Dec. 19, 1930.

Vol. 1. No. 16.

THE SAILPLANE AND GLIDER

Price 3*d.*

FROM OUR CHRISTMAS LIST.



The Artificial Horizon. For high-altitude Zoglers. A much-needed reference point in the vista otherwise occupied by interstellar space. Clamps on skid.
Indications:— Entirely surrounded by panorama = Nose too low,
Can't see anything else but = Nose too high.
Made of white pine from the Black Forest. Glued, no tacks. 2 gns.

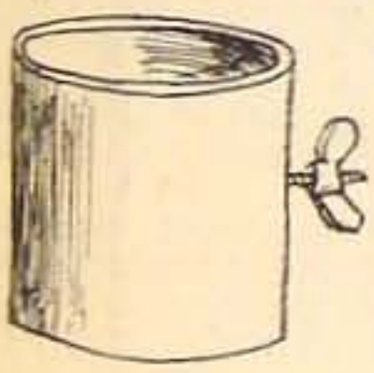


Air Speed Indicator. The "Red Riband of the Air" Used in conjunction with the artificial horizon to which it is attached by the end marked "British made".
Indications:— Flutters about 3rd waistcoat button = High speed
Flicks pilot's nose = Lower speed.
Hangs limp = Be careful!

Strong cotton, 30/- Dual purpose, adhesive, 45/-.



The Floppograph. Invaluable on certificate or contest flights. Calibrated for long durations up to 4 mins. or medium soft. On landing the pilot instinctively throws it away to grab something more solid, whereupon it lies on its side and records the flying time for when he comes to.
Automatically penalizes forbidden evolutions — such as inverted flight — by subtracting the upside-down time.
Finished in black and blue, reversible. 3 gns.



Ground Speed Indicator. mounted beside pilot. Very easy to see through.
Indications:— Ground stationary = Soaring or (probably) stalling.
Ground moving backward - O.K. It ought to.
Ground moving backward very fast indeed
= flying down wind, so land as soon as possible.
Every test-pilot should have one. Only 5 gns.
Not used in Germany, but England needs it!

"Titanine" Glider Dopes

TRANSPARENT & COLOURS, FOR FABRIC OR PLYWOOD

CABLES:— "TETRAFREE," LONDON.
CODES:— A.B.C. 5th EDITION & BENTLEYS.

Manufacturers and Sole Proprietors
TITANINE-EMAILLITE LTD
HEAD OFFICE:—
Empire House, 175, Piccadilly, London, W.1

WORKS:— HENDON - LONDON, N.W.
and also at:
NEW JERSEY . . . U.S.A.
MILAN . . . . . ITALY
BREMEN . . . . GERMANY

A WARNING AND GREETINGS.

When the next number of THE SAILPLANE fails to reach you, and you wonder whether it is the Christmas post doing its darnedest, do not ring up the editorial offices—we shall not be there! But this time that chill feeling of dismay and regret that THE SAILPLANE will not again revile your aerial tobogganing is unfounded. Such a time may come for the need to double our list of subscribers is still imperative. We suggest that every reader, each of whom no doubt feels quite kindly towards the editor, should instead of the little gift he meant to send, acquire a new subscriber instead. Such an activity would allow the editor to go on telling the Movement where it is wrong, expressions of opinion which, though personal, are, we believe, salutary.

To return to our subject, we would say that your fears are unfounded,—we are having a holiday. There is a theory, especially on the part of the editorial family, that no gliding will be allowed to interfere with the digestive processes so necessary at Christmas. There is a feeling that the slabs of turkey and Christmas pudding will be allowed in the traditional fashion to digest undisturbed by antics on the tops of high hills made unpleasant with biting winds where gliding fiends are fain to gather, but we have a feeling that like all good intentions they will but pave the way to a hell-lishly cold hill where we shall hear all the latest gossip. Who is really going to get that ten pounds, and what is this new machine that is being built, and did you hear about D—— last week who tried to spin and could not? You know the kind of thing.

In this issue we have been able to include some account of the lecture by Sir Gilbert Walker which we found of very great interest. The conclusions by one so versed in the intricacies of the flights of birds as to the existence of rising thermal currents of great strength, are very illuminating. We echo Sir Gilbert Walker's hope that some of his hearers will be induced to photograph birds in flight, for by so doing much may be achieved to further the cause.

We would lay emphasis upon the value of the information to be obtained by watching birds. Those so engaged will be able to see the existence of rising currents at certain places always repeated with certain conditions of wind; such observations are a big step towards charting the air. Club members trudging towards their ground would do well to watch and inwardly to mark promising sites, for there will assuredly come a day when they will be able, aloft in a soaring machine, to take advantage of the same currents in which they have so often seen the rooks playing.

And now we would offer to you all our greetings for a Christmas which shall be full of good things, on the ground and in the air. With you we will join in looking forward to the New Year, which we are convinced will be marked by British achievements in the renaissance of a sport whose early history is so richly marked with English names, whose characteristics make a special appeal to our temperament and in which our enthusiasm has already achieved so much.

THOSE GERMAN CERTIFICATES.

Through the courtesy of the Rhon-Rossitten Gesellschaft and *The British Gliding Association* we are able to publish some information about the Gliding Certificates which have been granted in Germany to our own countrymen.

Five Englishmen have been trained at Rossitten and four have passed their "A" tests. These are Dr. Slater, Messrs. St. Hobson, Derham and Dunlop. Of these, Mr. Derham has his "B" Certificate.

Six Englishmen are listed as having been trained at the Wasserkuppe, but of these we have only heard of Mr. Hedley Crabtree as getting a "C" Certificate. We should welcome further information.

Extra to these are Mr. Matheson who did so well for The London Club at Ditchling as did Mr. Caspareuthus, and both these gentlemen acquired "C" Certificates at the Wasserkuppe. They have now gone home, the former to New Zealand and the latter to South Africa.

The inclusion among their members of those who have German Certificates is obviously good for a Club and has the advantage that Clubs can profit from the improved experience of such members. But we should like Clubs to exercise care lest the inclusion of such members among their list of Certificate holders leads people to believe that such holding of Certificates is due to the instructional facilities offered by the Club.

We have now received a further communication which states that Messrs. Adjordan, Jackson and Russell-Taylor left the Wasserkuppe before achieving any test. This is informative in view of Mr. Russell-Taylor's claims when he was visiting the Northern Clubs. Messrs. Crabtree and Shutte got "C" Certificates. This only makes five; a Mr. Turner is also stated to have got his "C." Can anybody tell us something of Mr. Turner, whence he comes and to what Club he belongs?

TOO LATE.

We have been very pleased by the way in which subscribers have renewed their subscriptions. We gather from such promptitude that THE SAILPLANE is filling a need, and that its appearance is at least waited with some excitement.

A few people have failed to forward their subscriptions, and though we feel that this is merely laziness, we are compelled, having given such defaulters two weeks' grace, to withhold further copies until we receive their money.

THE DAGNALL PRIZE.

An observer, shall we call him "The Scout"? who has been watching form very closely lately, suggests that there are three Clubs in the running with something like a dozen "A's" each. He suggests that at the moment the order is Dorset, London, Surrey, with Scarborough some way behind as fourth. But the first three are practically level.

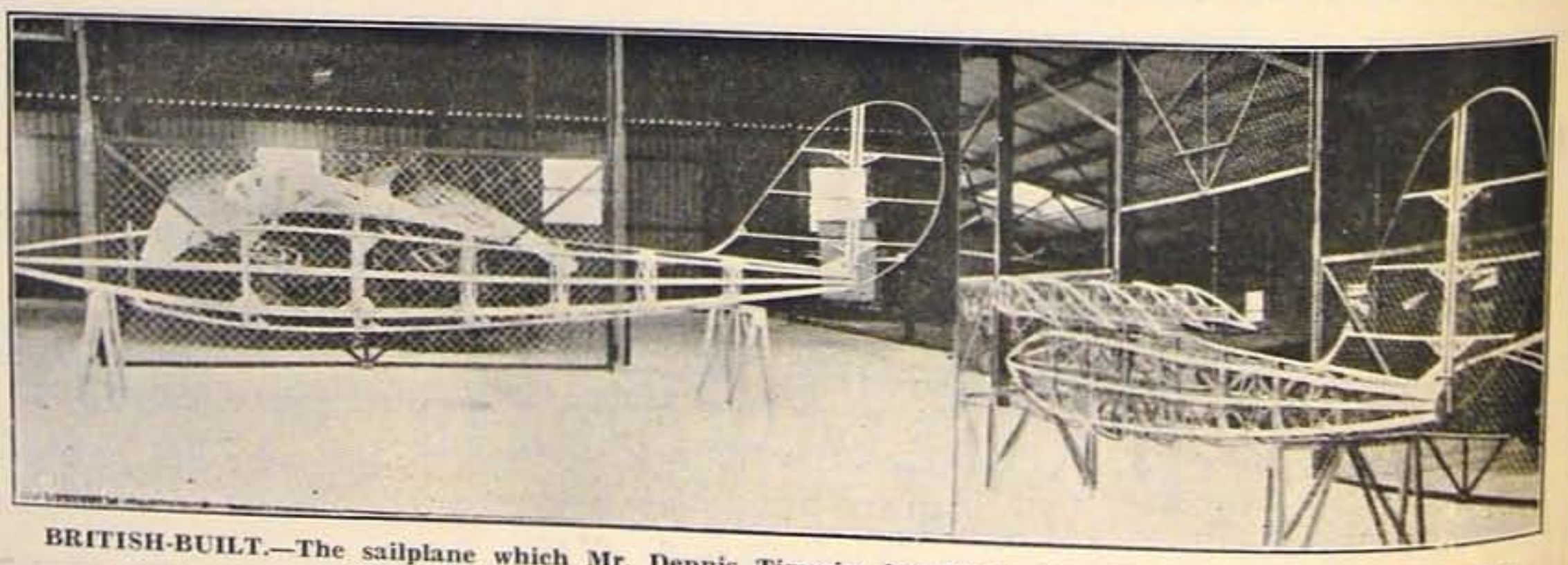
There is, however, still some time to go and no doubt many "A's" will be acquired during Christmas week, but the above will tell Clubs where they are. "The Scout" suggests that the Club which gets 20 will get the £10.

THE SCARBOROUGH PARTY.

The Scarborough Gliding Club have arranged a great Rally and Inter-Club Contest of British Gliding Clubs, to be held on Flixton Hill (near Scarborough) on Boxing Day, Dec. 26, and following days, Dec. 27 and 28, from 11 a.m. to dusk, each day. The contests will include: Longest Distance Flight, Greatest number of "A" Gliding Certificates gained by any one Club. Cups and Medals will be awarded for the various events. The price of admission will be 6d. A car park will be provided.

In the evening a grand Ball in honour of the visiting Clubs will be held at The Royal Hotel (Headquarters of The Scarborough Gliding Club) on Boxing Day, Dec. 26. There will be dancing from 8 p.m. to 2 a.m., and supper will be at 10.30 p.m.

Tickets (including Supper), 5s., may be obtained from all members of The Scarborough Club, or at the Royal Hotel.



BRITISH-BUILT.—The sailplane which Mr. Dennis Timmins has designed and is building. The rudder area does not look adequate when compared with the German types.

FOR SALE.

SILVER SPRUCE for sale. Particulars and Prices from W. Hopkins, 5, Jenner Street, Burmantofts, Leeds.

G.N. SPORTS CYCLE-CAR. Good running order and coachwork. New hood and cushions. Chromium plating. Well tyred. Dynamo lighting. Go anywhere. Climb anything. Taxed. £5 or best offer.—Lewis, 54, Marylands Road, W.9.

MALLITE PLYWOOD

Telephone: Bishopsgate 5641 (4 lines)

FOR **SAILPLANES AND GLIDERS**

Manufactured by the
AERONAUTICAL & PANEL PLYWOOD CO., LTD.,
218-225 KINGSLAND ROAD, LONDON, E.2.

JUST PUBLISHED

GLIDING AND MOTORLESS FLIGHT

A HANDBOOK FOR PILOTS, INSTRUCTORS, DESIGNERS, AND FOR ALL INTERESTED IN GLIDING.

By L. Howard-Flanders, A.F.R.Ae.S., M.I.A.E., A.M.I.Mech.E., *Member of the Council of the British Gliding Association*, and C. F. Carr.

Shows how a pilot is trained, gives practical information for handling, deals with meteorology, choice of ground, construction, care and repair of gliders, and contains details regarding associations, pilot tests, flights, etc. Illustrated, 124 pp., 7s. 6d. net.

Of a Bookseller, or
SIR ISAAC PITMAN & SONS, Ltd., Parker St., Kingsway, W.C.2.

B.A.C. Machines are designed and built by people with Gliding Club operational experience.

We can, therefore, best cater for your needs now and in the future.

Our interchangeable unit system covers all phases of motorless flight with the minimum of capital outlay.

The British Aircraft Co., MAIDSTONE.

General Manager:—C. H. LOWE-WYLDE.

REYNARD GLIDERS

Aylestone, Leicester,

SUPPLY ANYTHING for GLIDING

SETS OF PARTS, FITTINGS, ETC.

LISTS.

SEND US YOUR REQUIREMENTS

TRAINING TYPE, £45, DELIVERED FREE

LAUNCHING ROPE FOR GLIDERS

The high efficiency Turner rope, specially built for the job, is now available from stock in standard lengths of 60 yards from the sole distributors

BURLEY LIMITED,

Aeronautical Rubber Manufacturers,

192, Tottenham Court Road, W.1

Museum 5042. *Durubba, Westcent, London.*

DON'T ARGUE!

Cut your Committee Meeting short and decide on an

R. F. D.

Trainers, Soarplanes, and Sailplanes

Qualify for another R. F. D. Prize.

Hire purchase or cash.

A FRAGMENT FROM FLANDERS.

As announced in THE SAILPLANE of Dec. 5, we are able through the co-operation of Mr. Howard Flanders to publish part of his lecture. This lecture is being given to Gliding Clubs up and down the country; those who have not yet heard it are advised to get into touch with Mr. Flanders. A lecture by such an authority, who was one of the pioneer aircraft designers in the country, is bound to achieve nothing but good.

We are publishing those parts of the lecture which particularly relate to the stressing of gliders. Published with this is a diagram which will enable those who are so inclined to work out the stresses in their machines. So many people have written to us for information on this subject that we feel sure this diagram will arouse much interest.

Mr. Flanders says that it must be understood at the beginning of this talk that gliders are aircraft. The glider is a junior member of that new class of vehicle which includes the 150-ton airship and the 350 m.p.h. Schneider Cup racer, the kite balloon and the intercepter fighter aeroplane, the spherical balloon and the Dornier Do.X Flying Ship, the air liner and the $2\frac{3}{4}$ h.p. Wren light aeroplane, in fact, parachutes and man-lifting kites have to be included in the category of aircraft.

All aircraft have certain qualities in common, they are all air-borne and support man at a height above the ground. For this reason it is essential that they be so constructed that they will not break in the air, that they may be controlled in flight, and that they may be landed safely. When designing and building a glider we must be certain that it conforms to these requirements.

In his lecture Mr. Flanders then briefly touches on the difference between the glider and power-driven aircraft. The glider does not as a rule keep flying at the same height, it generally glides down the hill. All heavier-than-air craft will glide. All that is needed for support is that air shall pass over the wings at a speed greater than the stalling speed. This may be obtained by pulling the machine through the air by an engine, or by using the force of gravity and sliding down an incline which is steep enough to give the required speed.

Whether the glider is soaring, or slipping down the hill very fast, it is all the time gliding down through the air at a speed greater than the stalling speed. If the wind is blowing up the hill faster than the glider is going down then the glider will soar and may be rising relative to the ground, but, nevertheless, it is gliding down relative to the wind, and as it is the wind that supports the glider that is all that is required to support the weight.

Mr. Flanders next deals with the theory of flight in the simplest possible non-technical language, illustrating his remarks with slides of the pressure distribution on the wings, lift and drift, and specially prepared slides showing the effect of wing loading on stalling speed and high speed. He shows why the controls of a glider do not work when stalled and reads off the diagrams the best gliding angle of various types of gliders. He lays emphasis upon the fact that the best gliding angle is not found at the slowest speed.

Mr. Flanders has a slide which shows how various fuselages would produce gliders of very different performance with the same wings. On this slide are shown the resistance of a primary type of glider of the Zogling type with considerable head resistance. It will be seen that the best gliding angle is between 30 and 35 m.p.h. and that the resistance rises very sharply as the speed becomes either faster or slower, the sharp rise of the resistance as the speed increases will prevent the novice gaining speed very rapidly if he holds the joy-stick too far forward, and makes the usual instruction "keep her nose down" safe; such an instruction to a pupil on a glider as represented by curve 3 would be inviting a serious crash, because speeds of over 60 m.p.h. would be reached in a very short time. The high resistance when landing tends to stop bouncing.

It will be noticed that as the resistance of the fuselage is reduced to the intermediate type in curve No. 2 and an advanced type in curve No. 3 the gliding speed rises and the glider becomes too flexible in speed for the novice. The stresses also increase with the added performance. When on the stress calculations the lecturer supposes that the wings might be used for any of these gliders.

Curve No. 5 shows that high aspect ratio wings on a well streamlined fuselage will give a better gliding angle than the low aspect ratio wings *alone*. The very low resistance when near the stall shows clearly the reason for the difficulty of landing sailplanes.

It behoves all instructors, constructors, and destructors (over-ambitious novices) to remember that the seriousness of the crash increases as the square of the speed.

Mr. Flanders has made out a table of the probable weights of the glider, together with the pilot. He shows how the weight of the wings may be subtracted. The weight of the glider is taken as 190 lbs.; it being explained that the amateur constructor always finds his aircraft heavier than he expects. Mr. Flanders says that such aircraft always become tail-heavy and that the estimate of the weights in the tail of the glider must be carefully done.

The movement of the centre of pressure, which is discussed in an earlier part of the lecture, is then used to show how to apportion the weight of the machine on the spars. The load factor is explained, and having found the weight per inch run on the spars, the stress diagram as shown herewith can be used to determine the stresses, it being specifically mentioned that the mathematics necessary are simple arithmetic and that any intelligent boy of 14 ought to be able to work out all the formulæ quickly and accurately.

THE FLIGHT OF BIRDS.

On the evening of Dec. 17 every available chair was taken in the Library of the Royal Aeronautical Society, when Sir Gilbert Walker, F.R.A., F.R.A.S., M.A., lectured on Soaring Bird Flight to members of The London Gliding Club and other gliding enthusiasts. Sir Gilbert makes his own distinction between soaring and gliding. "Soaring" refers to gliding flight in rising currents due to thermal causes; "gliding" is, in Sir Gilbert's meaning, gliding in rising currents due to the horizontal wind being deflected upwards by obstructions and variations in the contours of the surface of the earth, such currents as sailflyers generally use, at least in the earlier stages.

Sir Gilbert opened his remarks with a description of the conditions at Simla where he had exceptional facilities for his observations. His hotel was so highly placed on the 7,000 ft. ridge that he was able with a three-inch telescope to follow the flights of vultures for ¼ hour at a time and because of his high elevation he could look down upon the soaring birds. This enabled him to see the fluttering of the small feathers on the top of the wing when the wing was stalled by some movement of the bird.

About 7 a.m. when the sun has started to warm the ground at Simla the birds slowly flap down from the trees and begin to spiral round with slow, heavy beats. These vultures are heavy birds and weigh about ten pounds with a comparatively small wind-spread of low aspect ratio. For the first fifty feet of climb they find the going heavy, then conditions improve and by the time 150 feet has been reached there is hardly any need to flap and soon after the bird is merely soaring round in large circles slowly ascending.

Vultures will soar all day at such heights that the eye can hardly see them, provided the day is sunny. Should the sky be overcast they will all descend and return to their trees. Kites as opposed to vultures can manage to soar even under fairly bad conditions on an overcast day.

Sir Gilbert explained that Simla lay in a kind of rocky amphitheatre and the birds started their day by soaring over the eastward side, which was first warmed by the sun. That the warm air is always ascending and the air that is cooler and in the shade is descending is most marked at Simla. One can see cigar-smoke and particles of dust rising in the sun and descending in the shade. The birds never attempt to fly in the shade, they always soar in the sun. Thus the evidence that they take advantage of the rising currents of warm air is conclusive.

[The report of the lecture will be concluded in the next number, which we hope to illustrate with reproductions from the slides.—ED.]

THE REAL THING.

[*Gliding and Sailplaning*, by F. Stamer and A. Lippisch, translated from the German by G. E. Startup and Frances Kinnear. 114 pp. 9 in. x 5½ in. 84 illustrations. John Lane, The Bodley Head, Ltd. From THE AEROPLANE Book Department, Cannon House, Pilgrim Street. 5s. 3d. post free.]

This is more nearly what hungry aspirants have awaited, and its brevity is the pity of it. Dr. Fritz Stamer is Principal of the Rhon-Rossitten Gesellschaft, and Dr. Alexander Lippisch is Principal of the Technical School allied thereto. He is also the designer of the *Wien* and the *Fafnir*. With such credentials behind the book the reviewer can only feel hearty relief that his criticisms can safely melt into a chant of modified rapture.

Modified merely because no book is perfect, and the distinguished authors have referred us English too often to other authoritative German works. We can only hope to see them, too, translated at an early date. Ths is a disadvantage of translations.

Minor errors, apparently in translation, appear with gratifying scarcity. For instance a glider does not side-slip to the left because the left aileron is "depressed," but when the left wing is depressed, and that implies a raised aileron. The generic term "rudder" is applied also to elevators, which continentally are termed "height-rudders"; another natural technical error on the part of the translators.

These minor matters do not mar a most useful book. It starts with a chapter on equipment and training which reflects the experience of years, and significantly assumes right at the beginning that the primary training period is merely a phase to be got over as soon as possible by serious devotees.

The choice of ground is dealt with fully under the three heads of training for beginners, practice grounds and sailplaning territory. Rarely, they say, does one site even remotely suit itself to all three classes! The action of winds and the production of up-currents is explained clearly but all to briefly.

The chapter on Training merely prepares the way for personal instruction, which, after all, no written advice can replace.

Something more on the simpler currents is introduced into the chapter on Practice Flying and Sail-planing. Among the points of technique which are of intense interest to a mere onlooker with ingrowing theories is the "start-turn." Watching our own budding sailplaners the reviewer has often thought that disappointing performances were mainly the result of excessive caution in making the first turn. Naturally the beginner is not going to risk cart-wheeling on the hillside by turning sharply in order to stay in the up-current on the slope, but one's suspicions of its necessity are confirmed by this statement of the authors: "it is necessary to commence the turn immediately after the start to prevent the machine getting beyond the often very narrow area of the up-current—an expert can push out the rudder bar before detaching the starting rope." This is useful stuff.

A short chapter on cloud-flying follows, and then an all too short description of various machines with some good pictures. Unfortunately the pictures merely show machines in flight and do not illustrate instructive situations. Some day someone will do a useful work by making a collection of such rare and valuable material.

The space devoted to tools, materials and construction methods fairly bristles with useful hints for building and repair. General methods only are touched on, applicable to any type of machine and restricted to the small points which blueprints and building instructions never mention. Incidentally the absence of tacks from German construction is due to sound technique and is not a means to cheapness.

The same characteristic method of treatment is used in the hints on maintenance and safety devices. This chapter would have saved money and grief to more than one gliding club of which we know.

Then follows a further section on training methods and a series of good diagrams illustrating certain points of technique and timely warnings. There should be twice as many.

The final chapter on instruments is of particular interest to a few—probably power-plane pilots in the main—who think that proficiency will sooner follow the acquisition of "flying sense" if some more accurate measure of speeds, etc., is available to the aspiring sailplane pilot.

This book ought to have a stimulating and strengthening effect on the whole Gliding Movement in England.—F. D. B.

AMERICAN GLIDING RECORDS.

The results and some pictures of the Soaring Contest held at Elmira, New York, between Sept. 21 and Oct. 5, have already appeared in THE SAILPLANE. The distance record of 21.1 miles has already been described. but some new figures are to hand.

The American Duration Record has to be achieved by an American citizen, so Herr Wolf Hirth's flight of over seven hours cannot count. The Duration Record which now stands at 6 hrs. 48 mins. was made by Jack O'Meara on Sept. 30.

The American Height Record of 3,159 ft. was made by Warren Eaton on Oct. 10. In neither case have we been able to find what machines were used.

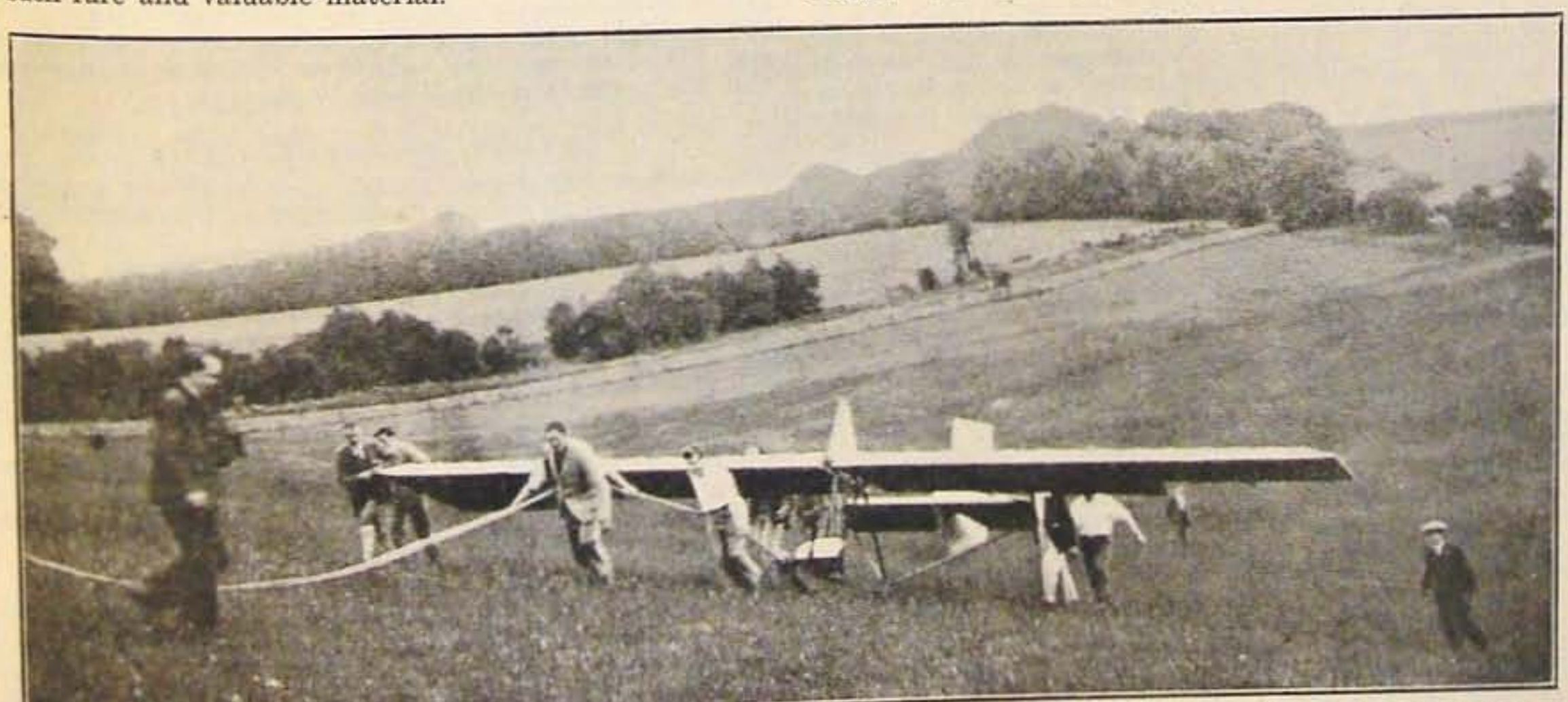
GLIDING IN SOUTH AFRICA.

A correspondent informs us that a South African Gliding Association has been formed in Johannesburg and Gliding Clubs are being established in different parts of the country. At present three gliders are in commission. The licensing of gliding personnel will be done by the Aero Clubs of South Africa and the South African Gliding Association. [Presumably this means the licensing of persons qualified to instruct and to inspect machines.—ED.] The Association will have the services of Mr. Caspareuthus, who recently qualified for his "C" Certificate at the Wasserkuppe. Experiments at Johannesburg with a glider have been very satisfactory considering that it is at an altitude of 6,000 ft. above sea level.

A CHANCE TO SOAR.

A really intelligent attempt to soar with high-efficiency machines is being organised. Various pilots have already gathered together with the object of acquiring a well-known German sailplane. When this machine arrives the group will make serious attempts to learn how to make cross-country flights.

Such a worthy object can only be endorsed by THE SAILPLANE which sees in such an effort a chance of British pilots putting up a good show in *The Daily Mail* Competitions. If there are any pilots (glider or power) who would like to join the group and contribute towards the cost of the high-efficiency machine they should write to: "Competition Flight," c/o THE SAILPLANE, 175, Piccadilly, W.1.



NOT AS ORDERED BY THE DOCTOR.—The North Cotswold Club hard at work. We agree with our correspondent that means must be found to reduce this slaving which serves no purpose. A few pence are saved at the cost of very valuable energy.

CORRESPONDENCE.

Trailers and the New Law.

Sir,—We wish to call your attention to a matter of vital importance to all Gliding Clubs. Practically every glider has to be moved about the country in a trailer, and regulations governing the use of trailers have been dealt with in the Road Traffic Act, 1930. While the Minister of Transport has power to amend these requirements by regulations, the requirements as they exist at the moment are hopelessly inadequate.

They have obviously been framed to deal with the cumbersome commercial goods trailer carrying loads reckoned not in cwts. but in tons. The requirements call for the attendance of a second driver, and other arrangements, which will seriously hamper the use of the ordinary glider-carrying trailer.

The Minister of Transport has, we understand, drawn up a draft of his proposed regulations and submitted these for the consideration of the S.M.M.T. Regulation No. 57 states that every trailer other than a land-implement shall have an efficient braking system, the brakes of which at least act upon two of the wheels in the case of a four-wheel trailer, and so constructed that the brakes are capable of being set so as effectually to prevent at least two of the wheels revolving when the trailer is not being drawn. With this we have no complaint to make and, in fact, we find that every trailer should be fitted with efficient brakes, although we think it is unnecessary to lock the wheels of a light two-wheel trailer, but as this is so easy to arrange it can pass.

Regulation No. 82 states that where a trailer is drawn by a motor-vehicle other than a locomotive, unless the driver is in a position readily to operate the brakes of the trailer as well as the brakes of the motor vehicle, an additional person shall be in a position and competent efficiently to apply the brake of the trailer. Now this regulation is totally inadequate and, in our opinion, is carelessly drafted, as it disregards the use of automatic brakes.

We are not in a position to criticise vehicles of manufacture other than our own, but our own trailers are fitted with a braking system which is absolutely efficient and automatic. The writer has, quite unaided, held a load of 10 cwt. on a hill of 1 in 4 gradient without the trailer being coupled to any vehicle by merely pushing back the coupling piece which attaches to the car. On the road the inertia of a trailer with a load (the bigger the load the greater the inertia) is employed to actuate the brakes. If the car stops suddenly the brakes are applied with the necessary force, and, providing that the design is efficient, this is undoubtedly the best principle.

We repeatedly use a 4 h.p. motor-cycle for demonstrating our caravans and we find it can stop in practically the same distance with a caravan as it can without. Recently accurately tested with a small car, we found that it made 5% difference. In a sudden emergency on the road the driver of a car is already fully occupied without being called upon to operate an independent brake, which the regulations in their present form require, at great expense and interference with his car.

The automatic braking system is obviously the best, and we urge the B.G.A. to take all possible steps to get the regulations amended before they pass into force. We, on our part, are quite prepared to submit a trailer or caravan to the National Physical Laboratory for a certified test if this is necessary to prove the point, and we hope that this letter through the medium of The Sailplane will awaken the whole of the Gliding Movement to the impending difficulty which may arise in connection with their necessary trailers.

(Signed) J. Cecil Rice
(*Director, Rice Caravans Ltd.*)

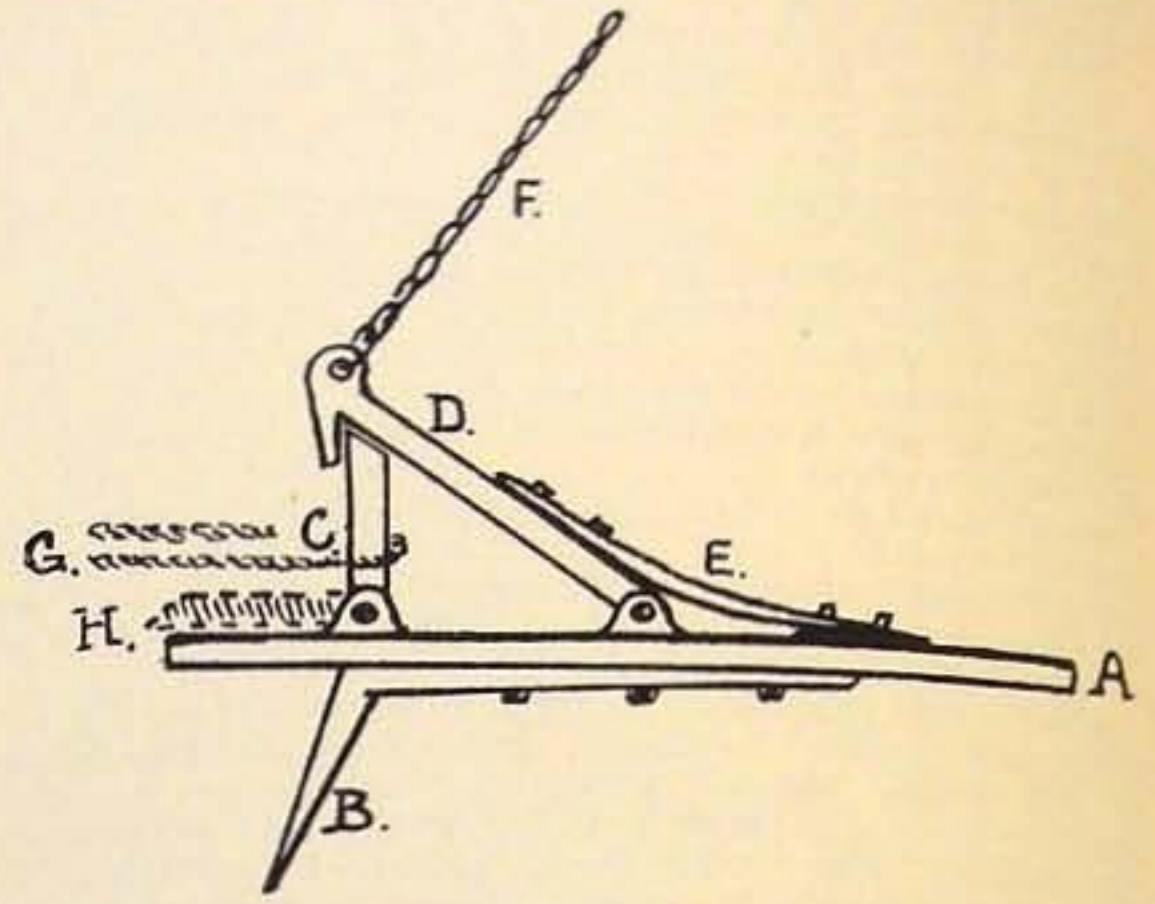
[We think that Mr. Rice's objection to certain regulations are justified, but think that the B.G.A. will be too engaged in coping with its own more pertinent affairs. This trailer business almost seems a matter for the Society of British Glider Manufacturers.—Ed.]

Steel Struts for Training Machines.

Sir,—In reply to your comments at the foot of our report appearing in The Sailplane of Dec. 5, re our metal struts, we have pleasure in giving you the following information regarding same.

The struts are made of 1 5-8 in. (o/d) twenty gauge steel tube, with the ends flattened and plugged. Actually they are double the weight of the wooden struts originally supplied with the glider (B.A.C.II) but in practice we have found that this additional weight has made no noticeable difference in the performance of the machine. We have had one or two cases of heavy stalled landings by beginners since these struts were fitted, and no damage either to strut or wing spar has resulted.

One of our members, Mr. F. Petty, has designed and made



a very effective releasing device, which enables one man to control the tail of the glider without any effort, irrespective of what tension is placed on the ropes. It consists of a strong metal plate about 18 in. by 12 in., fitted with two prongs which are sunk in the ground. The tail rope is looped round a metal pin which is locked by a trigger. All that is required is to stand on the plate, and pull the trigger by means of the attached chain on the command "Release." I enclose a rough drawing to illustrate the working of this gadget.

(Signed) John B. Smith
(*Hon. Sec., The Isle of Wight Gliding Club*).

A Doctor's Opinion.

Sir,—The labour involved in launching the machines and in returning them to their starting point is, I am convinced, injuring the prospects of the sport of Gliding.

Owing to poor health, sedentary occupation, age and various other causes many members of Gliding Clubs are finding that they have not the physical strength to do their share of the work and after the first enthusiasm is over will cease to attend Gliding meetings—and to pay their subscriptions.

Onlookers—always prospective members—are unfavourably impressed by the obviously hard work involved.

If all Clubs would experiment with apparatus to reduce labour and would publish their ideas and the results of their efforts we should soon get over the difficulties.

(Signed) V. C. Hackworth.

[Dr. Hackworth's criticisms could be applied equally to "Rugger," which is played with such enthusiasm up and down the country. But like the doctor we want to see gliding made possible for those in poor health, and of sedentary occupation, and for those whose age prohibits violent exercise. After a while poor health will vanish and the vigour gained in the open air will offset the debility induced by sedentary occupation. Hence our campaign for auto-towing. This method of tuition is quick, thorough, and labour-saving,—the only crew required are the pupil and the instructor.—Ed.]

A Loss to the North Kent Club.

Sir,—It is with regret that I have to inform you of the death, after a very short illness, of our Honorary Secretary, Mr. Walter T. Davies.

Mr. Davies had been the Secretary since the inception of the Club, and it is very largely due to his efforts that the Club has advanced so rapidly in such a short time. His enthusiasm was boundless, and he was never so happy as when he was spending time and energy on the Club's business.

It is a blow from which the Club will take some time to recover, and in extending our sympathy to his relatives we would say that we, too, were greatly mindful of his sincerity of purpose and his sterling worth.

As a mark of respect, there will be no gliding at our ground at Joyce Green Aerodrome this week-end.

(Signed) Leslie O. Kekwick
(*Chairman, The North Kent Gliding Club*).

[We would like to take this opportunity of extending to The North Kent Gliding Club the sympathy of The Sailplane, and would add a tribute, as a result of our own contacts with Mr. Davies, to his sincerity of purpose and unflagging energy.—Ed.]

NEWS FROM THE CLUBS.

WHERE GLIDING CAN BE SEEN.

Beds.—The Bedford Gliding and Flying Club. Week-ends at Wilstead Hill, 5 miles from Bedford on Bedford—Luton road.

Bucks.—The London Gliding Club. Meeting place, Turveys Farm, near Tottenhoe, on Sundays.

Dorset.—The Dorset Gliding Club, at Chickerell, Weymouth.

Edinburgh.—The Edinburgh Gliding Club. Sundays, at West Craigs Farm, between Corstorphine and Turnhouse Aerodrome.

Glam.—Merthyr and District Gliding Club. Sundays, 10 a.m. to sunset. ¼-mile-left Dynevor Arms, Merthyr Tydfil—Swansea Road.

Herts.—Herts. and Essex Gliding Club. Sunday afternoons, Eastern Roadways Garage, one mile north of Stortford.

I.O.W.—The Isle of Wight Gliding Club. Whiteley Bank, near Godshill. Every Sunday from 11 a.m.

Kent.—Channel Gliding Club. Adjoining Hawkinge R.A.F. Aerodrome, 2 miles from Folkestone on main Canterbury Road.

—Kent Gliding Club. Week-ends above Lenham, on the Maidstone—Ashford road.

—The Isle of Thanet Gliding Club. Saturdays and Sundays from 2 p.m. Manston Aerodrome, Thanet.

Lanark.—The Glasgow Gliding Club. Barrance Farm, Easter Whitecraigs, near Glasgow. Every Sunday from 11.15 a.m.

Lancs.—The Furness Gliding Club, at Gleaston Park Farm, Gleaston, near Ulverston (midway between Gleaston and the Coast Road), every week-end.

—The Preston and District Glider Club. Week-ends at Beacon Fell, 2 miles from Inglewhite and 7 miles from Preston.

Staffs.—The North Staffs. Gliding Club. Week-ends at The Downs Banks, Barlaston Downs, near Stone, Staffs.

Surrey.—Surrey Gliding Club. Every Sunday, if weather permits, at Lockner Farm, Chilworth, near Guildford. 10 a.m. to sunset.

Sussex.—Sailplane Club of T.M.A.C. Horton Farm, Smalldole, near Steyning.

—Southdown Skysailing Club at Ditchling Beacon. Sundays, 10.30 a.m. till dark.

—The Worthing and District Gliding Club, Weds., Sats., and Suns., at High Titton, 2nd turning to left going from Washington to Storrington.

Warwick.—Rugby District Gliding Club. Cote Hill Aerodrome, Husbands Bosworth, Rugby.

Wilts.—The Wiltshire Light Aeroplane and Glider Club at Easton Hill, Alton Priors Range, Bishops Cannings, near Devizes.

Worcs.—North Cotswold Gliding Club. Every Sunday at Fish Hill, above Broadway Village, from 10 a.m. to sunset. Saturdays and Wednesdays from 2 p.m.

Yorks.—The Bradford Gliding Club, at The Pastures, Apperley Bridge. Sat. 1.30 p.m., Sun. 9 a.m.

—The Huddersfield Gliding Club. All day every Sunday at Bradley Bar, Huddersfield.

—The Leeds Gliding Club. Week-ends at Gildersome near Leeds.

[Clubs are invited to send in full details as to where and when they can be seen at work. This feature should help Clubs considerably as readers who are not members can go to look at the nearest local Clubs and see which they like.—ED.]

A GLIDING CLUB FOR CROYDON.

An effort is being made to form a gliding club for Croydon and the surrounding district. Those who live in the neighbourhood and are interested should get in touch with Mr. J. E. P. de Segesser, 67, Wellesley Road, Croydon, Surrey.

ANOTHER CLUB FOR KENT.

Kent now has at least five Gliding Clubs. The newest of these is the Dover Gliding Club, which is to have its opening meeting on Dec. 21. For some queer reason THE SAILPLANE has not been officially informed; perhaps the onlookers are to be limited to the locally curious and not those whose knowledge is somewhat greater.

On the other hand it may be that the Secretary has been so overworked that he has not had time,—still it is a pity that we cannot tell interested people as to the location of the gliding site.

THE BEDFORD GLIDING AND FLYING CLUB.

On Dec. 13 the Club held its first indoor social function in the form of a Whist Drive at the Club rooms and the social committee are to be congratulated for their splendid arrangements.

The Club rooms were full to overflowing and after a most enjoyable evening, which closed with the presentation of prizes, all went home hoping that this would be the first of a series of social gatherings during the Winter.

On Dec. 14 the weather was perfect, and although the wind was not in the most favourable direction, a number of glides were made. Mr. Bell, our junior *ab initio* pilot, having successfully passed his oral and practical tests, made a very good show in his first glides. Unfortunately, on the way home, one of the main planes was slightly damaged coming through a gateway, but this is a repair job well within our reach.

Again members are asked to keep acquainted with Club room notices regarding Christmas week, when an intensive programme is proposed.

We take this opportunity to express to THE SAILPLANE, the "B.G.A.," and all brother Clubs our Greetings for Christmas, and all the best for 1931.

THE FALKIRK AND DISTRICT AVIATION CLUB.

Falkirk's new glider was delivered and demonstrated by Mr. Lowe-Wylde on Nov. 29. On that day it was arranged to begin at 12 o'clock, but as Mr. Lowe-Wylde did not arrive until 2.30 or thereby the demonstration had to be curtailed to two ordinary rope-launched flights by Mr. Lowe-Wylde and two car-towed launches.

The site was ideal and for the use of it on that day the Club is indebted to the farmer of Westerglen, Mr. Miller.

Through the kindness of Captain H. J. Kennard, R.N., D.L., one of the Club's Hon. Vice-Presidents, the Club now has the use on Monday nights of an ideal meeting place in the Welfare Canteen of Falkirk Iron Works.

A very interesting lecture, illustrated by lantern slides, was delivered there by Mr. Lowe-Wylde on Nov. 29, and since then the Club has had a lecture by Chief Instructor Shaw, and a Social Free-and-Easy Night, at which tea was served.

On Dec. 15 the Club had the pleasure of hearing a very interesting lecture delivered by Mr. George Yuill, one of the Hon. Instructors of the Scottish Flying Club, Renfrew. Mr. Yuill's lecture took the Club away from the usual hard and fast conventions of a technical lecturer and was more of a delightfully informal talk upon a subject about which the lecturer was himself so interested that he could not fail to fascinate his audience. With the aid of a blackboard Mr. Yuill explained many points of aeronautical interest to Club members and was accorded a vote of thanks at the end of the evening.

The weather being foggy on Dec. 6 no Gliding Meeting was held. On Dec. 13, however, the weather was clear with a fine S.S.W. wind and the glider was conveyed on a motor truck, kindly lent for the occasion by Thomas Brown, Falkirk, to a capital site 3½ miles to the south of the town. The lorry had to be pressed into service as the trailer, which is being constructed by Club members, is not yet completed. Great care was required to hold the wings in position during the journey, and one wing, which was slightly damaged in loading, had to be repaired by the application of doped patches of fabric. The delay cost a good part of the remaining daylight and it was almost 3 p.m. before Club members found themselves ready for the first launch.

Under the guidance of Chief Instructor Shaw nine launches were made, all by *ab initios*, and all were very creditable performances. The first flight of the day was made by the Hon. Secretary, Mr. Tomison, who had a successful flip of approximately 25 seconds duration and 300 yards in length. All those who took the air had been given preliminary instruction in accordance with the Club's rule that no members are allowed to fly until they have had a certain amount of instruction. Three men only were used on each rope's end.

Except for some very slight damage done to the plywood support for the pilot's back (we are not sure whether this was done by our 16 st. Treasurer or by the Ground Engineer who attempted to break the altitude record and then owing to a jammed control, so he said! performed a "B" certificate curve and smote mother earth) the machine was returned to its garage intact for the second day in succession. We claim that this is a Scottish Record.

It is hoped to have the trailer ready for next Saturday to allow of those members having a flight who were disappointed on Dec. 13.—"AILERON."

THE GLASGOW GLIDING CLUB.

The Glasgow Gliding Club has speedily developed from a number of individuals interested in gliding into a band of gliding enthusiasts acting in concert and encouraging each other to greater efforts in the field and in laying a sure foundation for a progressive future.

Glasgow, which has for so many years been the birthplace of great engineering and scientific achievements, offers a fruitful field for gliding propaganda. Considerable efforts have already been expended in this direction with encouraging results.

Under the auspices of the Club a public lecture on Gliding was given by Mr. Lowe-Wylde in the St. Andrews Halls, Berkeley Street, Glasgow, on Nov. 27, Mr. Gregor Cameron, the Club President, being in the Chair. About 250 people were present to hear Mr. Lowe-Wylde's instructive discourse. The slides loaned by the B.G.A. and the film of the British Officials' visit to Germany were shown. Thereafter followed the private film (Pathescope) of the Club's achievements on their first practice day.

Altogether it was a most successful evening; a pleasing feature was that during the ten minutes allowed for discussion Mr. Lowe-Wylde was able to satisfy those with a thirst for technical knowledge.

On the following afternoon Mr. J. Kincaid Mackintosh of the Glasgow Club gave a short lecture and showed the slides and films to a number of students at the University.

To date of writing the Club have had practical gliding instruction on the three successive Sundays beginning Nov. 23. The Club possesses one glider at present; an R.F.D. primary. Good work has been done right from the start, but on Nov. 30, a beautiful day, the members were elated by the amount of work accomplished. Gliding began at 12.30 p.m. and in all 54 glides were made. Of course, being at the elementary stage the glides were comparatively short. We feel convinced, and hope that you will agree, that the industry, enthusiasm and team-work incidental to this augurs well for our future.

Weather at this time of year is much against us, but by seizing

every possible opportunity we intend to be in a position to put up some convincing displays next year.

The site for gliding practice is at Barrance Farm, Easter Whitecraigs, Glasgow, and gliding will continue there every Sunday beginning at 11.15 a.m. until further notice.

THE ISLE OF THANET GLIDING CLUB.

On Dec. 13 The Isle of Thanet Gliding Club had an instructional meeting at Manston Aerodrome with Flg. Off Phillips and Mr. Bicknell as instructors. The machine has now been reconditioned after a minor mishap last week, and Sq. Ldr. Cuckney, D.F.C., the ground engineer of the Club, has passed it out as "fit to take the air."

Many members had successful short flights. The President, Capt. H. H. Balfour, M.C., M.P. for Thanet, arrived during the afternoon and made three very good glides.

On Dec. 14 there was a splendid attendance. Hundreds of people seemed to have been drawn to Manston, and the main road was lined with cars. This was the best attended meeting the Club has had so far, and the practice flights were quite good. The instructors are pleased with the progress made.

The afternoon opened with excellent "test" flights by Flg. Off. Phillips, Sq. Ldr. Cuckney, D.F.C., and Mr. E. Bicknell. Then the *ab initios* commenced.

Then the first lady member of the Club actually to fly was Mrs. Moor. This was followed by the second lady member, Mrs. Bartlett, of Manston, who made two good flights.

The meeting was voted an entire success, and everyone went home, perhaps tired, but extremely happy and satisfied.

This meeting gained the Club seven new members.

[This report appeared in *The Thanet Advertiser*. The Sailplane has not got time to rewrite Club reports.—Ed.]

THE ISLE OF WIGHT GLIDING CLUB.

On Dec. 14 the Club met at Somerton Aerodrome, when a good number of members were present. Unfortunately our instructor, Capt. F. W. Merriam, was indisposed with a chill, but gliding was done under the supervision of Messrs. Thompson and Smith. During the morning "session" some twenty launches were successfully made and all flights and landings were satisfactory. Mr. John Lord introduced Capt. MacIntosh (late of Imperial Airways) to the Club, and we were very pleased to welcome him. Capt. MacIntosh, although finding the controls of our B.A.C.II somewhat different to a three-engined passenger plane, made three very good flights, and afterwards expressed his intention of joining the Club.

During the lunch interval rain fell, but after an hour cleared again, although the downward pressure caused by rain clouds deprived the air of any "lift." A good number of flights were made, however, including three by a new lady member, Miss Forbes. Although having no previous gliding experience, Miss Forbes has solo-ed on light aeroplanes, and very quickly mastered the controls of the glider.

Next Sunday, and until further notice, we shall be at Whiteley Bank, near Godshill, where we are beginning instruction on slopes.

THE KENT GLIDING CLUB.

On Dec. 12 a very successful Club Dance was held at Maidstone. A large number of members and their friends were present and prizes were presented by the British Aircraft Co. for the best Fancy Dresses. So popular did this dance appear that it is proposed to hold another in the near future.

On Dec. 14 the weather was bright and fine with the result that many members and spectators turned up at Lenham, where training gliding was carried out. Several members put in valuable work applying creosote to the hangar and it is hoped that this very necessary job will be completed next Sunday.

THE NORTH STAFFS. GLIDING CLUB.

On Dec. 14 we visited the Wrexham Club, taking the B.A.C. Primary and Secondary Type gliders. The conditions for gliding were about the worst we have experienced. There was almost an entire absence of wind and the very muddy ground restricted the speed of the teams.

The Wrexham Club have just taken delivery of a B.A.C. Primary Type and whilst their members received instruction from Mr. Lowe-Wylde, our Instructor (Mr. Coles) demonstrated the capabilities of the secondary type. We wish to thank the Wrexham Club for their cordial reception.

Excellent progress has been made during recent months and it is felt that several "A" Certificates would have been obtained with a suitable ground available.

Much amusement was caused recently by the efforts to launch Mr. Wilson, the Club's "heavy-weight champion." At the command "release" the glider refused to move, and the teams, becoming exhausted, were nearly catapulted back to the glider! Mr. Wilson had been sitting on the machine for some minutes whilst receiving instruction for his first launch and the skid had sunk slightly into the muddy ground.

Meetings will continue to be held at The Downs Banks, Barlaston Downs, on each Sunday after the Christmas holidays.

Hon. Sec., Mr. C. Teeton, Havelock Place, Shelton, Stoke-on-Trent.

THE NOTTINGHAM GLIDING CLUB.

The Lecture given by Mr. Gordon England, on "Gliding as a National Movement," at the Parliament Street Picture House, Nottingham, on Sunday, Dec. 7, proved a very great success, and there was a very large gathering of young men from many athletic associations in the City, as well as a good sprinkling of Rover Scouts and senior schoolboys.

The interest which Mr. Gordon England aroused was clearly illustrated by the rapt expression on the faces of the audience, and the silent and intense attention to all his remarks. Not only did he deal with gliding as a National Movement, pointing out the progress made in Germany, but he also gave some very interesting details, together with lantern slides, of soaring flight by Herr Kronfeld, under cumulous clouds and over storms.

There is not the slightest doubt that, before soaring flight can make any headway in England, it is absolutely essential that exploration of air-currents and investigation into cloud soaring, as very ably set forth by Mr. L. Howard Flanders in The Sailplane of Dec. 5, must be undertaken. This was one of the points stressed by Mr. Gordon England.

Letters of apology have been received from many Gliding Clubs in the Midlands, apologising for their absence and pointing out that the very foggy weather prevented them from coming.

The Movement is extremely fortunate in having such an energetic and willing worker as Mr. Gordon England as Chairman, as, in spite of the fog, he motored from London on Sunday, and returned on Sunday night. We had so many questions to ask him that it was nearly midnight before he was able to say good-bye to us.

By the way, when other Clubs invite Mr. Gordon England to give them a lecture, we would like to suggest that they also invite Mrs. England, as it was found she was a most charming acquisition to the party. The lady members of the Club all fell in love with her.

The Secretary has received a number of applications for membership as a direct result of this lecture, and is hoping to receive a further number in the course of a few posts.

THE SCARBOROUGH GLIDING CLUB

The record of the Scarborough Gliding Club is one of achievement, in the face of many difficulties. From the first day, when this Club made its modest blushing "debut" on the Yorkshire Moors last Spring, it has steadily "soared" to higher altitudes, and is still looking upward. The early history of the Club is one of many minor vicissitudes: even the first week-end, its Ground Engineer, Mr. Slingsby, earned distinction by "soaring" without a machine at all, the launching medium consisting of a somewhat irate bull which chased him "up-wind" and over a five-foot hedge!

Followed a series of flights, crashes and repairs with the Zogling, until something in the nature of a diversion was indicated. The Club then arranged demonstrations locally by Herren Kronfeld and Magersuppe. These duly took place, and there was no doubt as to the diversion! Magersuppe hit a fence at the cliff edge, 200 feet above sea level, and finished up in the grey North Sea, motor coble coming along in the proverbial nick of time; Kronfeld swung round just short of the said fence and proceeded to commit mahem on the launching crew! Be it at once said that it was not their fault.

Other little pin-pricks included the weekly refusal of landlord to allow further gliding on the same pastures; an outbreak of fire where the glider was stored; resignations of an illustrious line of overburdened Hon. Secretaries, etc.

But "Everything comes, etc., ..." The Club is now in possession of an excellent ground at Flixton, a few minutes' run out of the town, which is quite suitable for Gliding and Soaring. Herr Magersuppe's services have been retained for some months as instructor, with a two-seater dual control machine, the property of the Club. A large number of members have had instruction, and have duly obtained "A" and "B" Certificates on the Zogling as a result.

The social side has not been neglected. The Club holds popular dances, monthly, at the Royal Hotel, which are cheery and well-attended. In the intervals of dancing, the Scarborough Club's ever-lengthening film is shown for the benefit of intending patrons and members. In addition to the machines mentioned, one member has a Prufling. On Dec. 12, this member, Mr. Thompson, made several excellent flights, his best being a soaring flight along the Yorkshire Wolds of nearly four mins.' duration. The Club proposes to turn out in force on Boxing Day, to get through plenty of work and perhaps provide a few holiday thrills for visitors, of which there are generally quite a number.

On the whole, it can safely be said that the Gliding Movement is making great headway up here, as reference to the list of B.G.A. Certificated pilots will show.—E. C. T.

THE SOUTHDOWN SKYSAILING CLUB.

On Dec. 14 a busy day was spent near Ditchling Beacon by members of the Southdown Skysailing Club. Fifty launches were made, including several long-distance flights from the top of the hill.

Two more "A" Certificates were obtained making our list of qualified Gliding Pilots as follows:—Flt. Lt. Brown (Club Captain), Capt. Russell, Mr. E. K. Robins and Flt. Lt. Wood.

Mr. Robins made two remarkably good glides—one was officially timed at 41 secs. and the other was also about 40 secs.; Flt. Lt. Wood 32 secs. and 22.5 secs. Mr. Lawson made several good glides, including one of 20 secs.

It may be of some interest that Flt. Lt. Wood in qualifying for his Glider Pilot's "ticket" adds another to those which he already holds, viz., Aeroplane, Balloon and Airship Pilot's Certificates.

We look forward to some keen competition among the Club *ab initios* as several are ready to take their "A" tickets at the first opportunity.

With reference to the elastic-cum-hempen idea for launching ropes mentioned in The Sailplane, our Club has been using this method for some time and it is certainly successful in prolonging the life of a "tired" launching rope. But can anyone suggest an idea for prolonging the lives of tired *launchers*?

For particulars of membership apply Hon. Sec., New Yorke Hotel, Bedford Square, Brighton.

FORTHCOMING DATES.

Dec. 26—Jan. 2.—The Gliding Display and Inter-Club Contest organised by the Scarborough Gliding Club at Flixton Hill.

Printed for Aeronautics Ltd., by Bonner & Co. Ltd., The Chancery Lane Press, Rolls Passage, London, E.C.4; and Published by Aeronautics Ltd., at Cannon House, Pilgrim Street, Ludgate Circus, E.C.4.

EDITORIAL AND ADVERTISEMENT OFFICES OF "THE SAILPLANE," 175, PICCADILLY, LONDON, W.1.
ACCOUNTS AND PUBLISHING OFFICES, CANNON HOUSE, PILGRIM STREET, LUDGATE CIRCUS, E.C.4.
Telephones: Editorial, Gerrard 5407; Advertising, Gerrard 6023; Publishing, Central 5822.