particularly good, which is a relief after the somewhat sluggish movements of some existing types. The machine will be flight-tested by the London Gliding Club again next Sunday.

The whole conception of the *Scud* is novel. It is a parasol cantilever monoplane with the wing in two parts. These two parts are joined together before erection on the machine to which it is attached by four bolts. These bolts fix the wing to a structure of steel tubes. The wing has a modified Göttingen section and is covered with plywood over the leading-edge on both sides to the rear spar. The trailing-edge is a cord. This wing is noticeably rigid. The ailerons, which have a very narrow chord, extend nearly the whole length of the wing.

(To be concluded next week.)

THE BRANT "SCUD."—(Continued.)



Wing area 85 sq. ft., Weight empty 103 lbs., Minimum sinking speed 3.25 ft./sec. at 31 m.p.h.

The fuselage, which is minute, has a square section, set on edge. This form allows simplicity of wing attachment and the introduction of hand-holes, which means that the whole *Scud* is transportable by four men, with one passenger to hold a wing-tip. The fuselage is a ply-covered structure with spruce longerons at the apices.

The tail unit is cantilever and interchangeable; there are

no fixed surfaces, and either half of the elevator will form the rudder.

Brant Aircraft Ltd. are to be congratulated on producing a machine which its first trials proved to want but little alteration. We would draw attention to the need for enlarging the cockpit entrance and leaving a clear getaway for the pilot. *Every German sailflyer wears a parachute, and this coming summer will see the habit growing.*



PORTABILITY.—The Brant "Scud." Mr. Baynes, its designer, nearest the camera on the left, carrying his baby. The diamond cross-section facilitates carriage.

A NEW GLIDING SCHOOL FOR AMERICA.

There are a number of Gliding Schools already started in the United States, and the latest is that organised by W. Hawley Bowlus and Wolfram Hirth. The school is called Bowlus-Hirth Soaring Schools Inc., Park Central Hotel, New York. Flying instruction is to be given at Glenn Curtiss Airport, North Beach, to residents round and about New York, the old Bowlus School at San Diego, Calif., will be used in the West. As required a chain of schools will be built up across the Continent.

Mr. Bowlus is well known as the designer of an American sailplane approximating to the German types, but with floating wing-tips instead of ailerons for lateral control. On a machine of this type Col. Lindbergh soared for some time last summer.

Herr Wolff Hirth, who, by the way, is a subscriber to THE

SAILPLANE, is a famous German pilot, whose reputation in Germany approximates to that of Herr Kronfeld. In 1927 Herr Hirth gained the Hindenburg Trophy at the Rhon.

A PRUFLING GOING CHEAP.

The B.A. Company, Lower Stone Street, Maidstone, have a Pruffling in bits and pieces for sale. This machine is the one in which a member of the Channel Flying Club flew for nearly an hour but getting into a down-current argued with the wall of a quarry.

We understand that the wings, tail unit and after part of the fuselage are in good condition. The forward structure of the fuselage wants re-building. As all the drawings of a Pruffling are available and would be loaned with the bits, a Club with an able constructional section should have no trouble in reconditioning the machine. One imagines that £25 would buy the whole outfit.

officers of every Gliding Club are responsible for the safety of their members in the air on Club-owned machines, we have not been able to discover, with one or two notable exceptions, that Clubs fully realise their responsibility in this connection. It is not enough to have a Certificate of Airworthiness for a glider. To ensure that the machine is kept up to this high standard, it must be regularly inspected and repairs must always be supervised and inspected by a properly-qualified person.

To give what assistance we can, a series of articles by Mr. V. S. Gaunt will appear in *THE SAILPLANE*. He is a fully-qualified Ground Engineer (that is approved by the Air Ministry), who is Chairman of the technical Sub-Committee of the Dorset Gliding Club. These articles have been specially written for *THE SAILPLANE*.

METHODS OF INSTRUCTION.

We have further, in response to a widespread demand, arranged for a series of articles on instruction. These will cover all phases from the training of the *ab initio* to the gaining of a "C" Certificate. We have taken a step which may cause some surprise, but after due consideration we came to the conclusion that the proper person to write such an article was one who had struggled from the *ab initio* stage to the qualified. Further, such a person must now be an Instructor. We found what we wanted in Mr. Graham Humby, who is Instructor to the London Club. We are convinced that his own experiences have given Mr. Humby a clear insight into the difficulties of the *ab initio* pilot, difficulties which are not appreciated by the power-plane trained pilot. Our conviction is confirmed by the appreciation of his pupils.

TERRITORIAL FEDERATIONS.

We publish a long letter from Mr. Goodyear, in which he suggests the formation of territorial federations. These groupings of Clubs are to be responsible for co-ordinating research, tuition in the form of schools and similar activities among local Clubs. These groups would be represented on the council of *The British Gliding Association*, in the place of representatives from all and every Club.

That this idea is not unpopular may be gathered by the formation of the Association of Northern Gliding Clubs, and by the fact that numbers of Clubs are now sharing sites and amenities. We would welcome discussion round the idea as it would certainly make easier the representation of different interests on the controlling body, poorer Clubs would not have to bear the burden of sending a delegate all the way to London, it would simplify the question of getting adequate sites and should relieve *The British Gliding Association* of part of its heavy burden of overhead charges.

A FATAL ACCIDENT AT HARPENDEN.

On Mar. 8 Mr. T. E. Lander died from injuries received as the result of a crash following an attempt to launch the *Scud* by the use of a power-driven winch at Harpenden, Hertfordshire. Ever since the inter-Club meeting at Ditchling Mr. Lander had been experimenting as to ways and means of dispensing with manual labour in the launching of gliders.

In his earliest attempts a car had been used to pull the glider off by means of an arrangement of blocks and tackle which geared up the speed of the car. At first a

light track was used to make the take-off easier, and then wheels. It was found, however, that trouble was experienced with the car slipping and so a way was sought to use the power of the car by means of a drum driven by the engine.

The experiments culminated last Sunday when a 38-90 h.p. Vauxhall was used instead of the 14 h.p. Delage. The drum instead of being driven off the back-axle as heretofore was attached directly to the driving-shaft between the clutch and the gear-box. No block and pulley arrangement was used for gearing, but the steel cable passed round a single pulley to allow the 38-90 h.p. Vauxhall to be placed out of line with the take-off. A single length of elastic was placed between the end of the thin steel cable and the machine to smooth out the sudden application of load.

Mr. Lander, who, we are told, had never flown the *Scud* before, gave the signal to take-off. The engine, which had been revved up, was let in and the drum revolved with quite unexpected speed. The *Scud*, which weighs but 103 lbs. empty as compared to the 250 lbs. of the Pruffing heretofore used for these experiments, was shot into space with appalling velocity, about 80 yards was covered in two seconds. After zooming to a height estimated at between 50 and 70 ft., the machine dived to earth with fatal results.

THOMAS EATON LANDER.

Thomas Eaton Lander, who was 36 years of age, served during the War with the Highland Light Infantry and the Royal Air Force. Before the resuscitation of the Gliding Movement at the Gliding Lunch on Dec. 4, 1929, which he attended, he had been conducting experiments with the kited launch of gliders in Northumberland. An article describing the results of these experiments appeared in *THE AEROPLANE* for Dec. 11, 1929.

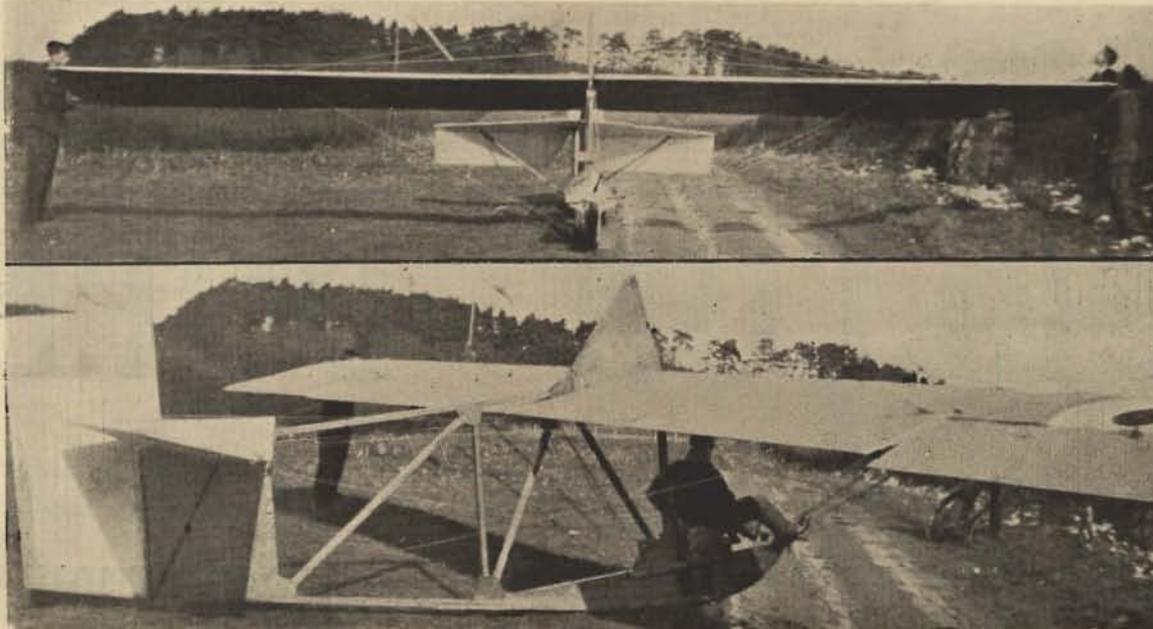
He was a founder member of *The British Gliding Association* and one of the original Members of Council. He was Chairman of the Rules Committee, a Member of the Finance Committee and had also served on various other committees. To the work of the Association he had given a very great deal of time.

He was also a member of the London Gliding Club and moving spirit of the Harlington Group, which was a group of private owners who spent a great deal of time making experiments with power launching.

His F.A.I. Gliding Certificate is numbered 23. He gained his "A" Certificate on July 1, 1930, and his "B" on Jan. 18, 1931.

This brief notice is intended to show the extent of his activities within the Gliding Movement. But no such notice can hope to indicate the depth of his enthusiasm for, and belief in, the Gliding Movement. My personal contacts with him were occasional rather than frequent, but I never finished a conversation with him without feeling the enthusiasm which permeated his whole outlook. He was enabled thereby to crowd into a week at least ten days of glorious life. He, and his friends who found his enthusiasm infectious, would think nothing of gliding half the night or working on some new gadget until the small hours.

On such enthusiasm as was his is the future of the Movement founded. It is our duty to see that the energy of such enthusiasm is not frittered away.—T. J.



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