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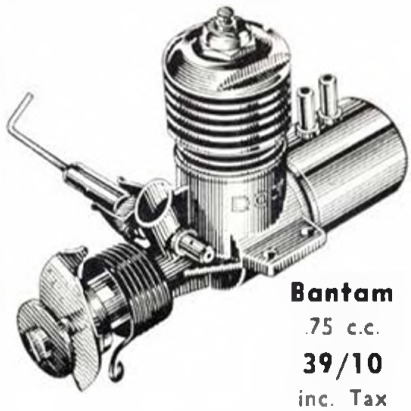

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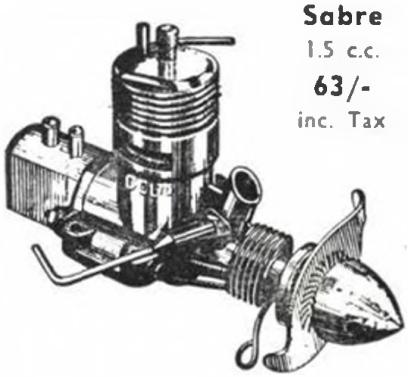

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AERO MODELLER

MAP HOBBY MAGAZINE

March 1965

VOLUME XXX No. 350

other modelling angles . . .

Some of the most attractive boats of recent years are those used in the Offshore Power Boat Race, and many of the craft developed for this race embody features of design and appearance which have become characteristic. This typical appearance has been caught in a semi-scale model, "Susie Q", which is a feature of the March issue of **Model Maker.** With a length of 27 in. and a 9 in. beam, this model can be built in balsa for electric power or ply for up to 3½ c.c. engines. A full-size plan is included ; this is a small sailing model catamaran, originally designed and used as a school project for 11 and 12 year-olds.

In March **Model Cars** World Champion Ferrari 1964 F/1 car is mated with latest fastest Ripmax Mabuchi motor—yes it 'will' go in !—to make this month's race-proved 1/32nd scale car. Beginners can "Wade in" with Barry Wade in a surprising all-balsa chassis for twin-Microperms that can put them up with the winners at once. More expert readers will enjoy the long and fully illustrated article on Miniature Universal Joints—just the job for four-wheel-drive and steering layouts !

Practically no one in the R/C world has been neglected in March **R.C.M. & E.** which carries a unit type of receiver to build (adaptable for many applications). For the pilot "Painless Single Channel" shows how much can be done with simple signalling The comedy brigade should enjoy details of, a Flying Wheelbarrow . . . a what ? . . . it actually happened. Boat enthusiasts will find there are fewer difficulties in controlling powerful electric boats than anticipated This is the first of a series for boat men.

contents

cover

Japanese entry in the fictitious air race from London to Paris which forms the plot of 20th Century Fox Films Co. Ltd , aerial comedy, "Those Magnificent Men in Their Flying Machines" is appropriately the aircraft with racing No. 1 and the most colourful entry. Basically an Eardley-Billing biplane, it has the interplane struts filled and an enlarged fin plus fuselage covering in order to accept the decoration appropriate to the nationality. Note too how the pilot is appropriately enthusiastic! This is but one of the 12 eligible subjects for the replica model contest to be organised this year with the co-operation of the makers of the film.

next month . . .

Plans for a Bleriot and more details on the full size machine add interest to the pioneer machines which are featured in this March issue. For those with racing aircraft interest, Harry Robinson brings intriguing detail on the famous Gee Bee in his own fastidious style. How to decorate models with tissue trim : the latest radio-control news ; reports on the national championships in Australia and New Zealand and a full-size plan, plus all the regulars will be there for your enjoyment, out on March 19th and 52 pages full of value as usual.

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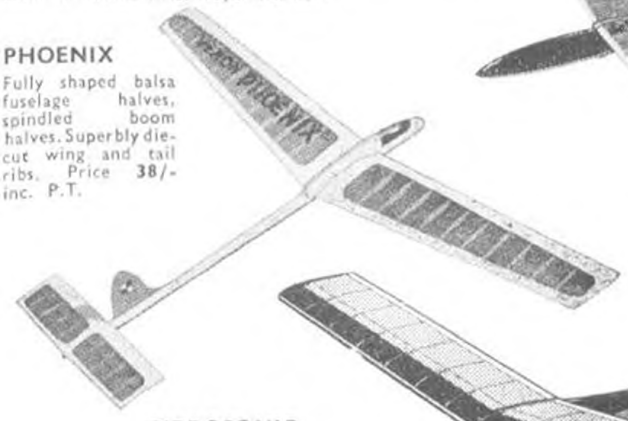

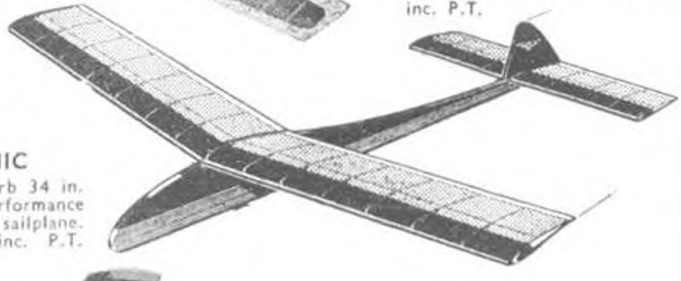

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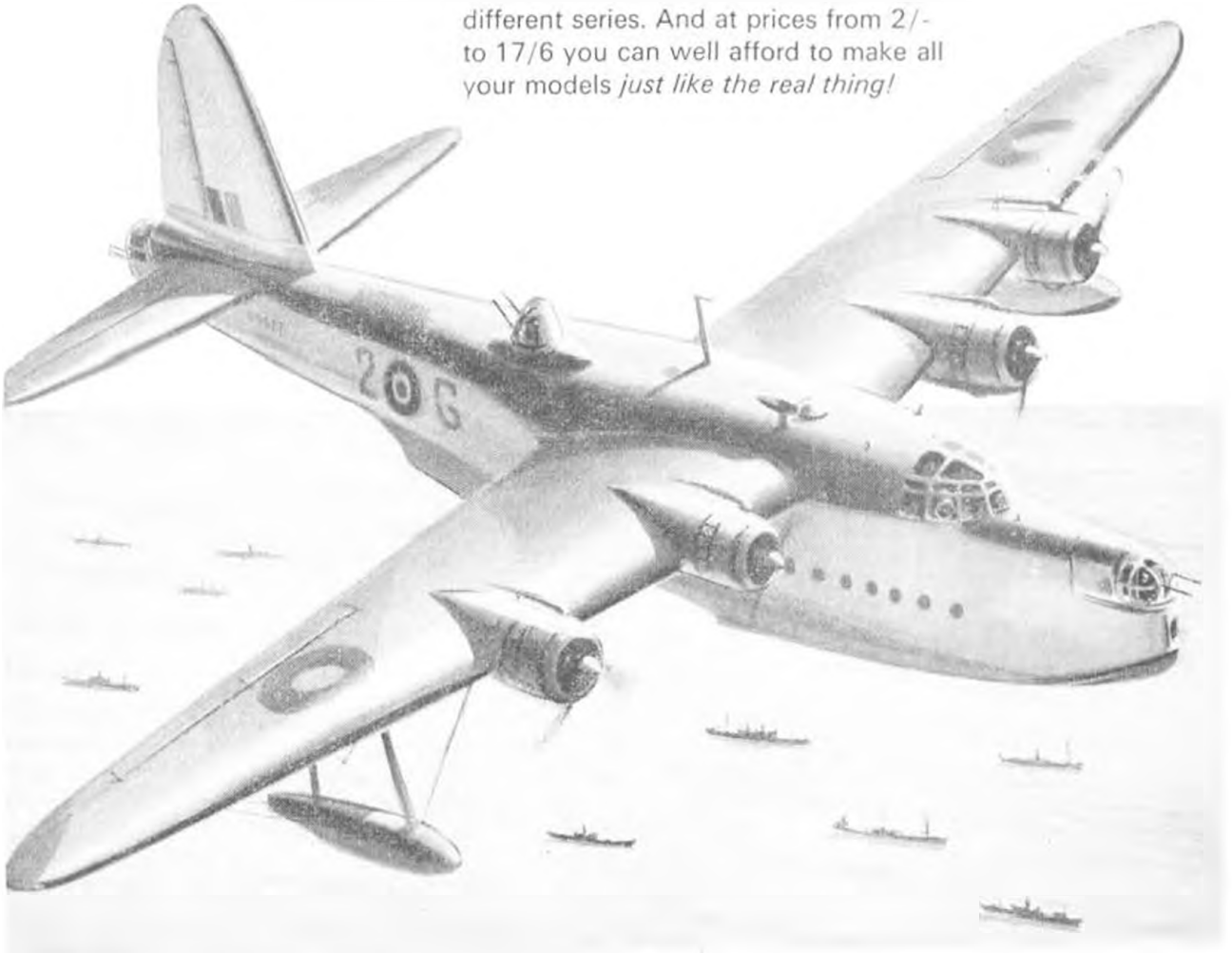

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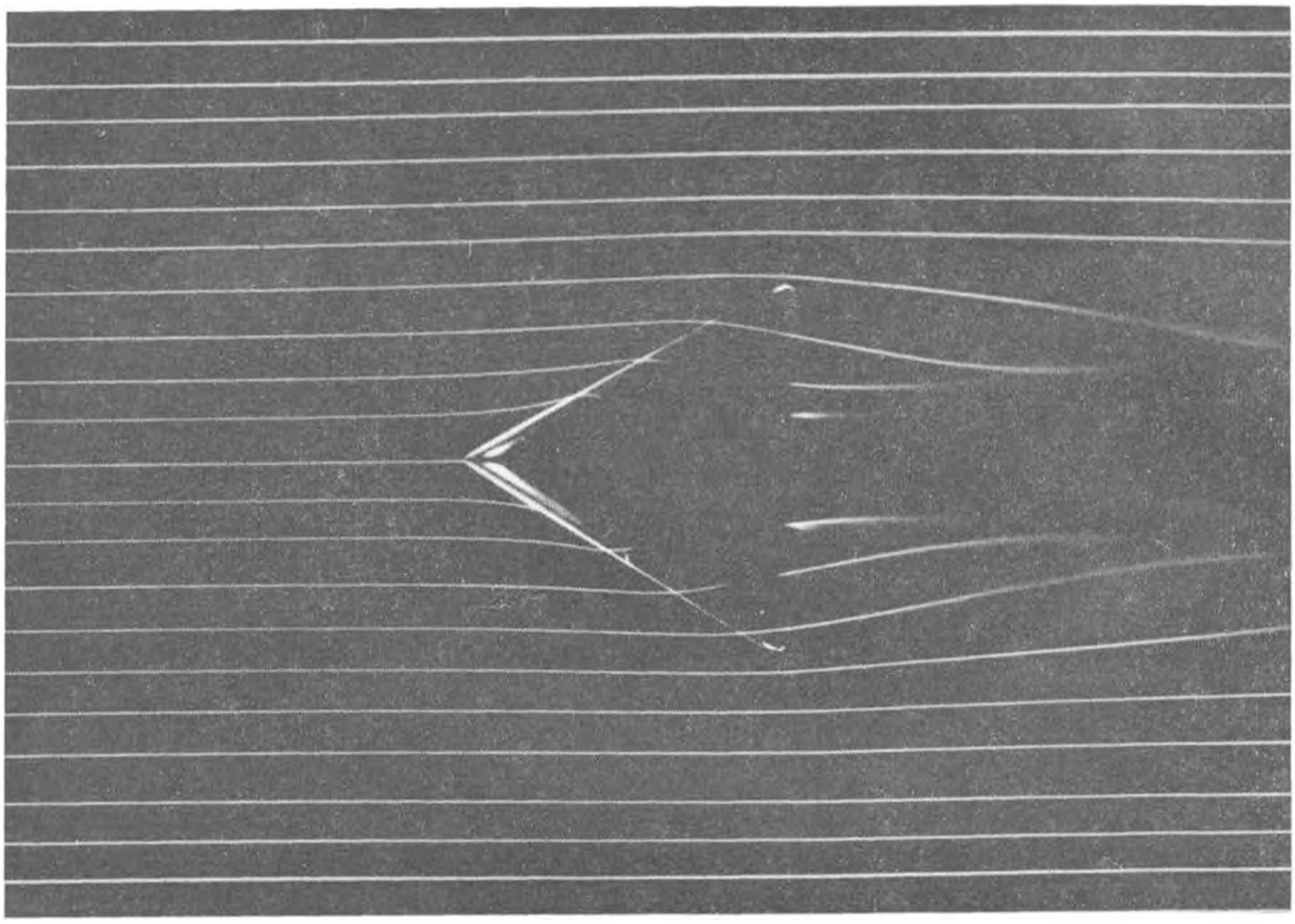

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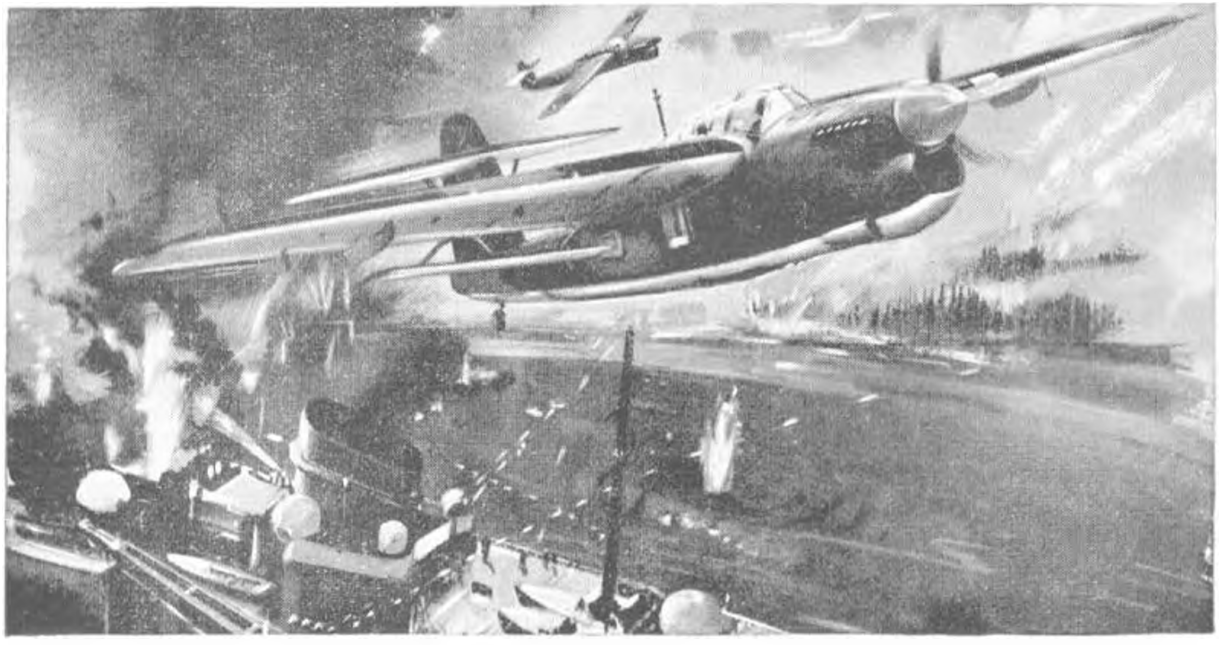

Dawn. April 1944. The place—Kaafiord, Norway. The Target—the Tirpitz, pride of the German Navy.

Aboard the Tirpitz watches were changing and sleepy-witted sailors were struggling from their hammocks. There was a smell of oil, of steel, of sleeping men. In the background a reassuring sound of crockery, suddenly, harshly, swamped by the sound of Barracudas at full dive and the awful impact of 500 and 1000 lb bombs. Within minutes it was over. 15 direct hits. 300 men dead. Into the distance droned the attackers, leaving three of their number to show that they too had paid a price. It wasn't exactly a curtain raiser for the Barracudas. They made their debut at the beaches of Anzio. They made an unrequested return performance over the Tirpitz.

The Barracudas were powered by Rolls Royce Merlin engines. Armaments were twin Vickers K and whatever else could be carried that was lethal. They were 39 feet 9 inches long with a wingspan of 49 feet 2 inches.

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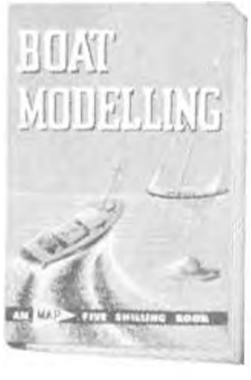

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Heard at the Hangar Doors

Exact replicas of the famous hangars at Brooklands were reconstructed at R.A.F. Booker along with an enormous windmill, section of the famous racing track around the perimeter and . . . the infamous sewage farm in which so many pioneer flyers "landed". They were for the film, "Those Magnificent Men In Their Flying Machines", produced by 20th Century Fox Films Ltd. Two of the aircraft taking part which did not have to be specially made were the Blackburn 1912 monoplane and the Deperdussin seen at left. These belong to the Shuttleworth collection and are maintained in tip-top flying condition. Much of the film was taken at Booker (to the inconvenience of the local High Wycombe model flyers who had to forsake the field last summer) and other scenes were shot at Skegness, Dover, Henlow and Cardington.

"Magnificent Flying Machines"

Cover subject and the main feature of this issue introduce what is certain to be the most fascinating film of 1965 to our readers. Already the stories connected with the making of "*Those Magnificent Men in Their Flying Machines*" are legion, and tempting photographs of some of the veteran machines to be seen in this aerial comedy have given rise to many readers' queries.

Pages 131-137 give drawings of 12 of the aircraft taking part and which are eligible for the scale replica competitions to be organised this year for prizes kindly donated by 20th Century Fox Film Co. Ltd.

First of these will be on May 9th, incorporated in the S.M.A.E. centralised scale model contest rally to be held at R.A.F. Hemswell, Lincolnshire. We hope to be able to announce other venues for contests to be held in the south next month.

Rules are to be kept within the most simple bounds. It is recognised that all 12 of the eligible subjects as drawn were virtually prototypes for which no manufacturing drawings exist and there are variations to be found in shapes and structures of almost every one of them. In fact the considerable amount of research undertaken by those who made the six flying replicas which are "Flying Stars" of the film (*Avro, Antoinette, Demoiselle, Eardley-Billing*, and *Bristol Box Kite*) produced little more than postcard illustrations and rough sketches in early magazines for some of the subjects. Faced with the same problems and eliminating the sail wing "*Picat Dubreil*" and "*Pavsat Ornithopter*" (the 13th and 14th different types which will be seen) which are obviously improbable modelling subjects, we are obliged to deviate from our normal insistence for precise scale authenticity.

In some cases the film replica machines had to be altered to improve airworthiness and certainly to provide stronger structures. Thus the modeller will have a very free hand not only in the selection of the subject of his entry but also in the manner in which he produces the replica.

Contest

1. Models to be made for entry into any of the following categories:
   (*a*) Radio Control.
   (*b*) Free Flight.
   (*c*) Control Line.
   (*d*) Static Replica.
2. Eligible subjects are the 12 which are drawn in the feature beginning on page 131 of this issue.
3. Models will be judged for scale, appearance, construction and finish, and additional points awarded for flight performance.
4. Cash prizes in the order of 1st—£10, 2nd—£5, 3rd—£2/10/- donated by the 20th Century Fox Film Co. Ltd., for each category. (Supplementary prizes will be awarded by Model Aeronautical Press Ltd.)

A complete listing of helpful material available in the form of plan/photo packs is available from the editorial offices. These packs contain whatever drawing information is available and a selection of photographs, illustrating film replicas in general and close-up detail.

Simply mark your enquiry "*Magnificent Flying Machines*" and we'll do our best to help you prepare your entry for the contests.

Tragedy in Yorkshire

The last day of January brought one of those most tragic events which come to shock us out of our complacency in the hobby of aeromodelling.

Fourteen-year-old Peter Charles Brown of Appleton-Roebuck, Yorkshire, chose to take his control-line model in a local field and aided by his brother John, started flying.

Minutes later, contact with a 6,600 volt high tension cable grid network across the field spelled disaster and though rushed to hospital this young modeller died from the effects of electrocution.

The youngest of three brothers, Peter had only recently moved from Bridlington and may possibly have been unfamiliar with the local flying area. There might also be other contributing reasons why he should have overlooked the horrible dangers of

flying a model in such a situation. One can reflect on this as an object lesson, but what an awful price to pay in terms of human life!

The hazard of flying *any* type of model which has a connection with the operator using any type of line is a matter of common-sense. What might not be fully appreciated is the fact that direct contact is not essential in damp conditions and fibre or other non-metallic lines are no proof of insulation. A dampened glider tow-line or a pair of Terylene control-lines can be equally disastrous in effect.

Having actually seen scorch marks left in the grass as footprints of one who so narrowly escaped death on one of our own local flying areas, we speak with feeling on this subject and urge all modellers to **FLY WITH CARE — AVOID POWER LINES.**

Coupe d'Hiver

As we go to press, we are very pleased to record the fact that 120 modellers have made application for entry forms in our Coupe d'Hiver postal event which takes place on alternative dates, February 21st-28th. The team travelling in person to the French International in Paris on February 28th is 10 strong and with several non-flying supporters should do very well, for it includes many leading names from the British contest fraternity. We hope to bring the results back in time for publication next month.

Meanwhile another nation has shown enthusiasm for the class (which for those who do not already know involves models with a minimum airframe weight of 2.47 oz. and maximum additional weight of lubricated rubber motor of .35 oz.).

The new nation is the Netherlands and on January 24th, four prominent clubs got together at Haarlem in very poor weather: de Vos from Amsterdam became the winner of this first Dutch event and we hope it will be the beginning of a new series of winter cup contests.

Radio Duration

New duration records have been established in France and the Netherlands.

On January 11th, M. Poulain from Vichy flew for One hour 14 minutes 10 seconds to establish a new French record and in Holland the well-known control-line stunt flier Willy van Dorp has established the Dutch record at 54 minutes 40 seconds. He was using his *Leprechaun* glider (an Aeromodeller Plans Service design) with 5 c.c. auxiliary engine power. We understand that a more recent attempt by Willy has pushed the time to over 70 minutes.

The Newcastle Nats

Location of the venue for the 1965 *British National Championships* to be held on June 6/7th is R.A.F. Ouston. For those who wish to find the position on the map the nearest village is Stamfordham and the entrance to the R.A.F. Station is on the B6318 road. An easy route by road from the South could be to use the A1 to Newcastle then A69 to Heddon, where one joins the B6318. From Scotland, the A69 and A68 routes are obvious choices. Those who travel by rail to Newcastle, will be able to continue the 12 mile journey to the Airfield by bus from the Haymarket. Fastest route from the South is of course by air, and here it is worthy of note that B.K.S. have a regular airline service between London (Heathrow) and Newcastle (Woolsington) 7 miles from Ouston.

A number of readers have enquired as to the possibility of arranging air charter from the London area. This would not represent any considerable saving due to the fact that an aircraft would have to be held for the weekend pending the return journey; but there would be a posibility that if sufficient inquiries were received of definite interest in air travel, some fare reduction could be effected. Those interested, should write to the Editor no later than March 1st.

The R.A.F. Station at Ouston is on a moor overlooking the Tyne Valley. It was an operational Fighter station in 1940 and has a Spitfire in the main entrance to commemorate its proud record. Many famous Squadrons including those of the Free French and Polish Air Forces were based there. Its present role is that of a relief landing ground for flying training.

New S.M.A.E. Address

A number of very important changes affecting the future of the Society of Model Aeronautical Engineers Ltd., take place within the next few weeks. Introduction of the single date membership renewal system operates as of April 1st and all clubs which are at the present affiliated with the Society will be requested to submit their collected membership fees prior to that date.

It will be to the advantage of all individual members outside the club framework to make their renewal at this time and all concerned should note the new address to which communications should be directed.

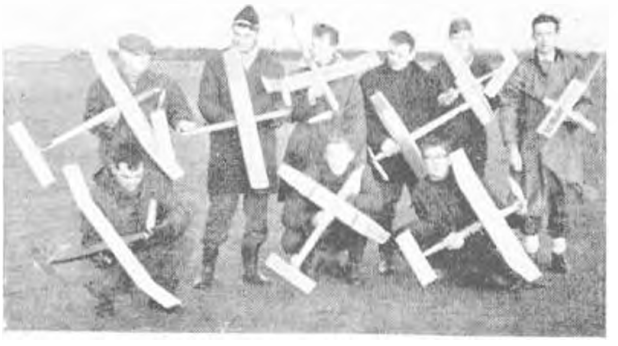
It is: Secretary Treasurer, S.M.A.E. Ltd., 15A Low Ousegate, York.

Faster Yet

Following our announcement in January issue of new American speed model records, we understand that Jim Nightingale and Roger Theobald have set a new 2.5 c.c. Class "A" record at 154 m.p.h. They were using the K & B 15 of the type seen at the last World Championships and generally known as the "Wart", on .018 in. single line. Another new record is 166 m.p.h. in Class "B", using the unusual combination of a K & B "64" with Super Tigre 29 piston and cylinder liner.

That Bulldog

Despite claims that the Solarbo Balsa advertisement last month illustrated various aircraft tail units ranging from the D.H.4 to the D.H. 82A, we affirm that the tail in question was undoubtedly that of a British Bulldog high altitude version. The unusual shape obviously caused confusion it was definitely not the usual Bristol fashion. Full marks to a clever advertisement agent.



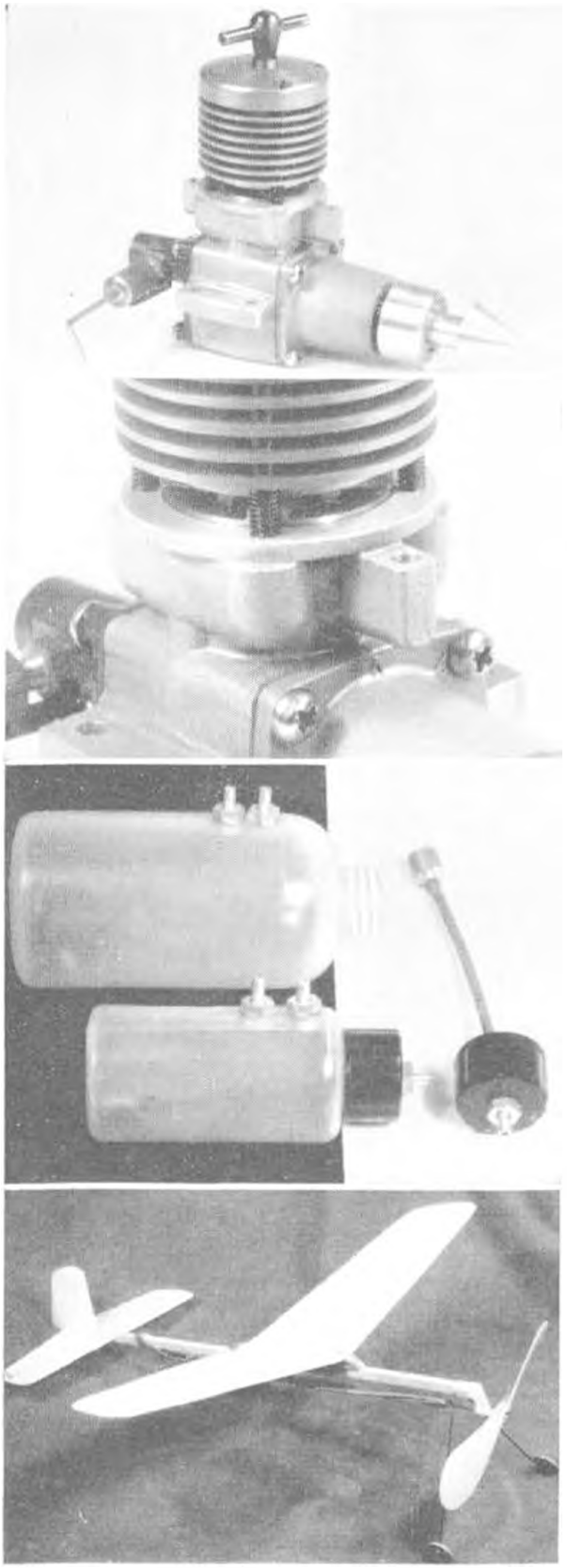
Nine entries in the first Coupe d'Hiver contest to be held in the Netherlands on 24th January, indicate a new keenness for the type which suits small field flying and of course wintry conditions. See "Coupe d'Hiver" above.

TRADE . . . . . NOTES

Eta Instruments of Watford have announced the Mk. III version of their well known Eta 15, 2.5 c.c. diesel racing engine. The only noticeable external difference that modellers will find is in the new crankcase casting, which has been redesigned to accept their muffler system as described in "Noise Annoys". Two substantial lugs have been cast at the front and rear of the crankcase, and a mounting flange slightly larger than the cylinder head diameter cast around the top end, just below the exhaust ports. The internal modifications affect the piston honing and boost the speed considerably at no cost to fuel consumption. We test flew a modified Mk. II with this type of honing and can vouch for its worth. Unfortunately a free flight model hit our racer in mid air wrecking both motor and model before reliable test figures could be obtained. Ken Bedford regrets that due to increased production costs the price of the 15 and .29 rose to £7 8 6d. and £7 13 10d. respectively.

From **Henry J. Nicholls & Sons Ltd.,** we "borrowed" samples of the Williams Brothers' scale W W I wheels, Whistler Ox hair brushes, Dubro flag cell clip, printed circuit board and R C clunk tanks that are welcome accessories. **Williams Bros'** wheels are available in 5, 3½, 2½, and 1 in. diameters, prices ranging from 12 6d. for the 1 in. to 59 6d. a pair for the 5 in. size. Moulded with a cream coloured plastic centre, coned on one side and with irremovable hollow black plastic tyres they are remarkably tough (and rather heavy) at 7 oz. for a pair of the 5 in. size but just the job for a 10 channel Sopwith Camel. **Whistler** Ox hair brushes have been our personal choice as doping brushes for a long time. Of flat section they come in ½ and ¾ in. widths, priced at 6 - and 4 6d. Soft and supple, they last for years with careful cleaning. The copper laminate printed circuit is bonded to a glass fibre board ready for the R C home constructor to etch and is 9 6d. for a 9 x 4 in. panel ⅛ in. thick. Those superb cased and glazed **Tatone** 1/24th scale instruments we reviewed last in June 1963, and which many scale fans have been seeking are in stock at HJN's for 17 6d. a packet which includes vital fitting instructions. From **Dubro** a sturdy flag cell clip at 3 11d. for the "other end" of the glow plug leads forms an enterprising change from the popular glow-clip and offers a quick detach connection at the battery or acc. end. Radio control clunk tanks in 2, 4, 6, and 8 oz. sizes with both fill'er and vent pipe on one side so the engine feed line need not be disconnected whilst filling the tank are so'd at 5 6d., 6 -, 6 6d., and 7 6d., respectively. Also from H J N's come two of the new Series '64 K & B engines. The .29R at £11 10 0d. and 15R at £9 19 6d. are basically the same as the series of '61, but with larger transfer passages no hard chrome plating on the piston or crankpin, solid cylinder head with changed internal contours, strengthened backplate and elimination of skirt transfer ports. These are two very well made and most powerful engines suitable mainly for high nitromethane operation speed model flying. Also from the U S A the new **Carl Goldberg** [illegible] 42 in. span, single channel radio control model to take .049 engines is the latest addition on the Holloway Kit Shelves. Carl wrote to tell us how well the Kit is going in the States and following the success of the "Falcons" we suspect the Skylane will be popular here too.

Ready to fly models are increasingly seen in the model shops



Top to bottom. New Eta 15 Mk. III incorporating mounting lugs for the shortly to be released silencer, and modified piston fitting. Close up shows lugs and crankcase sealing flange. H. J. Nicholls and Sons Ltd., radio control clunk tanks shown in 2 and 4 oz. sizes, black plastic screw on cap and alloy feed/filler nipples. Gram 7 ready to fly rubber model goes together in five minutes but could do with more downthrust. Left, Whistler Ox hair dope brushes in ½ and ¾ in. sizes from H. J. Nicholls last for years if used with due care. 3d. piece is for size comparison.

Schuco Hegi Frechdax above now nears completition and looks a very nice robust model. Note the Spinaflo silencer fitted to Enya .09 power plant.

and coming to swell the ranks are the **Gram** range, imported from [illegible] by **Richard Kohnstam.** The models available are the Gram 7, 8, and 9 at 2 11d., 3 11d and 4 11d. each. Packed in polythene with card building instructions Gram 7 was fitted together for test (took us five minutes) its expanded polystyrene type wings easily dipping into position. Very light in weight it flies well, and features a moulded nylon nose propeller bracket.

Geoff Franklin of Leicester has introduced a range of R/C clunk tanks in sizes ranging from 1 to 16 ozs. costing 5 3d for the smallest and the largest at 12 6d. These are tough bottles with nylon plug in tops and copper tube vent feed and fill pipes, firmly fixed.

Our test model of the **Hegi** "Frechdax" has now reached the painted stage and is shaping into a very nice model. The fuselage was sprayed with a **Humbrol** Jet Pack and for the fust time some trouble was experienced with air bubbles in the finish but this was not bad enough to worry about. Wings were covered with the new **Keil Kraft** medium weight nylon applied dry and a good finish obtained after three coats of **Dimmine** dope. The tailplane is a flat structure and tends to warp when doped, so we advise intending builders to dope pinned to a flat board.

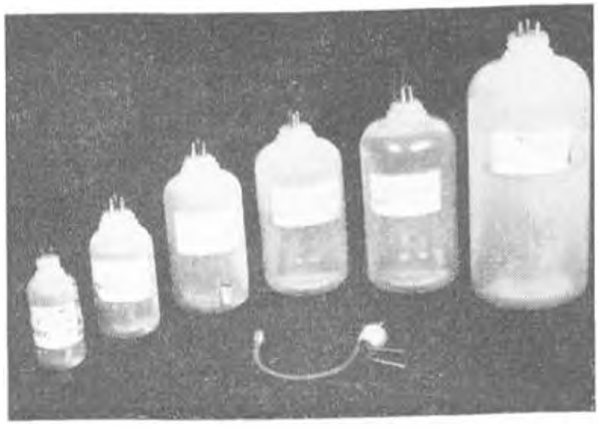
We are informed that the popular **E.D.** 2.46 Racer diesel is now back in production in a new version. Throttle characteristics of the R/C version are reported to be good, giving a very slow idle, price is £6 12 6d including a fitted **Webra** silencer.

Top Flite's Jr. "Blue Streak" from **Ripmax** is a very hot 31 in. span 2.5-3.5 c.c. combat stunt model, designed by George M. Aldrich originator of the A.P.S. Peacemaker" and Top Flite "Nobler" stunt models known throughout the World. Similar to the A.P.S. Peacemaker but slightly smaller this is really quick to build and finish, our own original version built a few years ago really moved with a Fox 201. Priced at £1 12 6d, this is a good buy. The novice should have no difficulty following the very clear plan when assisted by very good die cut parts and pre-shaped leading edges, etc.

John Tatone, producer of those clever tank mounts, timers, and a host of other specialised items has now produced a "Chicken Stick" no not a table implement, but an engine starting prod for those with sensitive fingers. This is a hard plastic rod attached to an enamelled handle and should be a useful replacement for those who hesitate when flickering engines. Tatone quotes it being sized to suit .049 to .60 engines and it sells in the U.S.A. at 69 cents.

Pressletta Dri-Transfer lettering is the latest of the ever expanding range of pressure sensitive dry transfers on sale and of a multitude of uses to the aeromodeller. The letters are printed on a tough plastic backing sheet measuring 10 x 7 in. and are available in many different styles. Technical stuns, symbols and spare sets of vowels and letters are also available. These dry transfers are very handy for adding extra details to plastic kits when using one's own favourite markings for a particular aircraft. We have also seen them widely used on flying scale models and as the method of applying names and addresses to R/C or U/C models as they will never come off if sealed with fuel proofer. To apply Pressletta Dri-Transfers just place them over the position required and bone into place by rubbing the back of the plastic backing sheet.

(Continued on page 140)



Top to bottom the Series '64 K & B .15R and .29R are noticeably different from the '61 series with solid cylinder heads. Revell Polikarpov 1-16 Rata has removable engine panels and is shown in Nationalist markings from the Spanish Civil War. Revell's Brewster Buffalo includes sliding cockpit canopy. Note civilian and military markings. Frog Ryan N.Y.P Spirit of St. Louis fits together well but needs alteration of the letter 2 as shown here, on the top wing. Left, Franklin R/C Products clunk tanks with moulded nylon plug in tops and firmly fixed feed/filler pipes.

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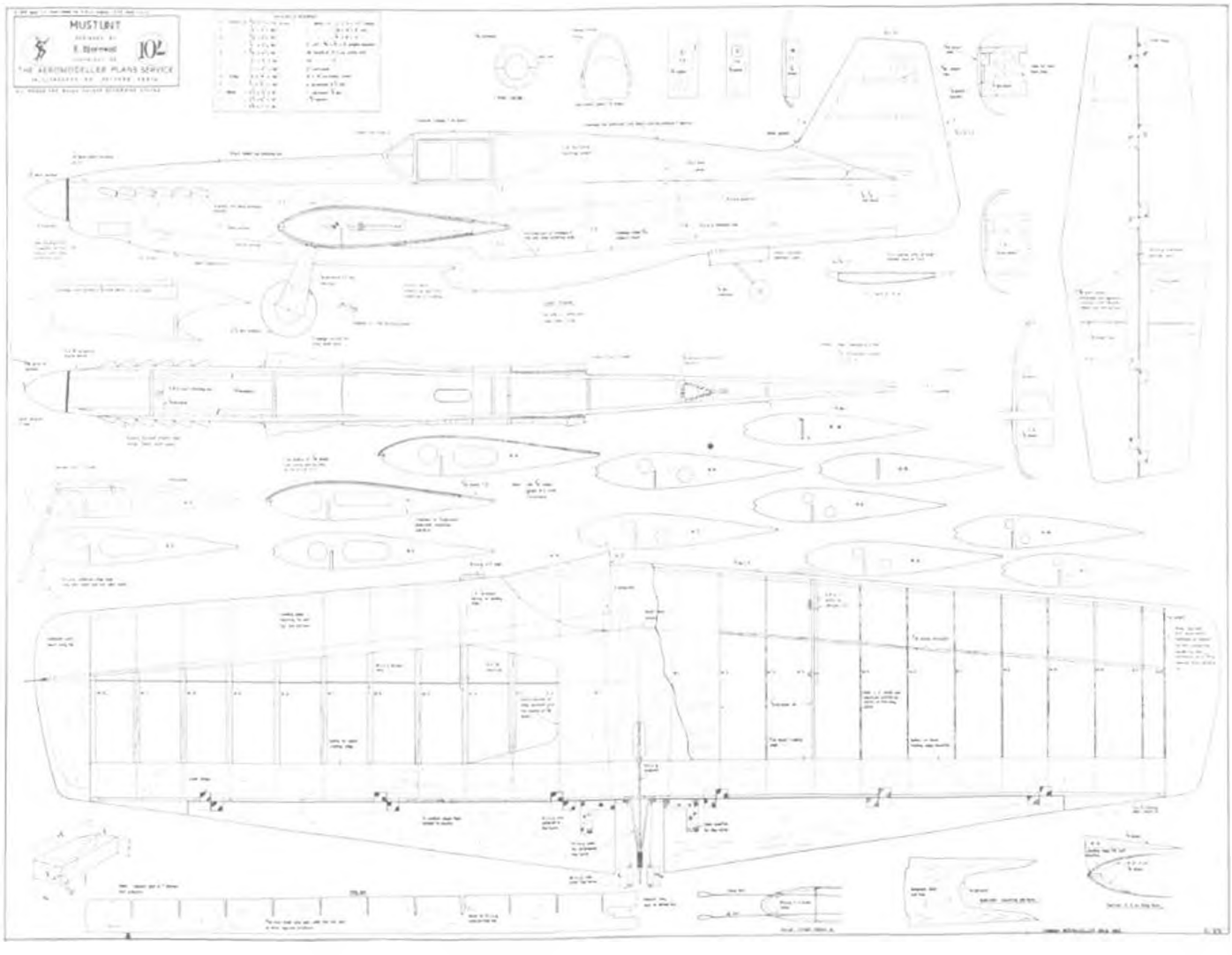
from Sweden
ERIK BJORNWALL'S
semi-scale control-line $51\frac{1}{2}$ in. span stunter for .35 cu. in. (6 c.c.) engines

THE RESULT OF EFFORTS to combine the best features of the leading stunt model designers' models with a realistic appearance, this Swedish design closely follows the trend towards semi-scale contest models. Based on the North American P-51 B (it is rather surprising that no one seems to have done it before) the "Mustunt" has very attractive lines.

You will probably recognize quite a few features "borrowed" from well-known stunters: Nose and wing construction and lifting section fin from the *Nobler*, differential flaps and leadout arrangement from the *Thunderbird*, tank design from Lloyd Cur-

FULL SIZE COPIES OF THIS 1/8TH SCALE REPRODUCTION ARE AVAILABLE THROUGH A P S AS CL 878, PRICE 10/-, POST FREE



tis' *Moody Moomey*. The wide track undercarriage without any spring action was decided upon after the designer had seen Louis Grondal's and Frank Warburton's splendid landings with this type of undercarriage at the 1962 World Championships.

Construction

First of all cut out two each of the ribs W1 to W12, noting that W4 which holds the undercarriage is made of ¼ in. ply. Cut holes for the leadouts and unless your ribs are from very light balsa, cut lightening holes.

Bend undercarriage legs from 10 s.w.g. piano wire and drill holes for J-bolts in W4-ribs now as it is difficult to do this later. Do not bolt legs to ribs yet.

Cut out and splice lower trailing edge and pin it to your Building board. Cement ribs to trailing edge and spot cement wing spar in position. Block blocks and hollow as shown on plan. Cement upper trailing edge, trailing edge cap and leading edge in place. Join the two halves of the spar and brace with scrap balsa. Cut out bellcrank mount and cement in place. Note that the bellcrank is positioned so that the pushrod is on wing centreline (when seen from above) when the controls are held in neutral. This is essential to get equal flap differential both up and down. Ribs W1 are cemented securely to spar as you cannot reach them later on when you have sheeted the centre section.

Mount bellcrank, complete with leadouts and pushrod. To avoid excessive wear the designer strongly recommends the use of bronze bushings in bellcrank and horns.

Note that the wing is double sheeted between the ribs W2 to take the stresses of hard landings. Cement the first layer of $\frac{1}{16}$ in. sheet to the centre section, followed by the leading edge sheet.

Fasten undercarriage legs to W4 with J-bolts and secure with Araldite. Mark undercarriage position on lower leading edge sheet, drill ¼ in. hole and cement in position. Glue the second layer of centre section sheet on top of the first one.

Check wing for warps. Block up wing straight again and cement spar carefully to ribs and let dry overnight. Carve tips from soft blocks and hollow the left one. There is no reason to hollow the other one as you are going to put lead in it anyway.

Cut out flaps and sand to section. Make flap horns. Note that the outboard horn is ½ in. longer than the inboard one. (Veco's flap horns have the same dimensions so you can use them, if available.)

Attach flaps to wing and connect pushrods, making sure that both bellcrank and flaps are in neutral position at the same time.

The tailplane is carved from soft ½ in. sheet, sanded to airfoil and cut out as shown on plan. Cement ribs in position and cover with very light $\frac{1}{16}$ in. or $\frac{1}{8}$ in. sheet. Mount elevator horn and attach elevator to stab.

The fuselage is best started by shaping all the parts and cementing engine bearers and nose doublers to fuselage sides, marking former positions on the sides. If you have an engine with a wider crankcase than the Merco 35 you have to make all formers correspondingly wider.

Cement F1 and F2 in place. Be careful to set them at right angles to the sides. Cement the sides together at the rear, noting that the whole fuselage is curved. Add resting formers except F3B which is not added until the wing is in position. Drill holes for engine bolts and fix nuts securely on top of bearers. Fill the space between the sides, above bearers and in front of F1 with hard ¼ in. sheet. Add tank floor and cowl tie-down bar.

Assembly

Cement wing and tailplane to fuselage and connect pushrod to elevator horn. Check that wing, tailplane and fuselage are at right angles to each other. Instal tail wheel mount and strut.

Carve fuselage top and bottom blocks to approximate shape from very light balsa. Spot cement in position and sand. Make engine cowl at the same time. When the right shape is obtained remove blocks and hollow as shown on plan. Cement blocks permanently in place (except cowl, of course).

The fin can be built directly on the plan as the right side is flat. Cover with soft $\frac{1}{8}$ in. sheet, sand smooth and cement to fuselage, offset as shown.

Cut out four fairing ribs W13 and two W14 and cement to wing. Make a paper template for the fairing sheets and check that it fits well. Cut out the four parts from $\frac{1}{16}$ in. sheet, taper at rear to blend with wing and cement in position. Sand, fill in any irregularities with plastic balsa and make wing and stab fillets, either from plastic balsa or soft balsa. Add cockpit interior and, if you want, a balsa pilot. Remember those S.M.A.E. appearance points. The canopy aft of the ply former is from sheet celluloid, part forward of the former is cut from a bubble canopy or moulded from sheet celluloid. Add dummy exhaust stacks and undercarriage covers.

Sand the entire model and fill in all irregularities with plastic wood, etc. Brush on a couple of coats of sanding sealer and sand. Cover wing and nose with silk, and rest of the model with light tissue. Dope tight and apply sanding sealer, sanding between each coat until you have a smooth surface without any dents or scars. Now decorate the model in any authentic colour scheme. The original is olive and light grey with a red nose and spinner and white stripes around wing, tailplane and fin. Add transfers and fuel-proof. Be especially careful to fuel-proof engine and tank compartments to prevent any fuel from soaking into the wood. As you can see from the plan the tank is removable by simply opening the engine cowl. This arrangement is preferable should any adjustments be necessary.

The original model weighs 45 oz. but that includes 3 oz. of nose ballast (use of too heavy balsa for the tailplane!) so it should be possible to build a Mustunt that weighs in at 40 oz. However, up to 48 oz. is tolerable if you use a good .35 engine.

Good luck with your Mustunt and may all its missions be successful!

Seen at right and in heading Erik's Mustunt has realistic lines and suitably decorated could gain valuable appearance points in contests, as well as combining the best of Palmer and Aldrich design features.

Persian Adventure

British modellers fly at Teheran

Heading picture at left gives an impression of the number of people watching Peter Cabrol performing aerobatics with the Veron Concord at Mehrabad airport Tehran during a flight demonstration close to the main control tower and Headquarters buildings.

H.I.M. the Shah of Persia holds the transmitter as Phil Smith explains the controls. Model in foreground is 10 channel Merco .35 powered Robot, with the tail of the Concord at right. Reading l to r, H.I.M. Queen Farah, H.R.H. Crown Prince Reza, television recording engineer, H.I.M. the Shah of Persia, Phil Smith, Dr. Safedi, Brigadier General Rafat, Mr. Arbabi (Director General of Civil Aviation in Persia) and officers.

WINGING THEIR WAY in the comfort of a Qantas Boeing "V-Jet" 707 at high speed and altitude over the desert waste of the Middle East, two British modellers sat pensive, wondering what to expect in the ensuing two weeks.

Phil Smith, noted designer for Model Aircraft (Bournemouth producers of "Veron" kits and Peter Cabrol, radio equipment designer and partner in C & L Developments, producers of Climax Servos, had been invited to demonstrate radio-controlled models to high ranking authorities by the Iranian Civil Aviation Club, at Tehran. Brigadier General Rafat had seen R C demonstrations during the Tiger Club Air Display at Fairoaks aerodrome, and also visited the "Veron" factory extending verbal invitations at that time. By happy coincidence, Phil Smith also had a contact with Iran. Phil Oddy, a B.O.A.C. engineer, had promoted Aeromodelling in Tehran, and so when all the formalities of the trip had been finalised, the two modellers did at least have the prospect of meeting people they knew, despite what were otherwise to them strange surroundings.

Imagine the responsibility. Asked to fly models before authorities in the Air Force, Aero Club, and even the Royal Family, one could have no patience with equipment malfunction, and must quickly adapt oneself to the high altitude and rarified dry air conditions, as well as the requirement to operate in confined spaces before large crowds.

Their confidence quite unshaken, our two modelling Ambassadors landed in the early hours at Mehrabad airport to be greeted by their contacts and conducted in chauffeur-driven car to a comfortable hotel in the city centre on October 26th.

On the following day, they were given a conducted tour of the capital city to admire the beautiful surroundings, crystal-clear air, and brilliant sun.

A main runway at the airfield was made available to them for their first practice session. Equipment included a Veron *Robot* with 10 channel

R.C.S. radio, Merco 35 and a Climax 10 channel Servomite pack. Span had been increased to 52 in., but even so, the rarified air produced strange flying, trim and both fuels and propellers had to be changed to suit the 4,500 ft. A.S.L. altitude. Flying speed was greatly increased, manoeuvres opened out and take off runs were approximately 25 per cent longer. One particular flying hazard was having to anticipate the stretched pull-out from any loop.

Another multi-channel model taken was the prototype of the new Veron *Concord* using the same equipment as the *Robot*. Mini versions of both Robot and Concord were used for single channel,

the *Mini Robot* having R.E.P. Gemini, Webra Piccolo and Elmic Commander escapement. The *Mini Concord* was fitted with A-M.10, R.E.P. "Twin-triple" and Bonner Varicomp escapement. Duplicates of these four basic demonstrators were taken as well as adequate spares.

A foretaste of the impressive organisation that was to follow, came during the first practice session when the radio monitor flooded the air with innumerable transmissions on the 27 Mc/s wavelength. A hasty word with the Minister of Communications produced an impressive silence, and all interference subsided so that practice could begin.

Having acclimatised themselves and become used to the new flying characteristics, Phil and Peter were ready for the first official demonstration which was to be in the Amjadieh sports stadium. Meanwhile Phil had most unfortunately pulled his achilles tendon during practice when having to put the extra heave into a launch and this gave him considerable trouble over the next few days.

The stadium was somewhat smaller than our own Wembley arena, and an immediate decision was made on sight of the forest of flag poles and floodlights to restrict the demonstration to the lower power single channel models. A take off in the midst of a 25,000 crowd had little appeal, so the fliers obtained permission to climb upon the Shah's enclosure and so control the model from a hand-launch, approximately 40 ft. above ground level.

The occasion was the birthday celebration of His Imperial Majesty the Shah of Persia, who with, H.I.M. Queen Farah and their son, His Royal Highness Crown Prince Reza awaited the spectacle.

Ascent to the lofty launching point was hazardous enough, not only for the climbers, but also for the search for arms and explosives by the Royal bodyguard! When eventually the model was launched, Dame Fortune played her hand and control proved intermittent. The reason for this was the very large metal roof on which the fliers were standing, and which caused a blank-out of signals, particularly when the model was in orbit at a lower level. One miraculous pass straight through the Royal enclosure from one side to the other under the very feet of the operators must have been a sight worth travelling 10,000 miles to see. When the motor cut for a controlled landing in the centre of the arena the delight of the crowd produced tumultuous applause for what must certainly have been a very brave as well as impressive display.

There followed six hours of rythmic exercises and marching displays, etc., by the Imperial Guard followed by the finest show of fireworks the two Britishers had ever seen.

Phil's leg became more troublesome, and he was obliged to spend a few days in bed but time was not wasted ; a *Colt* control line trainer and *Nimrod* rubber model were made from Veron kits and together with another made by Mr. Oddy these were to be presented to H.I.M. the Shah for young Crown Prince Reza's birthday.

Next time more space was offered on the aircraft ramp in front of the Shah's personal pavilion and hangar at Mehrebad airport. During the 90 min. show, all models were flown and the H.I.M. the Shah was given personal instruction on radio-control and tried it for himself. Televised in its entirety by Iranian TV with Phil acting as commentator whilst Peter flew, the series of aerobatics performed at the national airport were a great success. So much so, that the Shah's brother, H.R.H. Prince Golam Reza and high ranking air force and army officers were to have another display at the airport and one of the jet pilots received instruction (not without incident) on how to fly radio-control models.

A last display before 8-10,000 invited members of the public was made at Mehrebad when the airport was closed to traffic and an area cleared for the demonstration. The German Olympic team, who were waiting to take off on their way back from Tokyo had to spend another afternoon at Tehran, like it or not. Once more the display was televised and a great success.

In addition to the flying displays, lectures were

The Royal Family watching a flight demonstration with Phil Smith giving a commentary to H.I.M. the Shah of Persia. Note the winder and Nimrod rubber model at the ready for demonstration.

Phil Smith giving a lecture to young members of the Iranian Civil Aviation Club in Tehran. Phil is holding a Mini Robot with one of the students operating a Gemini transmitter. Model being held in foreground is a Veron Nimrod rubber free flight model.

given to junior members of the Iranian Civil Aviation Club and a 25 minute interview with the Minister of Propaganda was broadcast on television. Although very little time was found for relaxation, a trip was arranged by Viscount to the old city of Isfahan to see the famous blue mosques and it was largely film and colour slides of the sight-seeing trips which were used to illustrate a most entertaining lecture Peter and Phil gave to members of Esher M.A.C. early in December.

The return flight to London by Comet IV in B.O.A.C. colours was no less interesting and formed a wonderful ending to a fortnight of very hard work and responsibility. Needless to say the Iranian authorities were most impressed, and we understand that the hobby of aeromodelling is now recognised for its worth in education, and helping to make the nation air minded. Trade relations have been established in the model aircraft field which we hope will continue for many years to come

It is with regret that we learn that Phil's leg became worse after return and necessitated a special operation which has required long convalescence. We wish him well and look forward to seeing the Veron display on show at the 1965 rallies. He can take consolation in the fact that the flight demonstrations of his two latest designs could not have been better appreciated or put to finer use, nor too, could Peter Cabrol be more satisfied with the trouble-free performance of his Climax Servos

At right the young Crown Prince Reza gazes in awe as a radio controlled model performs aerobatics during a demonstration flight

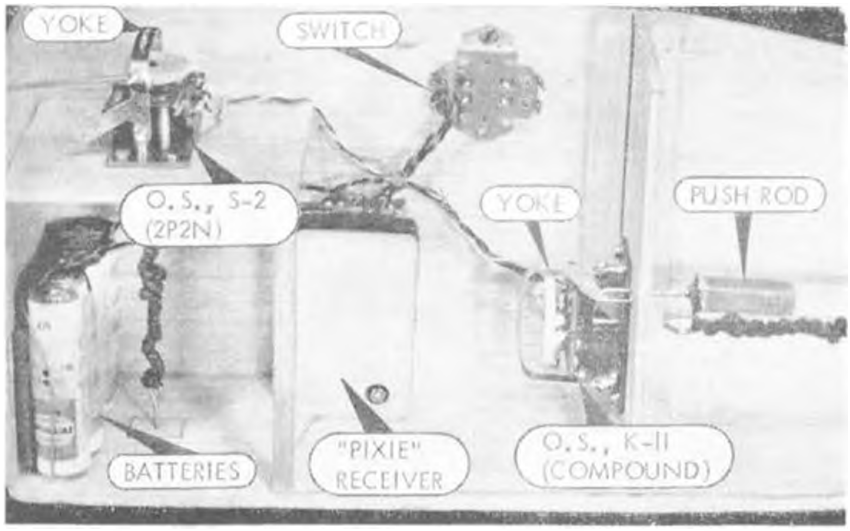
Phil Smith is seen on the left releasing the Concord during the public display at Mehrabad airport on our "Guy Fawkes" day, November 5th. Note proximity of airport buildings.

Getting started in Radio Control

PART NINE

by E. F. Bryant

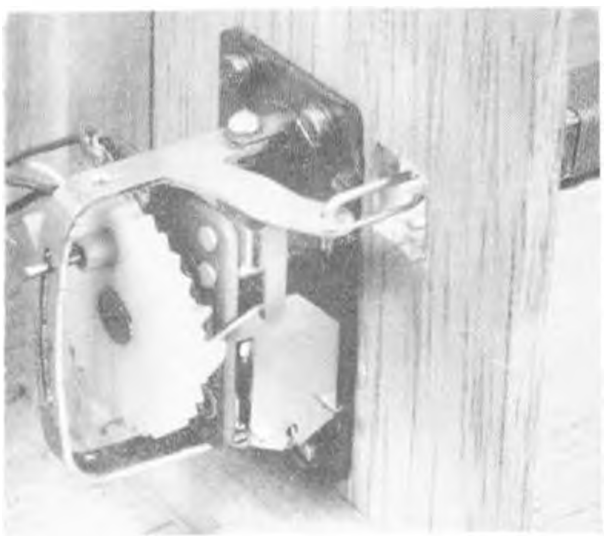
USING THE PUSH-PULL COMPOUND ESCAPEMENT



Layout in our test rig of the O.S. equipment with the push-pull action for both the engine and rudder escapements. Close-up of the O.S. K-11 type Compound used for the rudder, below left, illustrates how we use a wire clip connection from the yoke to the pushrod. Note the ratchet wheel which controls rate with a "rattler".

IN CASES WHERE IT IS impractical to install the escapement right in the tail of the aircraft, or where the modeller would rather avoid the torque rod method to move the rudder from one side to the other, he may well wish to consider the merits of another type of escapement, or, rather, a different application of the movement afforded by the escapement. This is the type which is popularly known as the "push-pull", and, as the name implies, it operates the rudder by a direct push or pull movement effected through a single rod, or, in special cases, through two rods and a lever. The mechanism which produces this different movement is a simple one, and, in fact, an escapement of the "Bang-bang" type *could* be modified to give this movement, although this is not generally recommended.

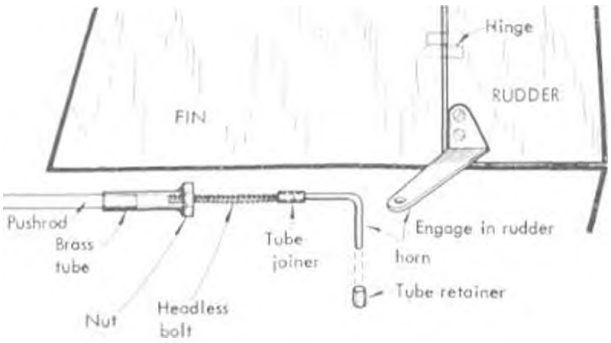
Basically, the actuator is the same as the simpler type, but, instead of the driving spindle terminating in a crank, it is fitted with a yoke and bell crank from a wheel. This wheel is, in turn, usually fitted with stops, arranged appropriately so that with each signal from the transmitter, instead of turning quickly, it is slowed down by a "rattler", or brake, bearing against the serrations and escaping at a fairly high speed as the wheel turns. In this way, a smooth, even, and much slower movement of the wheel is produced, and controls are selective.



Projecting from the face of the wheel, is a stud or post, engaged in a slotted yoke, pivotted at both ends at points somewhere behind the wheel, so that, as the wheel turns, the yoke is moved up and down. On one side of the yoke, projecting upwards, is a metal arm, and it can thus be seen, that as the yoke moves up and down, so the arm moves backwards and forwards. It is this movement which will operate the rudder. All that is normally necessary is a straight rod from arm to rudder, and all movement will be transmitted.

When installing this type of actuator, there are one or two extra points to bear in mind. Firstly, because of the yoke and its arm, there must be sufficient room around the component to ensure that there is absolutely no danger of any moving part being stopped or impeded in its action. Secondly, the actuator must be so positioned that the driving rod is completely free to emerge from the fuselage and engage in the rudder yoke, while the rod itself must be as near to a right angle as possible, to the actuating arm of the escapement. This is to ensure that full movement is obtained. Naturally, both the pivots on the rod must be easy moving and accurately lined up, and, equally naturally, the rod itself must be rigid enough to withstand bending strain when under compression. It could be pointed out here, that, to move the rudder from neutral to one side during flight, even in the case of a moderate-sized model, requires a fairly large pressure, more perhaps than is generally realised, and this pressure is often enough to bend a piece of piano wire, thereby inhibiting rudder movement. This, in turn, will produce a puzzling set of inconsistencies in the performance of the model, giving varying amounts of rudder movement at different air speeds.

From this, we may well conclude that piano wire is generally unsuitable as a push rod, and so a piece of wood may be used instead, always remembering to make it as light as possible consistent with the

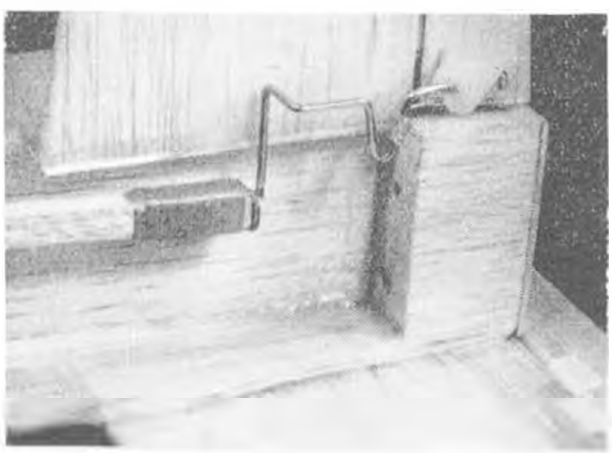


strength required, so as to avoid too much weight in the tail. When fitting this type of actuator, difficulty will often be experienced in setting it so that the rudder is exactly at neutral in sympathy with the actuator yoke, so that some form of fine adjustment is desirable. This may take one of several forms. On some actuators, for example, an adjustment is possible at the yoke itself, although this is not always very "get-at-able" after installation. A better idea is to have the adjustment at the tail end, and an adjuster of this type can be easily fabricated as is shown.

As can be seen, if the rear end of the rod is disconnected from the rudder yoke and screwed in or out of the nut, the rod will be altered in length, thereby adjusting the rudder position. This will give a surprisingly fine adjustment, and one which is simple to make on the flying field. In many cases too, the modeller will find it a bit of a problem to fit his actuator on to a former which is already a part of the airframe and glued rigidly in position. The answer, of course, is to mount the actuator on another former of suitable size and shape, and then to fit the whole to the existing former. In order to do this, the fuselage former must be cut out to take the shape of the actuator, and to allow the rod, and usually the actuator arm as well, to pass through it. Of course, the amount of cut out, and the shape of it, must depend upon the type of actuator to be used, and this should, if at all possible, be determined and acted upon, before the fuselage is assembled, because to attempt to cut the middle out of even a balsa former already in the fuselage can be a difficult, and sometimes even disastrous task.

Generally speaking, it is a good plan to make the fuselage former of balsa, as is normally shown on the plan, and then to mount the actuator on a former of ply, or even ply and balsa "sandwich". This will ensure a strong mounting, and will not detract from the strength of the fuselage originally intended at that point. Most actuators will be attached to the former by small nuts and bolts, and if this is the case, it is highly desirable to fit lock nuts, or some other form of lock (*not* a blob of balsa cement) to keep the nuts on. It is surprising how easily an unlocked nut will unscrew itself within the fuselage, and any movement of the actuator in flight will, no doubt, have a discouraging, though possibly spectacular result. It must be stressed that all too often it is the little thing which spells the end of a good model, and that attention to detail in construction never fails to pay off in the end. If there is no provision for bolting the actuator to the former, this can be done by using a good adhesive such as "Araldite", but a more positive result can be achieved by making two formers, and sandwiching the actuator mounting plate between them. In any case, be sure that the mounting is firm, and cannot slip in any way. Yet another point to watch is that the actuator is mounted square in the fuselage. Never should it be fitted to a former assuming that the former itself is in the correct position, because a former may be a fraction out of true without having any effect, but this does not apply to the actuator.

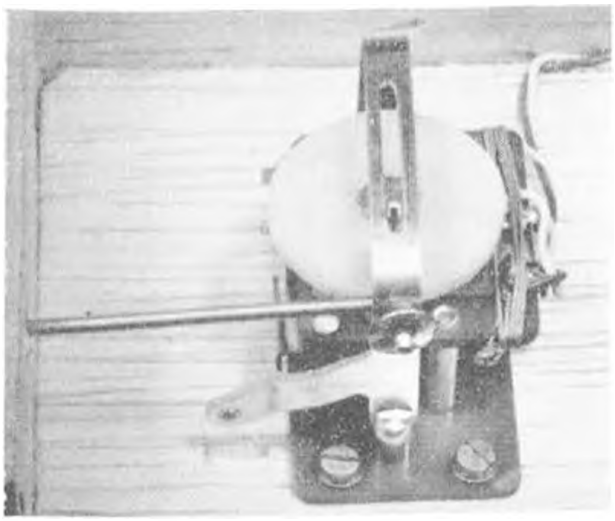
If necessary, packing pieces can be glued into the fuselage to true up the actuator position, and it will be found in practice that the actuator can be held temporarily in position by attaching the rubber drive and putting on a few turns. This will hold the actuator mounting plate firmly against the former in the fuselage, thus allowing the whole thing to be correctly lined up, and packing pieces inserted where necessary, before the actuator is finally secured. With regard to the push rod, it cannot be over-emphasised that this must be completely free to move backwards and forwards, and that its forward end must be an easy, but very definite, fit in the hole provided at the end of the actuator arm. Any looseness in either end of the push-rod can result in "flutter" of the rudder during flight. While this, in itself, may not be important in a model, it does produce a degree of extra vibration which is always undesirable, and, of course, it will also result in faster wear of these bearings which, in turn, aggravates the condition.



Close up at left shows how the wire end at rear can be contorted to provide adjustment (with the "Vee") and a simple slot used in the fuselage top or side by bending the vertical dog-leg.

At left, a suggested home constructed adjustment end for the pushrod and above, a clevis similar to those from the IBM typewriter which has become widespread in use for pushrod ends and has screw adjustment.

Above are the pushrod ends marketed by Graupner through Ripmax in this country and which have ample adjustment by means of a turnbuckle. At right, a close-up of the O.S. S-2 Motor control escapement with yoke arm drilled for the drive pick-up.



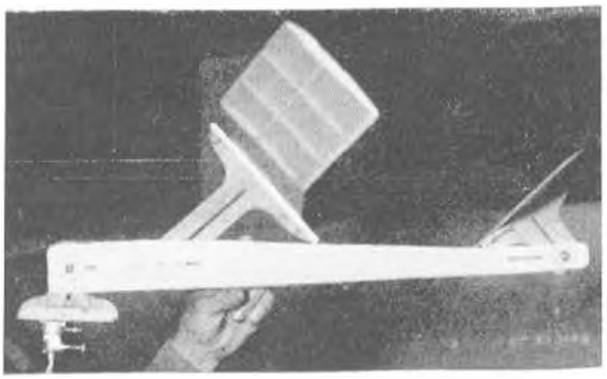
For this type of actuator, as, indeed, for any other, it is important that the correct size of rubber be used for the drive. An over-tensioned rubber motor, or one which employs too thick rubber, will almost certainly cause the actuator to stick, when fully wound. The secret is to use the size of rubber recommended by the maker, and to always make the loop or loops about 25 per cent longer than the distance from motor hook to actuator spindle hook. In this way, many turns can be piled on, ensuring a lot of signals in flight, without the rubber pulling too tightly on the spindle. A spot of lubricant on the rubber will make for a longer-lasting motor, but beware of any excess lubricant getting on to the pole piece of the actuator magnet.

When using this type of layout, it is usual for the rear rubber motor hook to extend, in the form of a spindle, back through the sternpost of the model, and terminate in either a loop or a crank, to facilitate winding. In practice, it will probably be found that the crank is more useful, because the maximum turns needed are only somewhere about 300, and these can be wound on by hand easier than taking the trouble to connect up a hand brace to wind via a loop. This is doubly true when one realises that, after the initial winding, only those turns that have been used up in the preceding flight are going to be put back on.

But whichever of these two is used, there must be an adequate stop for it after the motor is wound. This can take the form of a simple pin passed through the loop, or, for a crank, some sort of stud or catch. In any case, it must be strong and safe, because if the motor becomes unwound in flight, there will be no rudder control, and the flyer will be in the unhappy position of having a very expensive free-flight model, trimmed to fly straight, and, probably, a tank full of fuel. The resulting cross-country trip will give him plenty of time to ponder on the advisability of paying attention to details!

Finally, while on this part of the subject, it may be as well to mention a few words about the maintenance of the "push-pull" type actuator. Regular inspection is desirable, so that the component should not be buried for all time in the depths of the fuselage, but arranged so that it can be seen fairly easily. Happily, in the case of a high-wing 'plane, it could normally be serviced by removing the wing.

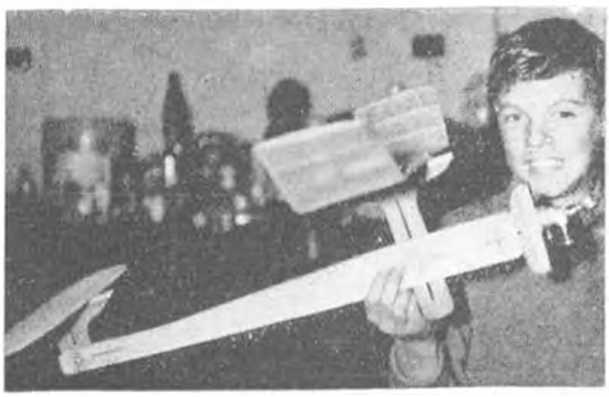
The moving parts must be kept free of dust and dirt, especially engine waste, while the pivots of the yoke and actuator arm must, occasionally receive a spot of oil. On no account should the pole-piece or magnet core end be cleaned with any sort of abrasive to try to increase the efficiency. These are specially treated by the manufacturer, and any interference in this direction will not improve the performance. A regular check to ensure that the wires leading to the actuator have not vibrated free and are liable to interfere with the moving parts will also pay dividends. Nearly all manufacturers provide directions on fitting and maintenance with their components, and these should be adhered to most carefully.

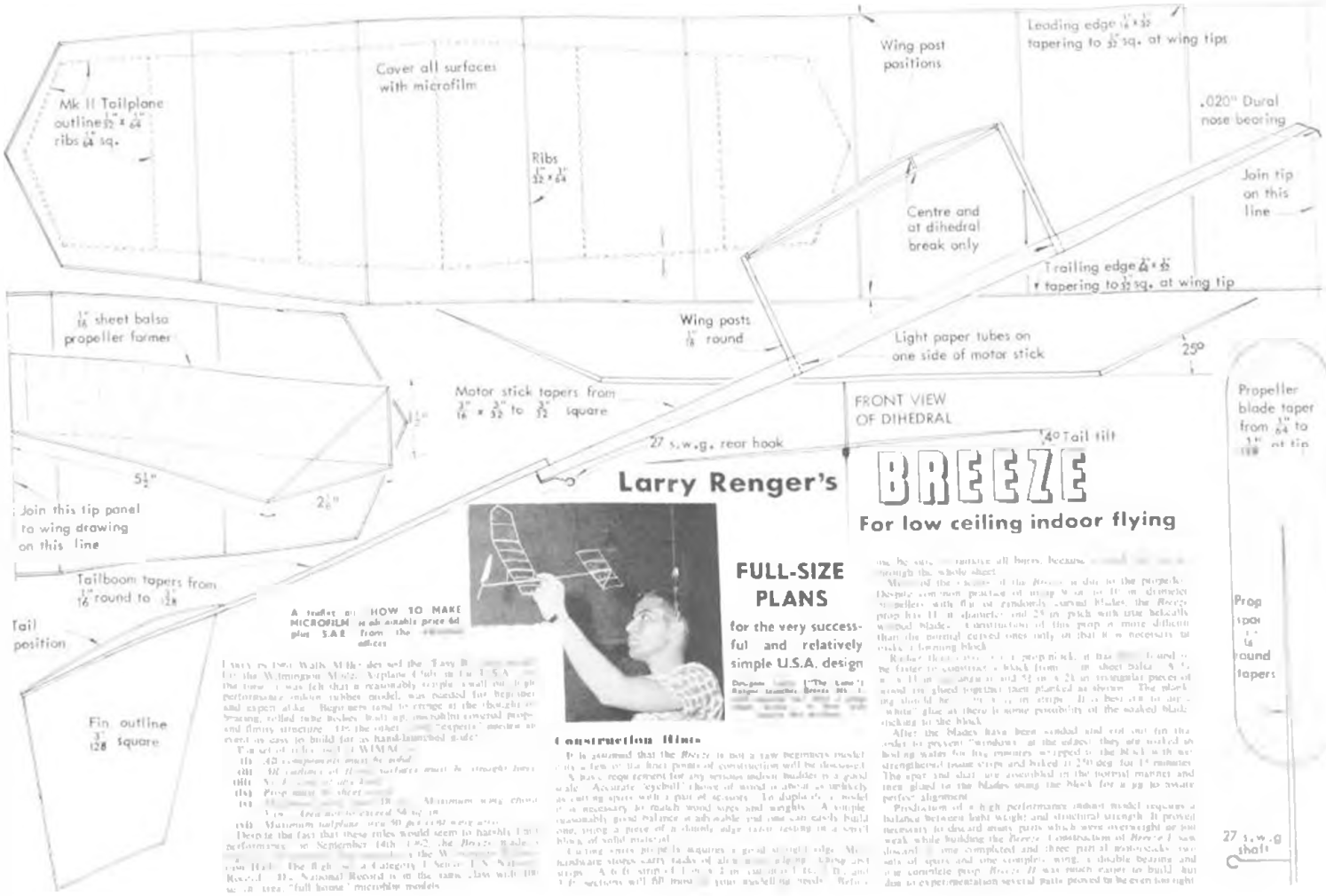


AUSTRALIAN ADJUSTABLE MODEL

Ivor Stowe is a modeller who always has a good idea and this all-adjustable model teaches the whys and wherefores of trimming.

Note how the extreme angles are shown at left and below the model adopts a more reasonable posture. Variations are infinite and the possibilities intriguing. Why not try one? Thanks to Adrian Bryant of Australian "Model News" for the pictures.





Larry Renger's BREEZE

For low ceiling indoor flying

FULL-SIZE PLANS

for the very successful and relatively simple U.S.A. design

A leaflet on HOW TO MAKE MICROFILM is obtainable price 6d plus S.A.E. from the [illegible] address

Larry Renger with Mike Abernethy and the Larry Renger Wilmington Model Airplane Club in the U.S.A. [illegible] the time it was felt that a reasonably simple small indoor high performance rubber model, was needed for beginners and expert alike. Beginners tend to engage at the thought of bracing, rolled tube bodies, built up, monofilm covered propeller and flimsy structure. The other [illegible] experts' machine an event in case to build for an hand-launched glider.

Fuselage [illegible] WIMAC [illegible]

(a) .42 [illegible] must be [illegible]

(b) All [illegible] surfaces must be straight [illegible]

(c) [illegible]

(d) Prop must be [illegible] Minimum wing chord [illegible]

(e) [illegible] Maximum wingspan 50 per cent of wing area.

Despite the fact that these rules would seem to handicap [illegible] performance, on September 14th 1962, the *Breeze* made [illegible] the Wilmington Model Airplane Club. The flight was a Category I Senior U.S. National Record. It is on the same basis with the [illegible] "full house" microfilm models.

Construction Hints

It is assumed that the *Breeze* is not a raw beginners model [illegible] a few of the basic points of construction will be discussed.

A basic requirement for any version indoor builder is a good [illegible] Accurate symbol: a sheet of wood is about as unhandy as cutting sticks with a pair of scissors. To duplicate a model it is necessary to match wood sizes and weights. A simple reasonably good balance is advisable and one can easily build one, using a piece of a thinnish edge grain balsa as a sort of block of solid material.

Cutting cross pieces requires a good straight edge. Most hardware stores carry blades of about 6" long, [illegible] strips. A 6 ft strip of 1" x 2" [illegible] sections will do many [illegible] needs. Before [illegible] be sure [illegible] surface all burrs, because [illegible] through the whole sheet.

Most of the [illegible] of the *Breeze* is due to the propeller. Despite common practice of using wide [illegible] propellers with flat or randomly curved blades the *Breeze* prop has 11 in diameter and 25 in pitch with true helicoidal blades. Construction of this prop is more difficult than the normal curved ones only in that it is necessary to make a forming block.

Rather than [illegible] a prop nick, it has been found [illegible] be faster to construct a block from [illegible] in sheet balsa 9 ½ in x 11 in [illegible] angles and 52 in x 2¼ in triangular pieces of wood are glued together then planked as shown. The planking should be [illegible] in strips. It is best not to use "white" glue as there is some possibility of the soaked blade sticking to the block.

After the blades have been sanded and cut [illegible] they are soaked in boiling water for [illegible] minutes, wrapped to the block with the strengthened tissue strips and baked at 250 deg for 15 minutes. The spar and shaft are assembled in the normal manner and then glued to the blades using the block for a jig to ensure perfect alignment.

Production of a high performance indoor model requires a balance between built weight and structural strength. It proved necessary to discard many parts which were overweight or too weak while building the *Breeze*. Construction of *Breeze I* was slow and [illegible] time completed and three pair of motor sticks, two sets of spars and one complete wing, a double bearing and one complete prop. *Breeze II* was much easier to build but due to experimentation several parts proved to be even too light

NOISE ANNOYS

New approaches to the silencer problem

TWO NEW SILENCERS are about to appear with features that are new to the model engine world. This method of exhaust extraction has been used many times before in the two stroke racing development, and like many of the improvements made to our model engines over the years, are not new in origin at all, but just borrowed from full size practice and adapted to suit modellers' needs.

P. A. Moore of Leicester who already produces mufflers for annular ported engines has now developed an internal extraction type silencer for side stack exhaust engines. The outer casing is turned from an extrusion that permits the manifold to be an integral part, this in turn is fitted over the exhaust stack and secured with two Allen head grub screws binding to the exhaust stack. The front end is a bellmouthed hole into which a tube fits that runs the entire length of the main body. This tube has 22 small holes in it situated near the end of the expansion chamber and is locked into position by a small set screw. Principle of operation is as follows: when the engine is running the exhaust is blown into the expansion chamber and at the same time the propeller is forcing air into bellmouth entry and along the extractor tube. This should result in the exhaust gas being sucked through the small holes from the expansion chamber, to the inside of the extractor tube and blown out of the end. Advantage will only come if the airflow along the extractor tube is greater than that of the exhaust gas trying to get out. If it is not greater the result will probably be more power loss than a conventional solid front silencer. All up weight is 2¼ oz. for a sample made to fit the Frog 500 as shown in photograph below.

After many requests for information we can now release details of the Eta silencer. At the time of writing the production version is not available, but having assisted in the flying of the prototype in a "test bed" F.A.I. team racer we are in a position to comment. The basic silencer is similar in principle to the P. A. Moore one just described, but with many extra refinements improving the performance. The expansion chamber is cast in two halves with a separate venturi casting being centred when two clamping rings are screwed on to each end of the expansion chamber. One silencer bolts straight on to the Eta 29 exhaust stack, lugs now being incorporated on all production engines and either one or two can be used on the Eta 15. An extruded manifold is being produced for the .15 Mk. 3 and seats over the cast ring on top of the crankcase as well as bolting on to the two integral crankcase manifold mounting lugs. The venturi is a steep taper for inlet and outlet and has a number of small holes situated just aft of the max. pressure point. With the air

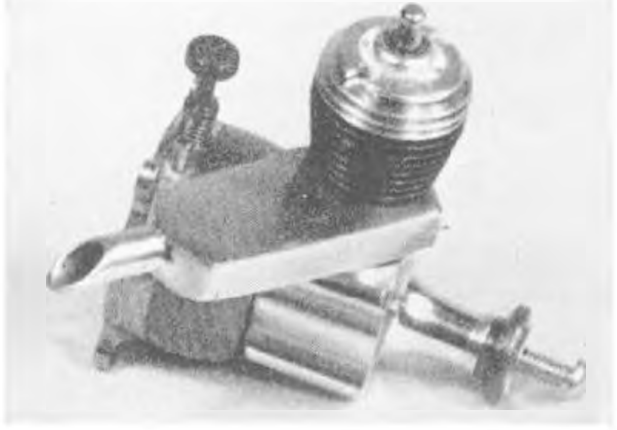
At top the Russell silencers for the Cox 15 (in this case Peter Russell's own engine with modified head) and the .049 (with the Servais type sound absorption chamber taken apart). Straight pipe or extra stub can be supplied. At left, the new O.S. unit with the integral butterfly throttle and below, the P. A. Moore "Through-flow" unit with core pipe removed to show holes.

being blown through the silencer this really does extract the exhaust, not to mention improved scavenging of the cylinder and higher pumping efficiency due to the fresh fuel charge being partially sucked up from the crankcase when the piston is depressed. For those who only want a silencer on one side of their 15, a blanking off plate can be supplied to fit the manifold. Test flights with the prototype made mainly from brass (and very heavy) indicated a gain of 30 to 40 per cent on lappage and no substantial reduction in speed. All up weight is expected to be 13-2 oz. for a double sided 15 installation. Cost is not yet known but should be available next month with photographs and test figures from a flying session. Silencers, manifold, and blanking off plates will all be available separately.

"308" silencers which are now being supplied by Henry J. Nicholls are made in sizes to suit any engine, Cox, McCoy, Veco, Frog, etc., and are really neat compact units. Made from silver soldered brass shim with a chrome plated finish they are of an oblong cross section and offer no internal restriction. The Cox type clamp around the cylinder by means of two brass straps silver soldered to the expansion chamber bolted together over part of one exhaust port, so that approx one third of the exhaust port area is blanked off. Being of the clamp on type they can be fitted in any position around the liner. Even the tiny Cox Pee Wee can have one fitted as well as all the other small engines. Approx cost is expected to be 25/-; write for a quotation on individual engines.

Since the last issue we have received samples of the O.S. type L R/C silencers via The Model Exchange, Watford. These are the usual two part O.S. Jetstream expansion chambers modified to accept a machined alloy butterfly valve that is screwed to a cranked arm that is in turn linked to the throttle control arm. Two sizes are available, the one for the 15, .19 weighs ¾ oz. and costs 30/9d. and the larger size to fit the .29, .35, .49, and .50 weighs 1¼ oz. and cost 36/2d. Each pack includes spare screws, link rods, and an extension manifold to increase overhang if needed also a spare throttle arm. We think the restrictor could be more restrictive as it does leave quite a large open area when compared with a conventional "chopper" system. Incidentally, unsilenced O.S. engines are now produced with the butterfly "chopper" instead of the pivotted 'gate' baffle.

Below is the "308" Silencer for the little Cox .032 c.c. Pee Wee and at right, the .049 and .09 engines showing various ways of angling to obtain maximum exhaust area from the two port cylinders. Made in brass they are chromec to bright finish.

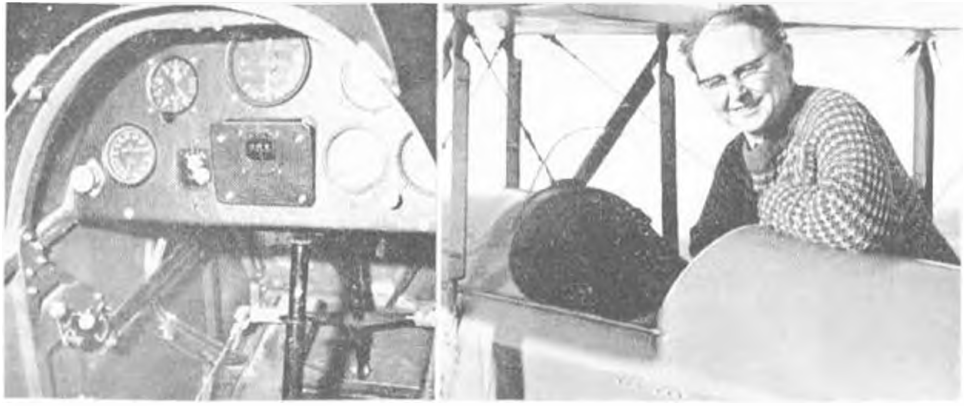


Peter Russell, well known designer of the A.P.S. 334 G stunt model and proprietor of the Model Centres at Worksop and Lincoln, now manufactures silencers to fit the Cox range of engines. Consisting of a turned alloy collector and expansion chamber with a $\frac{3}{16}$ in. I.D. outlet pipe it is very simple and robust. Turned off centre it effectively blanks off approximately a quarter of the exhaust port area and allows a fairly large expansion space around the outlet pipe. Installed in a delta pylon racer the Cox .15 Special size reduces r.p.m. from 14,300 to 13,800, but this loss of 500 r.p.m. seems to have little effect on performance apart from a lower fuel consumption and a clean model. Sizes available at present are the .15 and .049, each with alternative sound absorbing pipes, total cost about 35/-.

Oliver engines are now supplied ready to accept a silencer and manifold and the older type of engines can be machined at a cost of 7/6d. in three to five days. Total cost of having an old Oliver silenced will be £1/11/2d. inc. post. New enignes ordered from the factory can be fitted with the silencer at a cost of 20/- no fitting charge being made. All of the Oliver range take the same collector ring that has recently been modified to offer a better seal on the crankcase and to include a 9 B.A. mounting lug to retain the alloy expension chamber. A three view drawing of the collector ring and fitting instructions can be supplied on request to the makers. For the skilled model machinist an unmachined collector casting is available at 3/9d.

The Spinaflo range of silencers has recently been increased in size and now covers a range of more than 60 types. A tip for this silencer is to use a safety strap or locking device as recommended last month for the Gee Dee Pike silencer as this is also of the one holding bolt type and we have seen them fall off in the air, even after tightening before the flight.

Last but not least, comes the news from K. C. Binks who finds that the Davis Charlton O.S. Merlin wrap around tube muffler is a perfect fit on his Cox Tee Dee .09 as installed in his A.P.S. Bazz Bomb single channel R/C aerobatic model. This is a very lightweight muffler and should be the answer for T-D .09 Bazz Bomb owners, worried about C of G position and total weight.



John Isaacs describes in detail a fascinating home-built aircraft

Dr. John Urmston's Wot is the subject of the drawing. At far left is his neat instrument panel and control arrangement while at right, John appears appropriately proud of his home-built aircraft.

In 1937 a ground engineer, Mr. J. R. Currie, designed a neat little biplane and two examples, G-AFCG and G-AFDS were built under his supervision at Lympne by the students of the Chelsea College of Aeronautics. Both machines actually shared the same two cylinder J.A.P. J-99 engine although there were slight differences between the two airframes. When the prototype was under construction Joe Currie was always being asked, *"Wot you going to call it?"* and his invariable reply was, *"call it Wot you like"*. In this manner the curious name stuck. Both prototypes were eventually destroyed during a German air raid on Lympne in 1940.

The "Wot" revival began in 1958 when Joe Currie was working as Ground Engineer at the Hampshire Aeroplane Club, then run by Mr. V. H. Bellamy (but for whom, Gloster's famous Gladiator survivor would not be flying today). John Isaacs was a keen club member and Joe Currie was persuaded to dig out his original drawings. Viv Bellamy agreed to finance and the writer to build two "Wot" biplanes.

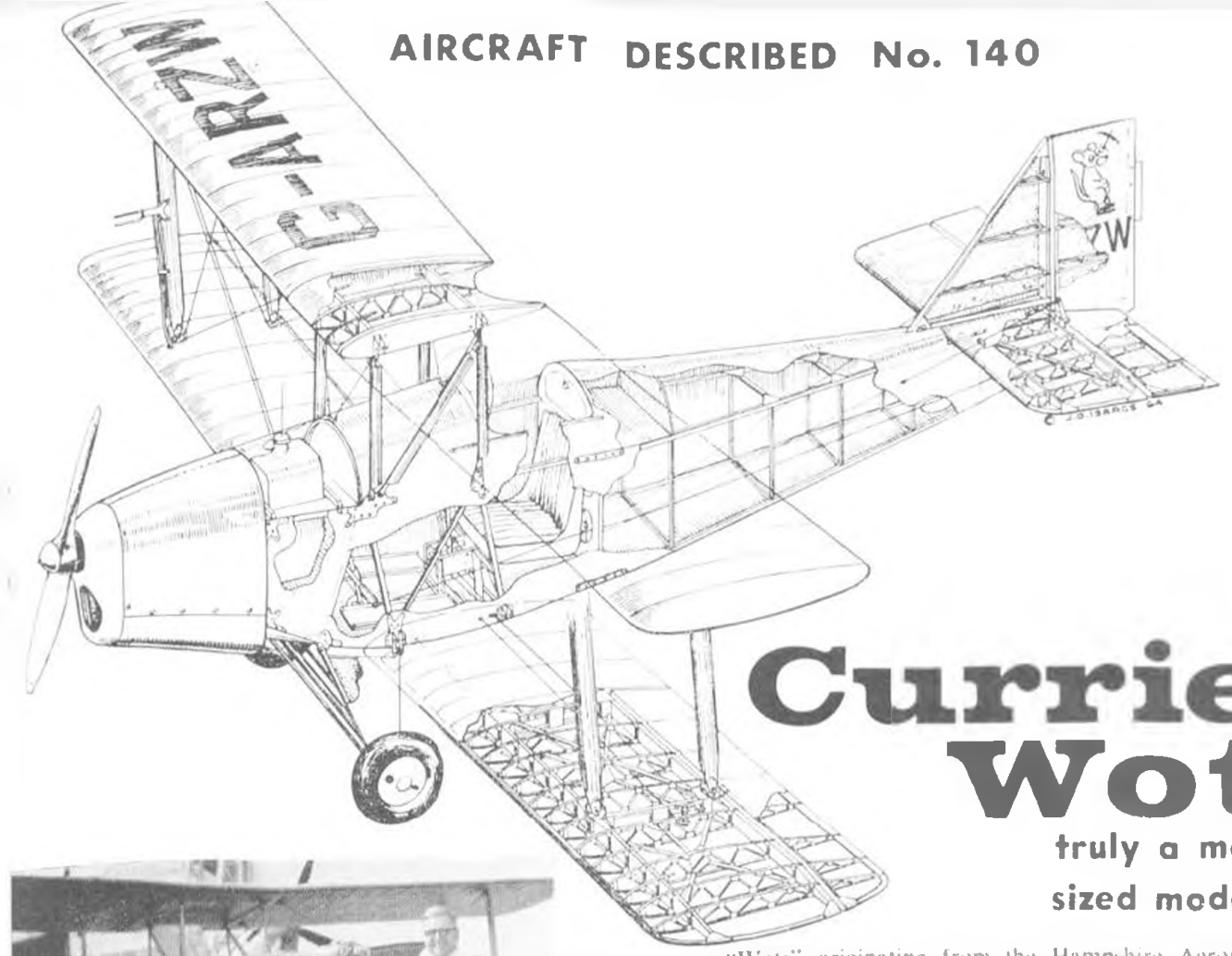
The first aeroplane G-APNT was completed to the original drawings in seven months from scratch and, fitted with a 35 h.p. JAP engine, made its first flight at the end of August 1958. It proved easy to fly and so viceless that soon all sorts of club pilots were sampling it. Tiring of the limitations of the aged JAP Viv Bellamy arranged for the temporary installation of a completely uncowled 60 h.p. Walter Mikron II using cut down Tiger Moth engine bearers. Flights in this crude form showed promise and, due to the increased power, gave rise to the nickname the "Hot Wot". At this period Viv Bellamy also had a pair of plywood floats made and fitted to the airframe but the idea was shelved when Mr. Harold Penrose purchased the aeroplane back in its original J.A.P. engined form. To complete the story of G-APNT it was subsequently flown back to Southampton for a 55 h.p. Lycoming to be fitted. In this form it was generally thought to be a little disappointing compared with the more powerful Mikron version. In 1964 the little aeroplane was taken over by Lieut. W. M. Hodgkins, R.N.

When John Currie left the club in 1959 John Isaacs undertook the completion of the second aeroplane G-APWT and flew it in October. The Mikron II was installed properly with cowlings and as the first true "Hot Wot" it incorporated a number of changes including a shortening of the tank bay to counteract the heavier engine effect on the centre of gravity, a larger fuel tank of 11-12 gallons capacity and increased fin and rudder area.

After some flying in this form the plywood floats were fitted, the wings removed, and the aeroplane trucked to the Hamble river. The "Wot" was rigged in the open one cold November Saturday and taxi trials began next morning. It handled well on the water in response to its water rudders but the floats proved a little short and as speed built up the bow wave tended to smother the propeller. The aeroplane was returned to Southampton Airport and work put in hand to lengthen the floats although these were never used again due to more exciting developments.

Mr. Bellamy envisaged the use of a small gas turbine for light aircraft and established contact with Rover Gas Turbines Ltd. Rovers had in production a small industrial gas turbine, one of which was modified and installed, uncowled, in G-APWT to drive a propeller. There were many initial problems particularly in connection with response to throttle control and during early flights of the "Hot Wot" Viv Bellamy became adept at forced landings. Ultimately the propeller problem was solved by Mr. Doug Llewellyn of Rovers designing a clever V.P. propeller. The "Wot" was returned to a Mikron version and the turbo prop. engine went back to Rovers to incorporate the lessons learned.

Variations. Round the clock are Dr. Urmston's G-ARZW with 65 h.p. Walter Mikron. Next is the first post-War Wot with quick temporary installation of 60 h.p. Walter Mikron on Tiger Moth bearers, flown uncowled. Below it is the let Wot in final form with large spinner and Rover Gas Turbine while to left is same machine, called Hot Wot with 60 h.p. Mikron.



Currie Wot

truly a man-sized model!

Left, The late J. R. Currie with G-APNT in Summer '58. Note 36 h.p. J.A.P. engine and 2-seat Spitfire G-AIDN in background. Below right is the Wet Wot on floats for a short period on the river at Hamble.

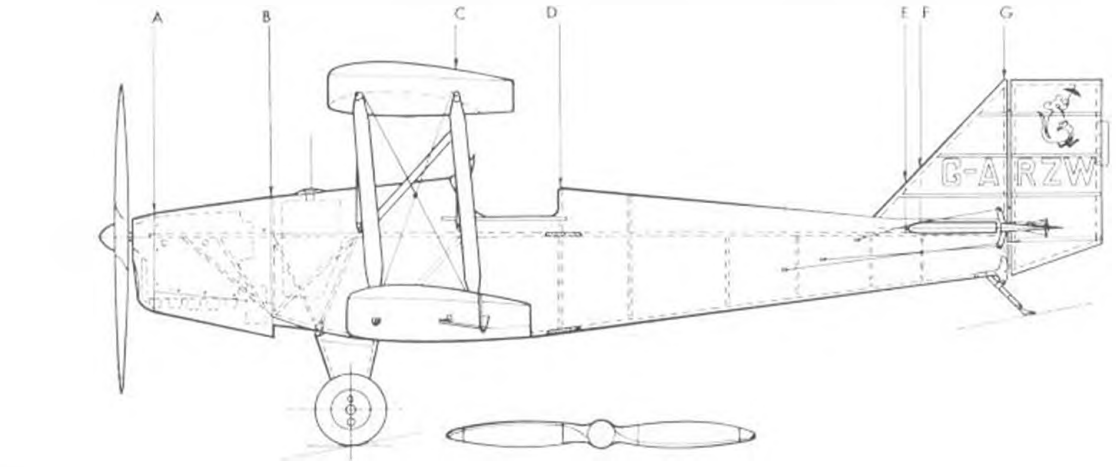
To digress from the chronological order of events it should be added that the Rover gas turbine was subsequently returned in revised form giving 70 b.h.p. and reinstalled in 'WT complete with a large glass fibre spinner. The engine was now so docile that several club pilots were privileged to fly it. There was no vibration, and, apart from the evidence of the lively acceleration and rate of climb it was difficult to believe the fantastic 47,000 r.p.m.

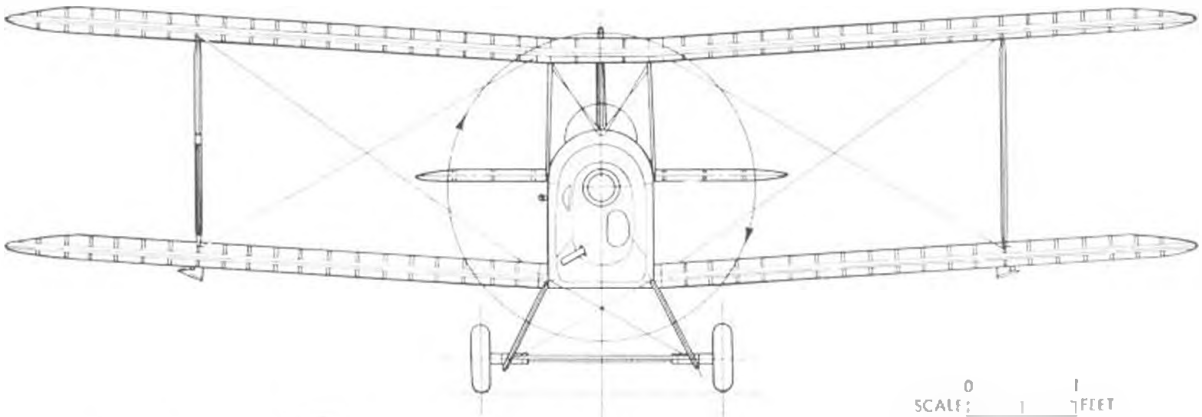
In its piston engined form a borrowed 65 h.p. Walter Mikron III was temporarily fitted for F/L Lt Bert Lane's memorable performance in 'WT in the 1960 Lockheed Aerobatic competition at Coventry.

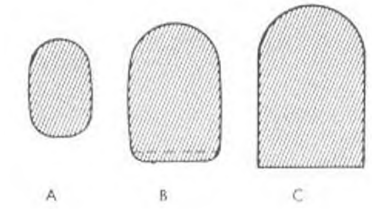
With the more usual Mikron II 'WT was also flown in the 1960 Air Races by Johnnie Underwood It was put into a genuine terminal velocity dive by Alan Butcher and flown to France and back non stop by that pilot. It has survived four crash landing incidents while at Southampton alone. Finally the historic little biplane was sold to a group of enthusiasts at Elstree who have also put in a tremendous amount of hard work to rebuild it after an accident at Sarratt in that area. Apart from the two "Wots" originating from the Hampshire Aeroplane Club quite a number of sets of plans have been sold in recent years as far afield as the U.S.A. and Australia. Of those which are known to have reached near completion is G-ABSA beautifully built by Mr Bert Etheridge of Letchworth and sporting a really elegant D.H. style fin and rudder. It is now owned by Mr. B. Pleasance of Romford but awaits engine installation.

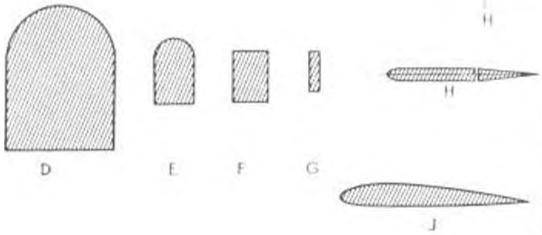
Probably the most well known genuine home-built "Wot" is G-ARZW built by Dr. John Urmston of Botley, Hants, who has accumulated a considerable amount of flying in it. It is powered by the 65 h.p. Walter Mikron II and, while externally a standard airframe it incorporates a number of detail refinements and sports a well equipped cockpit. Painted red on all upper surfaces with white undersides this "Wot" carries black lettering and has been made the subject of the detailed Aeromodeller drawings. It took Dr. Urmston two years to complete.

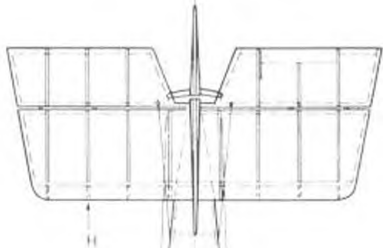
John Robert Currie, alas, is no longer with us but the fact that so many people are still building "Wots" 28 years after he designed it is a sure tribute to the importance of his contribution to the home-builders movement

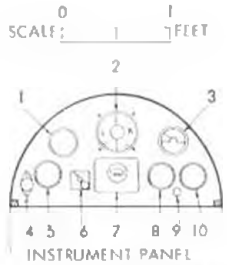




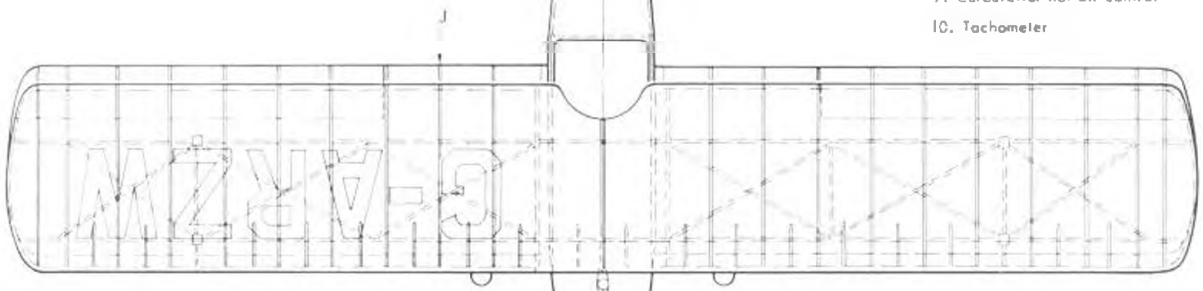








1. Altimeter
2. Turn and bank indicator
3. Cylinder head temperature gauge
4. Kigass fuel primer
5. Air speed indicator
6. Ignition switch
7. Compass
8. Oil and fuel pressure gauge and oil temperature
9. Carburettor hot air control
10. Tachometer

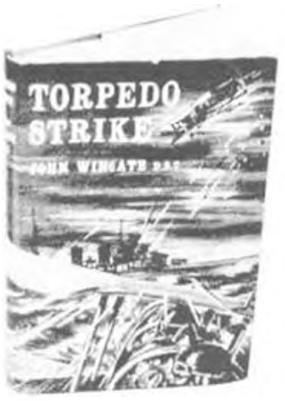


Reprints of this 1/48th scale drawing and dye-line prints of the 1/24th scale original are available as plan pack AH 2788, price 2/6d. plus 6d. post, from Aeromodeller Plans Service, 38 Clarendon Road, Watford, Herts.

Drawn by J. O. Isaacs

CURRIE WOT

FT.



Recommended Reading

A selection of recent and new publications reviewed

THE SECOND VOLUME of **Dora Kurfurst und rote 13** published by Verlag Dieter Hoffman, and sold in this country by Graham K. Scott, 2 The Broadway, London, N.11, at 44/9 by post, is certainly no disappointment. In 192 6¼ x 9¾ in. pages, we are treated to a positively fascinating selection of Luftwaffe photographs taken in the period 1933-1945 and thus ranging from early school machines (Albatros L 75) through to the Ju 88 A-17. Intercepting this time scale are two sections of particular interest. One deals with aircraft in the Spanish Civil War and another with captured aircraft. In these two sections, the range of types varies from the Vultee 18, to General Aircraft Monospar, PZL P-11, many French types, Spitfire, Wellington, Stirling, and Fortress and from the Russian front, the TB-3 two-seater version of the I-16, SB-2, etc., etc. Truly a collector's item filled with markings but alas no colour information, this second volume has tremendous use for scale modellers.

A number of books have been circulating around the staff for a few months and some of them escaped review, three of them come from MacDonald & Co., Ltd. First of these to appear was **Rendezvous With Fate** which is the autobiography of Belgian fighter pilot Lt. Col. Raymond Lallemant, D.F.C., who served with 609 Squadron R.A.F. and is currently Commander of a jet fighter school in the R.A.F. Originally published in French, the 192 page 25/- book has been expertly translated by Lallemant's war-time fellow Officer Frank Ziegler and amply conveys the spirit of those defensive years 1941-1942. Well selected illustrations identify the personalities and the atmosphere which prevailed. Lallemant was very lucky in being able to escape from a crash landing with his Typhoon on fire at Merville and it is this close brush with death that serves to introduce and conclude a dynamic war-time story. Similar in theme, being a story of war-time naval action in Swordfish torpedo strike aircraft is John Wingate's **Torpedo Strike**, a 192 page book selling for 13/6d. Although the characters of the story are fictitious the plot is certainly authentic and includes much of the history of action in the Mediterranean. It seems a pity a few photographs could not have been introduced to convey an impression of the open cockpit Swordfish to the younger reader whose only other opportunity of seeing what these grand old machines look like is to visit the Imperial War Museum London or the F.A.A. Museum at Yeovilton. Third of the MacDonald books is the one which interested us most and is the autobiography of Wing Commander R. H. McIntosh, D.F.C., A.F.C. **All Weather Mac** is a 288 page volume with many historic photographs and sells at 30/-. "Mac" learned to fly on the Maurice Farman Longhorn at Northolt and saw action in the Middle East against Turkish forces, flying the R.E.8 in 30 Squadron. Immediately after the First World War, "Mac" jumped at an opportunity to fly the Handley Page O/400 on a London to Paris passenger service and this was to be the beginning of his long saga in air transport. "Mac's" pilotage on the Paris run became legend and his experience through the formulative years of British civil aviation make fascinating reading. Here is the story of the very beginnings of present day airlines and transport. The list of 143 aircraft types flown by "Mac" fills four pages and "Mac" continues to fly, mostly in the comfort of Cessna aircraft.

Italian Civil and Military Aircraft by Julian Thompson, published by Aero Publishers (U.S.A.), $8.50 is a 304, 7½ x 10¼ in. volume of offset printing dealing with a fascinating variety of designs from 1930-1945. Three view drawings and adequate photographs enable the scale modeller to make many a fine selection for further study, and the appendices include invaluable colouring information. Variations of various aircraft are detailed with separate side elevations and the text cover all the major developments. For the scale radio controlled model enthusiasts, the twin boom fuselage Savoia Marchetti SM 92 should offer an irresistible challenge.

Returning now to a couple of items from the U.S.A. of direct aeromodelling interest which we thoroughly commend, World Engines **Catalog 65** selling for 70 cents in the U.S.A. is a positive mine of information in 128 pages measuring 8½ x 11 in. Naturally restricted to those items distributed by World Engines it is especially useful for layout drawings of Super Tigre and Cox engines plus radio-control circuit diagrams for Controlaire equipment up to 10 channel superhet. It was in this 'catalog' that we first gained knowledge of the new Japanese OS 15, 19, and 30 with Butterfly exhaust and throttle. **How to Build Radio-Control Models** by William Winter the well-known model designer is published by Kalmbach at three dollars in the U.S.A. and has 96, 8½ x 11 in. pages with one of the finest collections of line and tone illustrations we have ever seen on the subject of radio-control. Reproduction is to the standard of perfection and we fail to see how any radio-control modeller whether his interest be aircraft, boat or car could fail to learn something from this run down on installation, trouble shooting and general operation of modern commercial equipment.

This issue of Aeromodeller reflects the keen interest that prevails today for veteran and vintage aircraft. The admirable following will be very pleased to learn of the Australian publication we have just "discovered". It is **Last of the Breed** by Brian P. Creer published by James N. Warrington publishing company, 210 New South Head Road, Edgecliff, N.S.W. Australia. In 112 5½ x 8½ in. pages Brian Creer who is one of Australia's most keen light-plane flyers, gives an account of the vintage aircraft to be found preserved in Australia. There are 36 types ranging from the early Aeronca to the Westland Widgeon and each is illustrated in its Australian registration and described with local history, etc. The aircraft historian will fully appreciate Mr. Creer's enthusiasm for maintenance of these grand types.

Going back to the "Mad Men" period, Ernest Benn Ltd., have just published **Early Aeroplanes** a 64 page landscape layout 6¾ x 8½ in. book by Howard Linecar with 46 sketch illustrations by Donald Green. Those who are entering the model competition announced elsewhere in this issue will be very interested in what Mr. Linecar has to say. He seems to have completely avoided the shape and achievements of Santos-Dumont's Demoiselle although the description he applies to the aircraft name indicates that he has confused it with the biplane canard 14 bis. This aside, the book is fair value at 11/6d.

READERS' LETTERS

Single channel events

DEAR SIR,

May I use your columns to plead the case of the S.C. radio-control flier? Since the advent of multi, most competitions have catered for this category, with many good reasons; it is spectacular, a good crowd drawer, and it is recognised for international events.

Single channel has tended to lag behind, because even though it is a lot cheaper, it is more difficult to produce manoeuvres from one button and also equipment (speaking of a few years ago) was not so reliable. Competitions are few and are usually limited to simple spot landing events at the odd gala or club meet.

I feel that the S.M.A.E. could help the development of S.C. Radio by creating Area Centralised competitions for Power and Slope soaring types. Rules could be few for a start:

POWER Three flights, aggregate error of flight time (say three minutes) and distance from spot.

GLIDER Three flights, aggregate error of flight time.

Preferably ONE BUTTON ONLY s/c to avoid putting four channels on the rudder and so obviating the object of the exercise.

Reading Club News over the year seems to indicate a wide interest in both classes and there should be little difficulty of finding sites in most areas.

We are lucky in the South Eastern Area, in that we have run similar events for two years now and received a lot of enthusiastic support.

How about it S.M.A.E. members? After all, several other less numerous divisions of our hobby have had competition support in the past. PAA Lead, Jetex, Women's Cup (sorry ladies) and Tailless.

If you feel strongly about this, drop the S.M.A.E. a line or push for it with your Area Committee.

J. Whittaker

Tunbridge Wells, Kent

Public image

DEAR SIR,

"Killer models", "Noisy toys". A danger and a menace to the public. Such phrases are appearing in the local and national press in ever increasing numbers.

Speaking not only for myself but for many of my associates, I have come to the conclusion that the main complaint against us is that we are aeromodellers. An eccentric minority whose behaviour does not follow the accepted pattern of car driving and telly worships.

In many districts quite unreasonable bans have been enforced, ranging from the banishment of the local club to the rat infested wilderness of the town dump to the total ban of any kind of flying activity. In many cases this happens in areas where otherwise excellent facilities exist as regards open space.

I have seen vast areas devoted to every outdoor activity imaginable and still carrying a complete ban on even the test flying of a Wakefield or A 2 on a quiet calm evening.

In view of the present situation I think that every modeller in the land, the official bodies, and the model trade and press should stop this attitude of passive resistance to which we seem to have resigned ourselves and take a more active part in combating what is in effect the blatant supression of a minority by the ad-mass indoctrinated majority.

We must try and get our word over in the press and even on the radio and T.V. This must be done in such a way as to bring it home to the public that we are not overgrown children and that we have as much right to fly our models as one has to kick a football.

I for one will consider it an achievement to get the word "aeromodelling" used in the House of Commons.

Karl M. Webster

Rochester, Kent.

Retrievers

DEAR SIR,

Due to the numerous complaints made by farmers of damage to crops by people retrieving models, our club makes the following suggestions:

That each club which has more than three members flying at the meeting to nominate a responsible member to retrieve. These people to be stationed around the fields, and to be the only people allowed into the fields.

A large scale map of the flying and adjoining fields could be purchased by the area concerned, who could then nominate somebody to organise and appoint people to the areas in which the models are liable to land.

This we feel would not only keep the farmers happier, but would also result in fewer models being lost.

Regarding the clubs nominating members, this need not be compulsory, but just expected that each club would comply with this requirement, just as in the same way time-keeping is not compulsory, but each competitor is expected to time-keep at some time during the contest in which he is competing.

Do other readers have any other ideas on this problem?

M. Shipp, Hon. Sec.

Brentwood, M.A.C., Colchester.

S.M.A.E.

DEAR SIR,

Many readers may be unaware that the controlling body of aeromodelling in Great Britain is the Society of Model Aeronautical Engineers. This Society is a democratic one and membership is open to all. Many of the Society's activities are of greater interest to the contest-minded modeller than the sport flier, for example, the organisation of competitions and rallies, but many sport fliers take an active part in the running of the Society and thus the hobby in Great Britain. Membership fees are from 12/6 per year and all full members are sent regular newsheets, etc., to keep them fully in the picture, news-wise, and all members are, of course, provided free with comprehensive, up to £50,000, third-party insurance coverage.

If your readers are interested in a membership of the controlling body in this country, why not drop me a line. I'll be only too glad to send all details, plus the 1965 S.M.A.E. Contest Calendar, and details of your nearest aeromodelling club.

Kevin Lindsey

Public Relations Officer, S.M.A.E. Ltd., 53 Guildford Avenue Surbiton, Surrey

Those markings

DEAR SIR,

With reference to the article, *Capt. A. R. Brown's Camel Markings*, in the February, 1965, issue of AERO MODELLER I would like to add the following information.

An interesting comparison in the Camel markings would be with a painting executed in France in 1918, by British artist, Joseph Simpson. While attached to the R.A.F. in 1918, Mr. Simpson painted among many others, an excellent version of the Brown-Richthofen battle. He depicted the Camel *with* roundels and correct serial number.

Mr. Simpson's paintings were reported to be technically accurate due to the fact that his models were actual aircraft and his details of the action from first hand reports.

Unfortunately I am away from most of my records, but if some interested party could check, *The Times History of the War*, volume XVI, page 381, and report on the markings it would make an interesting comparison.

It would also be interesting to know the story behind Joseph Simpson's painting and where he received his information as to the Camel markings, but I suppose it is too much to hope for this type of information!

In closing, I would like to say how much I have enjoyed your WW1 marking articles over the years, please keep them coming.

Yours sincerely,

Sergeant H. E. Creagen

Canadian Armed Forces Germany

Silence rewarded

DEAR SIR,

The Huddersfield Aeromodellers Association is as active as any in the north. Its activities are wide and vigorous, *but it does not hunt pots*. It, therefore, does not expect to be featured in your Club Reports but it would like to point out that whilst many other clubs are losing their flying fields, we have *obtained* two in 1964. We have also had a rule in operation (without outside pressure) for a year, *requiring silencers* to be fitted to engines operated on our fields and in the near vicinity.

The point being made is that the man flying highest, longest and fastest is not necessarily the most responsible nor doing our hobby most good. On the contrary those who are trying hard to make our hobby acceptable to the general public are the ones who must work in the dark and often alone.

We have sought neither glamour nor popularity with other clubs, but we do claim sufficient standing in our own town to have reversed the usual trend of loss of flying fields and regarded by the general public as demented idiots. This we feel, is worth something.

P.R.O.,
Huddersfield, A.A.

Those Magnificent Men in their Flying Machines

12 Veteran aircraft from the 20th Century Fox film, drawn for the Scale Model contest, with descriptions by Francis G. Boreham.

A SPECTACULAR air race from London to Paris has been filmed in 70 mm. Todd-AO and De Luxe Color with the aid of the greatest full-scale aeromodelling operation since Hollywood made "Hells Angels". Given less than six months, groups of British light-plane enthusiasts recreated 55 year old designs for a colourful comedy with an all-star cast that includes Stuart Whitman, Sam Wanamaker and Red Skelton from the U.S.A., Tony Hancock, Eric Sykes, Benny Hill, Norman Rossington, William Rushton, Davy Kaye, plus Sarah Miles and James Fox in leading roles from G.B., and top personalities from Japan, Germany, Italy and France.

Wheels and tails fall off. One racer lands on a train, another in the Channel. Mid-air repairs avert disaster. Another is shot down by blunderbuss. Wings fold and a canard flies in the opposite direction. Hilarious action is matched by the realism of superb pilotage in magnificent replicas. Truly it is a production that will stir the modeller's heart, and we are very pleased to be able to offer this advance info. for those anxious to prepare for the model contests.

The Classic Antoinette

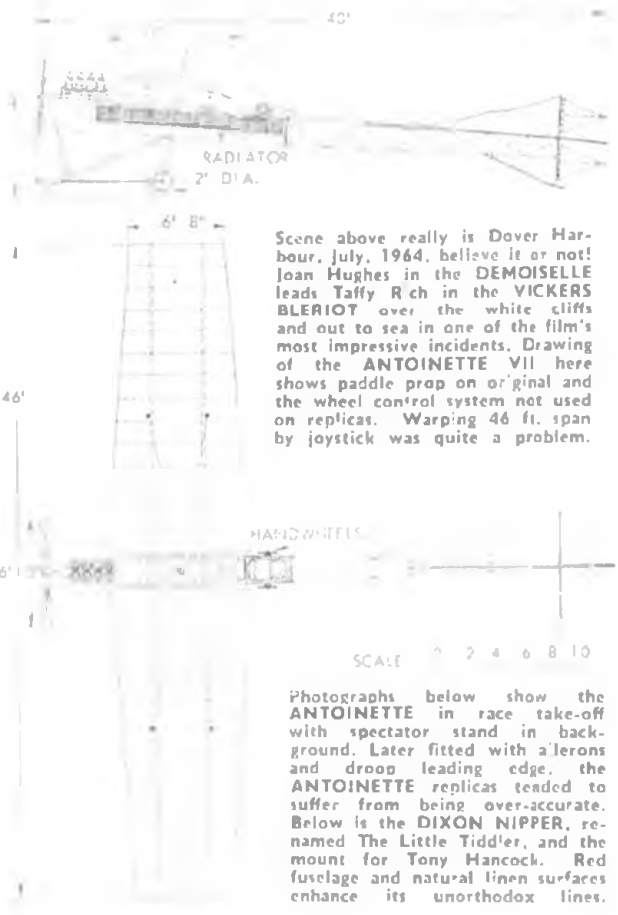
WHEN TALKING of pioneer veteran aircraft, the classic Antoinette monoplane will always be remembered. It shared the honours with Blériot, as the first to establish the monoplane design, and but for engine failure might have been the first to cross the English Channel.

Designed by the engineer from Levavasseur, many variants were produced. First successful flights took place in 1908. The Construction Company, the Aeroplane, and the engine were named after the daughter of Levavasseur's partner.

For its time the Antoinette monoplane was one of the most advanced aircraft of the day, fitted with a 50 h.p. engine aileron or warping control and double surfaced wings, with what was to become a conventional modern fuselage and tail unit with rudders and elevator. Many types were produced but all had the same main features.

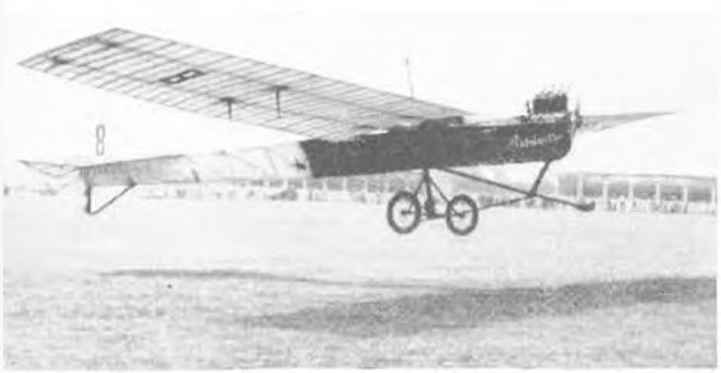
The fuselage was a long girder, triangular in section tapering towards the tail, the forepart was covered with cedar veneer, and pointed like the bows of a boat. Further aft, just behind the open pilot's cockpit, a covering of rubber proofed fabric encased the structure.

The wings were of trapezium form with a pronounced dihedral angle and with sharp leading and trailing edges. They were double surfaced, with a large number of ribs and internal trussing, and the spars were built up on the lattice girder principle. The king post system of bracing was used, and in order to facilitate warping the rear spars were pivoted to the fuselage. This allowed the

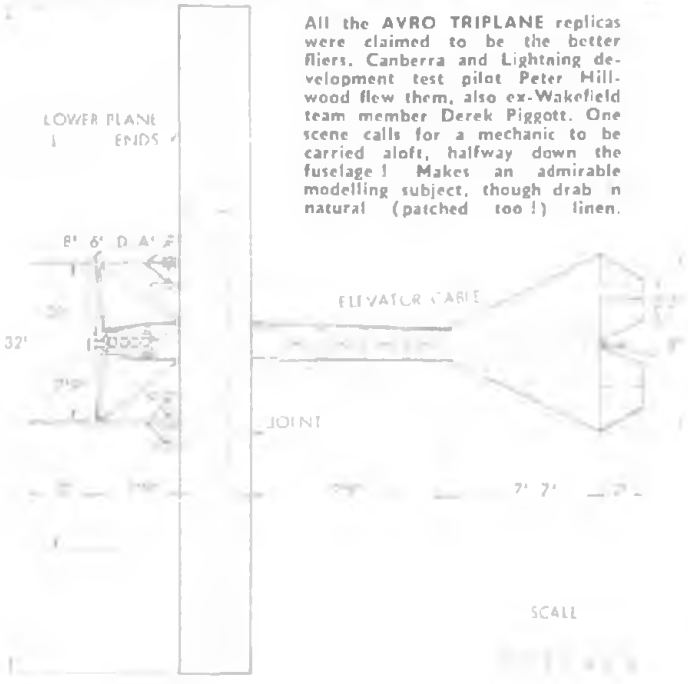


Scene above really is Dover Harbour, July, 1964, believe it or not! Joan Hughes in the DEMOISELLE leads Taffy Rich in the VICKERS BLERIOT over the white cliffs and out to sea in one of the film's most impressive incidents. Drawing of the ANTOINETTE VII here shows paddle prop on original and the wheel control system not used on replicas. Warping 46 ft. span by joystick was quite a problem.

Photographs below show the ANTOINETTE in race take-off with spectator stand in background. Later fitted with ailerons and droop leading edge, the ANTOINETTE replicas tended to suffer from being over-accurate. Below is the DIXON NIPPER, renamed The Little Tiddler, and the mount for Tony Hancock. Red fuselage and natural linen surfaces enhance its unorthodox lines.



All the **AVRO TRIPLANE** replicas were claimed to be the better fliers. Canberra and Lightning development test pilot Peter Hillwood flew them, also ex-Wakefield team member Derek Piggott. One scene calls for a mechanic to be carried aloft, halfway down the fuselage ! Makes an admirable modelling subject, though drab n natural (patched too !) linen.

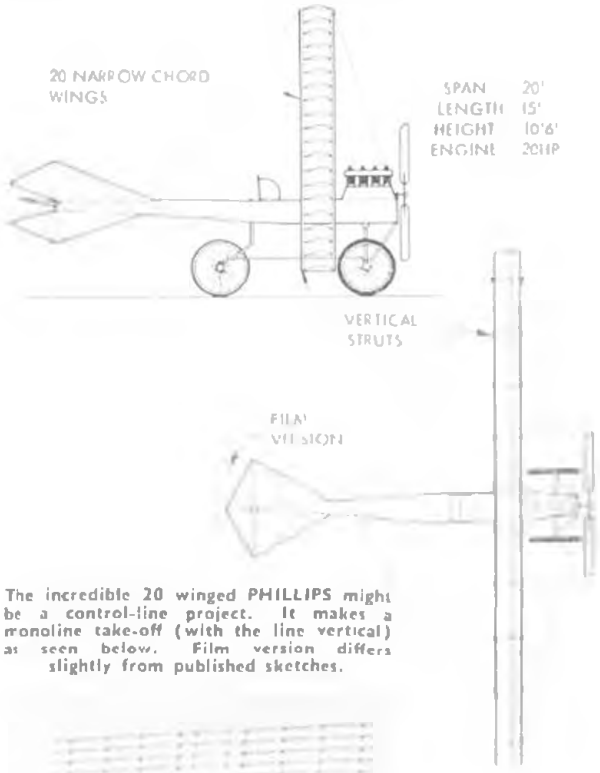


Those Magnificent Men in Their Flying Machines

wings to rock differentially and effective warping resulted, the covering was rubber proofed fabric. Some models had ailerons of the trailing type for lateral control. However, wing warping was adopted as standard after Antoinette type VII.

Controls were rather unusual, and consisted of two hand wheels placed vertically on each side of the pilot's seat outside the fuselage.

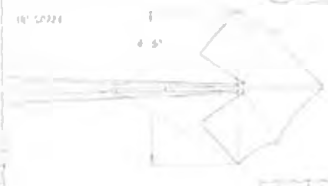
A forward movement of the right hand wheel controlled the elevator lowering the trailing edge, while the left hand one



The incredible 20 winged PHILLIPS might be a control-line project. It makes a monoline take-off (with the line vertical) as seen below. Film version differs slightly from published sketches.

Ioan Hughes was the only pilot light enough to fly the tiny DEMOISELLE of which three were made and even so, maximum altitude was 400 ft. Note ailerons in view above.

Simplest of the replicas but not easiest to make or fly, the DEMOISELLE was a real challenge to ingenuity of ex-modeller Doug Bianchi of Personal Plane Services.



operated the wing warping as a forward movement caused the trailing edge of the right-hand wing to move downwards.

A foot rudder bar was used to move the double rudder.

Engines used were the Antoinette Vee type with eight or 16 cylinders and of 50 h.p. or 100 h.p., though a few pilots used the E.N.V.

Pump injection of fuel was used, though carburettors were fitted to some later machines, and long tubular aluminium condensers placed on each side of the fuselage rapidly converted the steam into water which was pumped back into the cylinder jackets, as the engine was steam cooled. Early Antoinette monoplanes had paddle type propellers with aluminium blades and steel tubular spars but during 1910 normal wooden propellers began to be used.

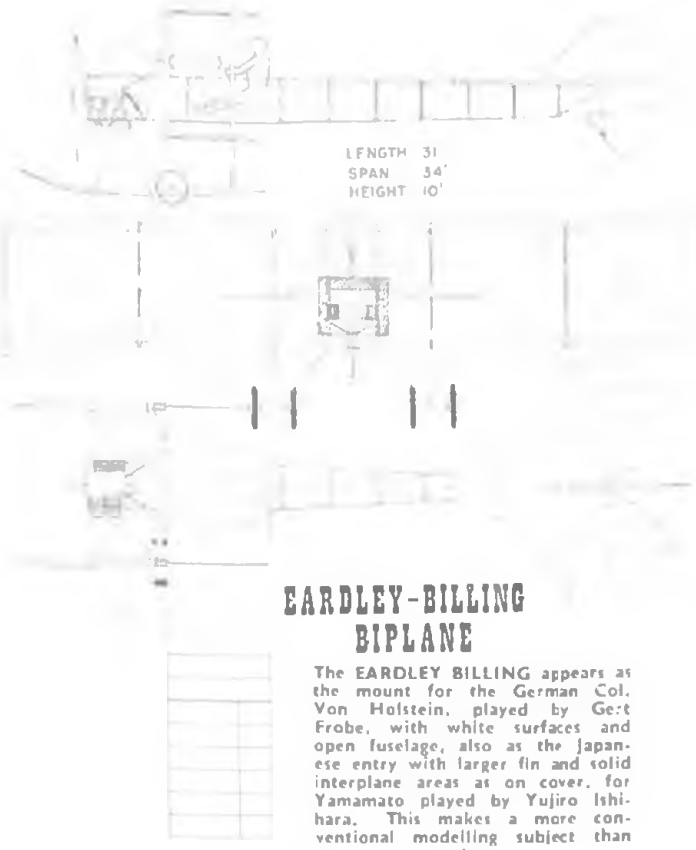
Made diligently "to scale" by the Hawes family of Hants and Sussex Aviation, the film versions have elderly Gipsy engines and were subject to several changes. Ailerons and leading edge droop were used to improve control and lift.

The Eardley Billing

BUILT FROM an old Voisin in 1911, and generally referred to as the "Gozeley Bird", the Billing biplane was used by N. S. Percival at Brooklands in August of that year to obtain his Aviator's Certificate No. 111.

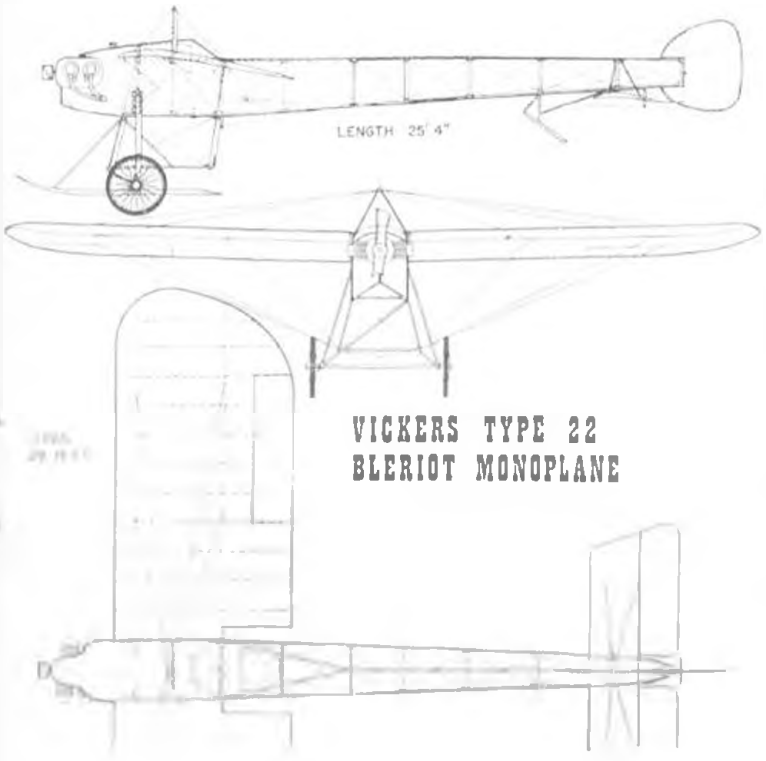
Powered by a 40 h.p. E.N.V. engine the machine was at first flown without fuselage covering.

Two versions constructed for the film appear as the mounts for entries from Germany and Japan. The latter has modifications to the side area to accomodate floral decoration as demonstrated on the cover of this issue. The former will be distinguished in the film by some spectacular flying including the loss of a tail unit and some hectic cross-channel flying. The replicas are fitted with Continental O-90 h.p. engines and were constructed by Harold Best-Devereux of Welwyn Garden City.



EARDLEY-BILLING BIPLANE

The EARDLEY BILLING appears as the mount for the German Col. Von Holstein, played by Gert Frobe, with white surfaces and open fuselage, also as the Japanese entry with larger fin and solid interplane areas as on cover, for Yamamato played by Yujiro Ishihara. This makes a more conventional modelling subject than others.



VICKERS TYPE 22 BLERIOT MONOPLANE

Bleriot Monoplane

MANY DIFFERENT VERSIONS of the famous monoplanes made by Louis Blerlot appeared and of course the most famous was the one in which he crossed the English Channel in 1909. This machine was powered by a three-cylinder Anzani engine and from it was developed a military version and also variations built under licence.

Typical is the Vickers Monoplane Type 22 which is a prominent machine in the film and which has only three longerons. (See drawing.) This was built by Personal Plane Services of White Waltham, and has a Continental C75 engine. Another true scale replica of the original Blerlot appears as background material and this was made some time ago by R.A.F. apprentices. It has no engine and it does not therefore take a flying part.

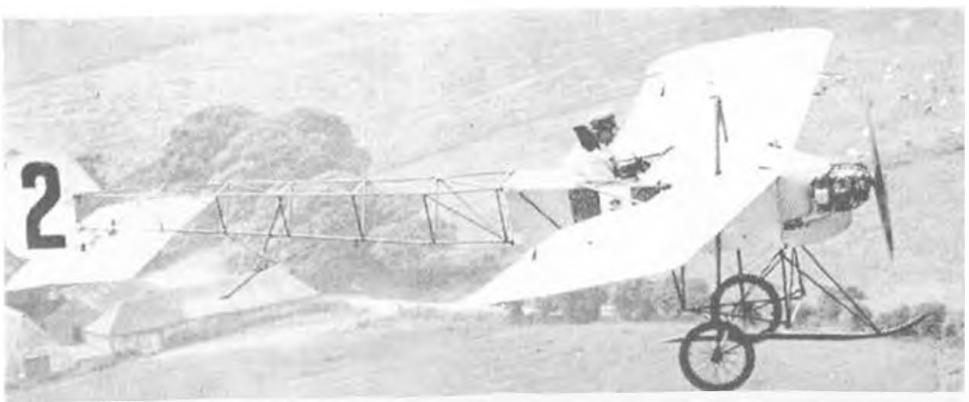
The Blerlot is particularly well documented and a well established plan for a 1/8th scale rubber driven model has enjoyed popularity in Aeromodeller plan service as drawing USR 2/5 (7/-, post included). The model is easily converted to power and is possibly one of the best subjects for the flying replica competition one could choose.

The Roe Triplane

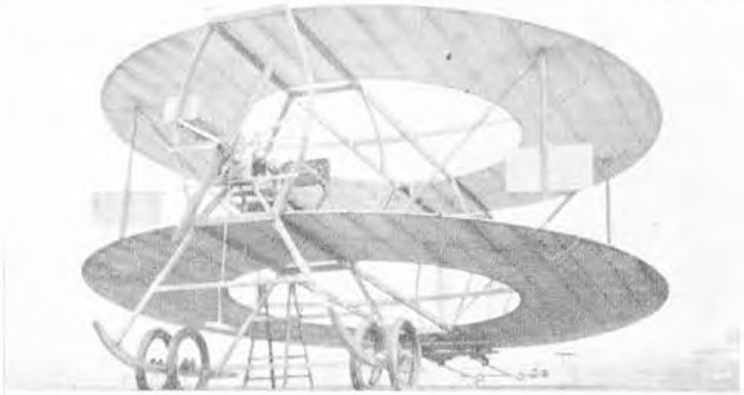
THE NAME of A. V. Roe will always be remembered as the greatest of Britain's air pioneers for his successful triplanes, followed by biplanes. All were of the engine in front tractor type, which eventually became the standard modern design.

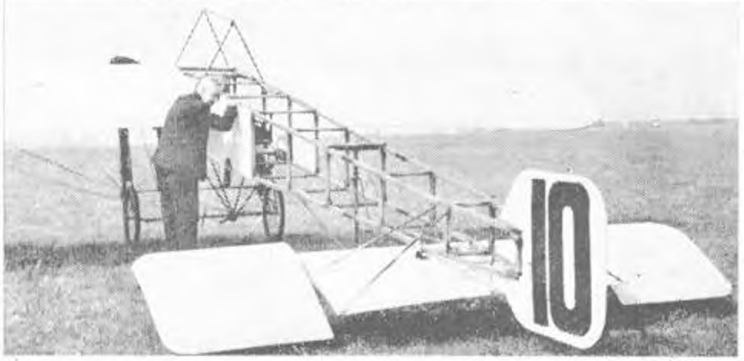
To Roe must go the honour of making the first flight in Ireland on an all British machine, in July 1909, the 9 h.p. triplane in which this was accomplished, is now in the aeronautical Collection of the Science Museum, South Kensington.

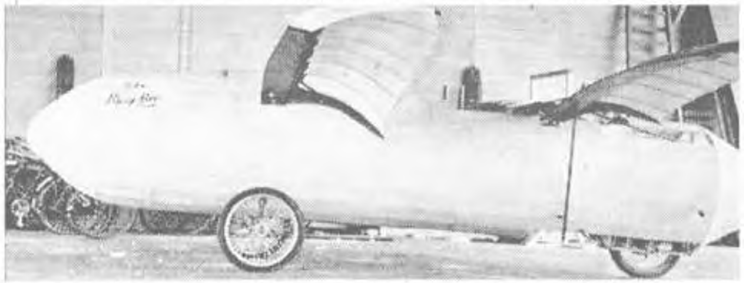
The 1911 machine shown was an improved version of the 1910 type, the triplane tail having been discarded and the lower main planes considerably shortened. Powered usually by a 35 h.p. four-cylinder Green engine, this aeroplane was a very successful flyer at Brooklands Aero flying school, and many pilots obtained their certificates on this type. Soon the biplane form was evolved from this design, and it is interesting to note, this eventually became the famous [illegible] type in 1913.

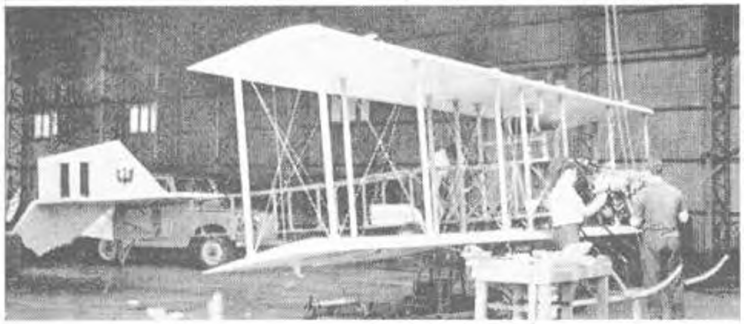


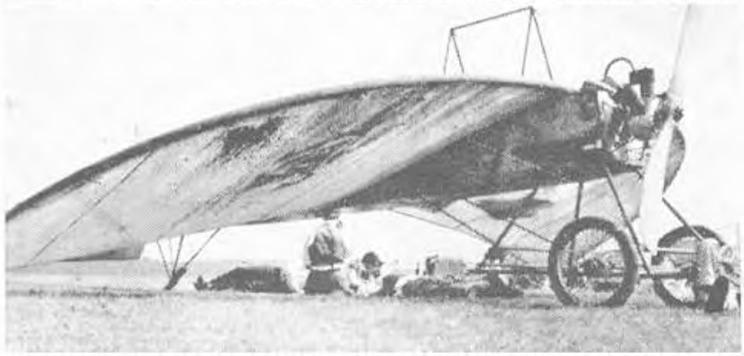
This replica above and at right was made before the film and might even have inspired director/writer Ken Annakin and co-writer Jack Davies to create the film story. Flown by Taffy Rich, who also piloted for "633 Squadron", the VICKERS BLERIOT had to have a steel tube rear fuselage after being subjected to blessing of the cockpit by Italian Alberto Sordi's prolific film family. Otherwise it tended to twist—as Derek Piggott can well relate! Virtually identical to a Bleriot apart from the triangular rear fuselage.











The body was an open triangular girder, made of ash and braced with piano wire, and was placed beneath the level of the middle main planes, and was covered to just behind the pilot's seat. Eventually the fuselage was covered with fabric, it was thought at one time a covered fuselage was hard to make turns, and more prone to be affected in side winds. The undercarriage wheels and skids were on Farman lines, using elastic cord shock absorbers round each axle, with a single skid to support the tail. The mainplanes were fairly high aspect ratio giving a good supporting area for a low weight.

Wing warping was used for lateral control, the outer panels of the top and middle planes, were connected to a steering wheel, mounted on the vertical control lever working the elevators. The rudder was moved by a pivoted cross-bar, forming a foot-rest. The replica built for the film by the Hampshire Aero Club is a very faithful reproduction of the original Avro Triplane though the power unit is of course a departure, and a 60-80 h.p. Cirrus engine is used, easily giving taking off power on about half throttle, otherwise the aeroplane is unaltered and flies very well indeed proving to be the favourite of all the "Magnificent Machines"

Phillips Multiplane

THE ENGLISH PIONEER Horatio F. Phillips will always be remembered for his work on wing sections which were all evolved with a "dipping front edge" or "Phillips entry". In order to test the lift of these wing sections a multi-plane driven by a steam engine was tried out in 1893 and when tethered and using a circular track (origin of control-line?) flew some few hundred feet lifting about 70 lb. for each horsepower delivered. This machine had a venetian blind arrangement of surfaces. Experiments were continued with the advent of the petrol-engine, but all retained the narrow chord unstaggered venetian blind arrangement of the main supporting surfaces, but due to longitudinal instability only short hops were made.

In 1907, during a test, a flight of a few hundred feet was said to have been made, and Mr. Phillips claimed to have made the first power driven flight in Great Britain, however, the official honour was awarded to the late Lord Brabazon (J. T. C. Moore Brabazon) for his flight at Eastchurch on May 2nd, 1909 the first controlled flight.

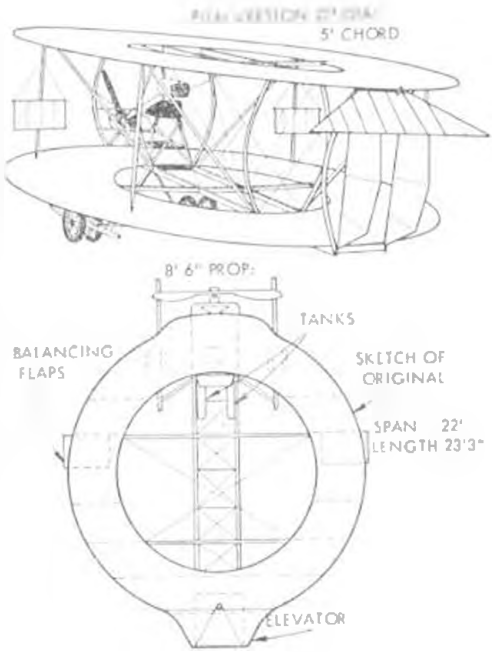
Made by Personal Plane Services of White Waltham the pseudo "Multiplane" has electric propeller drive and dummy engine. It makes a spectacular sight taking off (by cable lift).

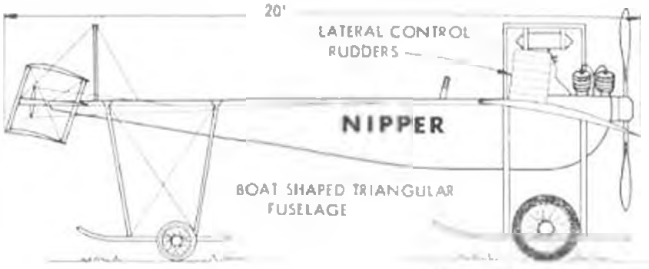
Lee-Richards Annular Biplane

THIS EXPERIMENTAL BIPLANE was built during 1911 to test the principle of the annular wing which was the subject of a patent by G. J. Kitchen and bought by the pioneer Cedric Lee, assisted by the engineer and afterwards aircraft designer G. Tilghman Richards.

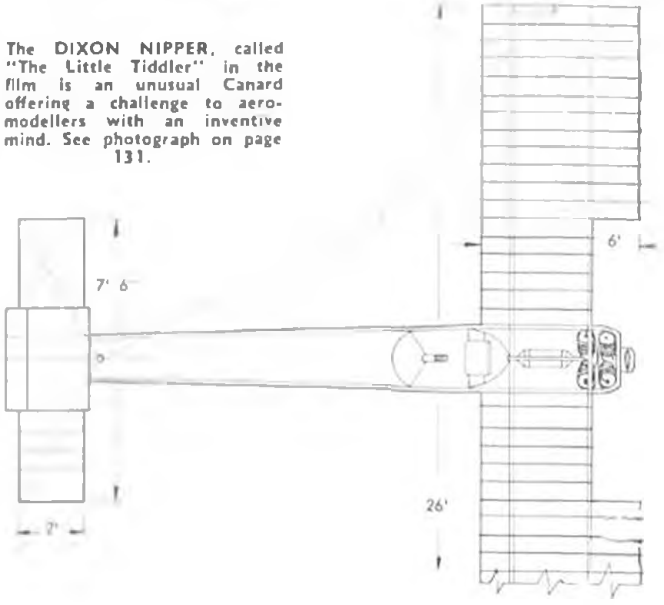
Built as a small single-seater biplane and powered with a 50 h.p. rotary Gnome engine it was tested at Hevsham and while showing a great measure of stability with low speed stalling qualities it was not particularly successful but paved the way for subsequent experiments. As the Lee-Richards "circle plane" or "Doughnut" an annular monoplane was produced in 1913, this was quite a successful design, but was not taken up by the authorities. The 20 ft. biplane was of simple wooden wire braced girder construction, amply strutted by a system of curved and cross shaped bracing struts.

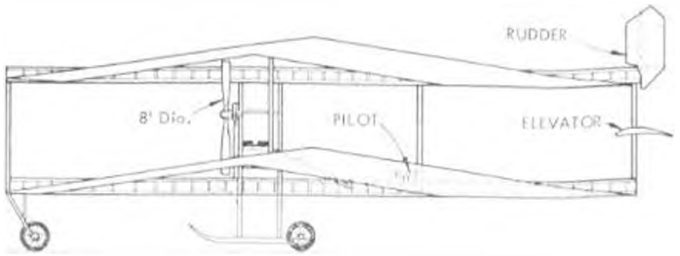
Top to bottom at left; BRISTOL BOXKITE, called "The Phoenix Flyer" is the U.S.A. entry flown by actor Stuart Whitman. It is involved in several spectacular events. Double hoopla ring is the LEE-RICHARDS, strictly non-flying but powered to taxy, see sketches at right. A true BLERIOT is racer 10 being inspected by Francis Boreham who grew up with the real machines and contributes the descriptions to this feature. The ornithopter was an engineering delight, called "The Busy Bee" it "Flies" for the film and is based on the original PASSAT. Obviously not a modelling subject. Open frame German entry FARDLEY BILLING is having an engine change at Booker, compare with cover. Last, another "impossible" for modelling, the sail wing PICAT-DUBREIL made by Shuttleworth Trust, and a non-flyer.

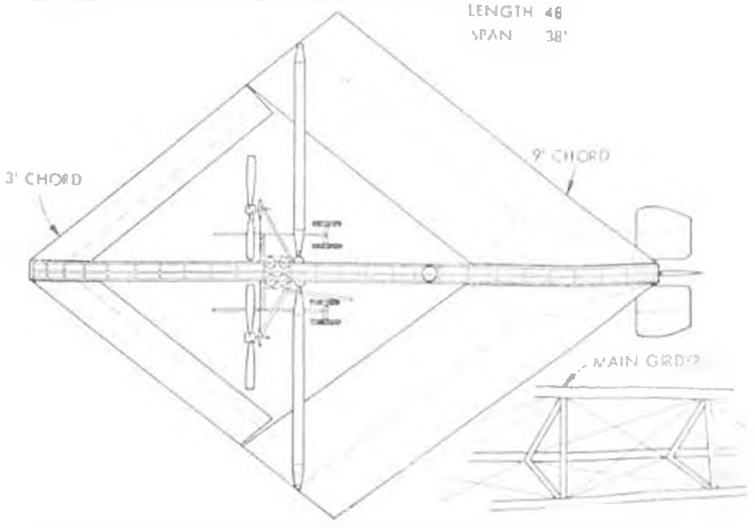




The DIXON NIPPER, called "The Little Tiddler" in the film is an unusual Canard offering a challenge to aero-modellers with an inventive mind. See photograph on page 131.







Not photographed because it proved to be so huge and difficult a subject, the cloth winged EDWARDS RHOMBOIDAL is a weird device that could even be made to fly as a control-line model and that is why we include the views above as one of the eligible 12.

Small balancing flaps, which were positioned at the outboard interplane struts, and simply hung down when the machine was at rest, were used for lateral control and also to assist the turning action of the rear twin rudders, while a small extension of the top plane surface served as a movable elevator.

The biplane and its hangar were wrecked during strong gale force winds in November, 1911.

Made by Denton and Partners of Woodley, the replica has a Douglas engine for which several props were made before the machine would taxy. Reports that efforts were made to fly this "racer" under its own power are regrettably imaginative.

The Dainty Demoiselle

SANTOS-DUMONT, a Brazilian, was the famous pioneer flyer who first astonished the world, by his successful airship experiments at the turn of the century. Altogether, he built 14 airships and in 1901 won the Deutsch prize by flying round the Eiffel Tower and travelling about 10 miles in 30 minutes. In 1906, Santos-Dumont turned to heavier than air craft, and made the first flight in Europe, with a tail first box biplane (the 14-bis) winning the Archdeacon prize, for the first officially recorded flight of more than 25 metres, subsequently flying 721 ft. in 21 secs.

In 1909, he produced the smallest flying machine in the world, which was the forerunner of the light plane — this he called the "Demoiselle" his 20th design, and he gave to the world, the unrestricted privilege of building rights. Several concerns such as Clement-Bayard in France and Mann and Overton in England built these monoplanes at a selling price of about £300. Many enthusiasts built copies but they were handicapped by the design built for Santos who was very light (110 lb.) and a small man, where as the average sized pilot needed more power to fly satisfactorily.

In construction, the machine was a very simple structure as the fuselage was a triangular girder with apex at the top composed of 1¼ in. bamboo poles, trussed with light steel tubes, and piano wire bracing. The main planes had ash spars, with Bamboo ribs, and wire leading and trailing edges. The covering was of varnished silk, double surfaced stretched taut with upper and lower surfaces sewn together, alongside each rib. The tail surfaces vertical and horizontal were of bamboo stayed with wire, and worked on an universal joint at the rear end of the fuselage girder.

The bald aviator sat on a piece of canvas stretched across the two main bamboos, thus quite low down just aft of the two supporting bicycle wheels. These were splayed so they were closer at the top than on the ground, this helped to avoid buckling of the wheels if a landing was made slightly to one side.

The engine, a two-cylinder apposed Darracq, or Clement-Bayard of 30 h.p. was of the water-cooled type, the cooling radiator consisted of ¾ in. copper tubing, running down the lower surface of the wings close to the fuselage.

It drove a 6½ ft. wooden two-bladed propeller at about 1,800 r.p.m. Lateral control was by warping the flexible rear edges of the planes, a pivoted lever which was against the pilot's back enabled him to control this by leaning his body over to the left or right as may be needed. Leaning to one side caused the rear edge of the wing on the opposite side to be flexed downwards thus correcting the tilt. An elevating lever working fore and aft controlled the tailplane which was also moved by a hand-wheel for steering purposes. Throttle of the engine was by foot pedal, it is interesting to note the unorthodox controls of these pioneer craft, it was some time before the "joystick" was made standard.

The replica "Demoselles" which have been constructed by Personal Plane Services of White Waltham to take part in the film, differ from the original by having welded steel tubular structures, modern type double surfaced planes with inset ailerons and normal controls, using the 30 and 40 and 50 h.p. Volkswagen flat four engine air cooled engines. Span is increased by 2 ft. and nose droop used to improve lift. Wheels are moved aft to improve take off.

The Dixon Monoplane

THIS MONOPLANE designed and built by H. S. Dixon was a pusher of the tail-first type with a covered in boat shaped body. Known as the "Nipper", it appeared in 1911 at the Acton Aerodrome. Some short flights were made, but it was eventually wrecked, the pilot escaping injury while learning to fly. The framework was mostly bamboo, a simple "A" type undercarriage with one pair of wheels was used on Farman lines with elastic cord sprung axle. Lateral control was unusual, as vertical rudder planes were mounted above the tips of the mainplanes, and were operated by a sideways movement of the control lever, and equilibrium was maintained by steering into the wind.

Fore and aft movement worked the two halves of the elevator planes, the leading plane was a small biplane, set at an angle of incidence which was adjustable, on the ground.

The engine was a four cylinder air-cooled Vee type Advance mounted just in front of the rear spar, the trailing edges of the mainplanes, were cut out to accommodate a wooden propeller, of 6 ft. 8 in. diameter. Span 26 ft., Length 20 ft., Wing area 210 sq. ft. The non-flying film replica was made by Denton and Partners of Woodley and re-named "Little Tiddler" by the producers.

Edwards Rhomboidal Biplane

SUCCESSFUL MODEL experiments convinced the designers of this unorthodox type to build a large machine, which it was hoped would prove a good weight lifter. The backbone or main structure consisted of two triangular girders one above the other some 45 ft. long and 8 ft. 4 in. apart.

On either side of these girders was a transverse spar sloping outwards and carrying the main planes which were of fabric single surface and having curved ribs in pockets like the battens of a yacht main sail. The trailing edges were also steel wire cables, thus the supporting planes were flexible to a great extent, depending on the tension of the supporting cables. Upper and lower planes were connected by vertical struts. The engine a 50 h.p. Humber

was mounted just forward of the spars on the lower main girder, and drove two tractor propellers through a pair of chains, one was crossed to give opposite rotation, and were geared. Suitable sprockets, gave a 3:1 ratio, the propellers rotated about 600 r.p.m.

The machine rested on a chassis, with two skids and wheels sprung like the popular Farman undercarriage of the period while a single castoring wheel was used at the front of the main girder.

Control was solely by rudder and elevator, and no doubt trouble was experienced in this connection as the rudder was above the upper wings and out of the "slipstream".

The machine was partly wrecked after extensive taxying trials, and as only a few straight hops had been accomplished the type was abandoned and the next machine built was more orthodox known as the Walton and Edwards "Elephantoplane" or "Colossoplane" which flew at Brooklands late 1911.

The replica made by "Airgeneers" of Staverton seemed to require a structure of S.C.B. tubing to support it, while the supporting surfaces were so flexible, due presumably to insufficient cable tensioning, they appeared to flap about, like a "line of washing"! Strictly non-flying although the film makers have ingenious ways of deceiving us!

Passat Ornithopter

CLAIMED TO BE THE first flapping wing machine to have risen off the ground for 20 yards. Driven by a 4 h.p. motor-cycle engine, the Passat Ornithopter was built in 1910.

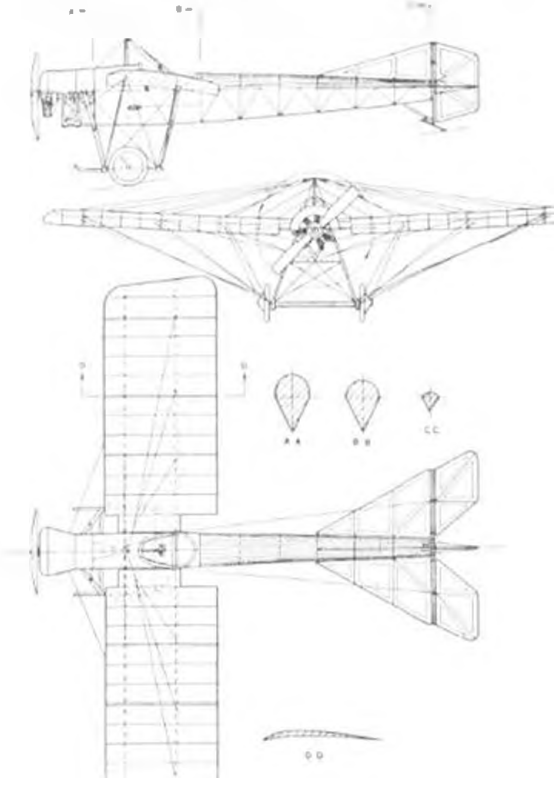
"Flight" for November 12th, 1910, reported that the machine was to be fitted with an 8 h.p. engine and proceed to Brooklands for further tests.

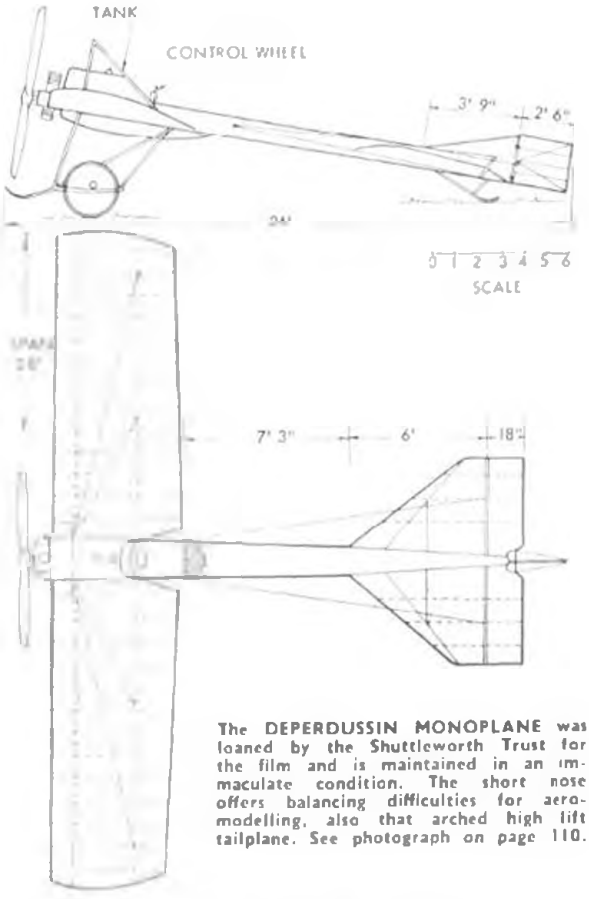
The smaller pair of front wings were used as an elevator and were non-flapping, the 24 ft. rear wings flapped through a simple chain driven reduction gear and cranks and were also connected by chain to the single rear wheel. For two revolutions of the wheel on the ground the flapping wings made one complete beat of 10 ft.

A fabric covered 20 ft. long bird-shaped fuselage formed the structure for pilot and engine, having a three-wheeled undercarriage, two wheels in front and one in rear, while a small bird-like tail and rudder was fitted.

The last report of this machine was in 1912 when Mons. Passat flew for 120 yards on Wimbledon Common and crashed in a tree.

Made by Westland staff, the replica is most ingenious. It was first powered by a Douglas, and then by a Clinton engine.





The DEPERDUSSIN MONOPLANE was loaned by the Shuttleworth Trust for the film and is maintained in an immaculate condition. The short nose offers balancing difficulties for aero-modelling, also that arched high lift tailplane. See photograph on page 110.

Deperdussin Monoplane

THE DEPERDUSSIN MONOPLANE, a neat and practical design, soon became a popular aircraft. Many flying schools used them and during 1911 numerous prizes were gained in competitions and cross-country races. The fuselage was of the box-girder type and had the top and bottom longitudinals parallel from engine to rudder post. To make more room for engine mounting, tanks and pilot, a semi-circular well made of ply veneer was fitted under the front fuselage section. The fuselage was quite shallow with the pilot "on" rather than "in" it.

The landing chassis was a neat skid and wheel combination having elastic cord shock absorbers, while the double skids were curved to protect the propeller.

The engine mounting for either the radial Anzani or rotary Gnome was made of steel plate while an aluminium cowling and hood prevented excessive oil spray reaching the pilot.

Main planes were of two spar construction with the usual ribs, the trailing edges were flexible and of wire. Tailplane was usually a flat surface, though some of the racing Deperdussins had a cambered section, to increase the effectiveness of the controls.

Tanks for fuel and oil were mounted in front of the pilot between the two wooden pylon masts supporting the wing bracing cables.

Controls were natural in action, the wheel mounted in the centre of an inverted "U" shaped lever, was used to warp the wings for lateral balance, while a to and fro movement worked the elevators and a foot-bar pivoted controlled the rudder.

Rear bracing wires were connected to a rocking lever on chassis-cross member which was worked through wire cables running on pulleys from the control wheel, thus warping the wings for lateral control.

The film machine is genuine, being loaned by The Shuttleworth Trust.

Blackburn 1912 Monoplane

Drawn to 1/144th scale at left

BUILT FOR CYRIL FOGGIN in 1912, this machine was used for exhibition flights in the Leeds area and proved to be very reliable. Later it belonged to one Montague J. Glew, who was unfortunate enough to crash at Wittering. After the crash it was set aside until 1947. It became the property of the Shuttleworth Trust, was rebuilt in 1948 and is beautifully maintained in flying order as one of the most impressive veteran aircraft in the country. Thousands have seen it at air displays since its début at Hendon in the 1949 "Battle of Britain" show and on many occasions since that date when weather conditions have combined with air shows to make flying possible. The 50 h.p. Gnome rotary engine has many a fond reminiscence to those in the crowds.

The Blackburn Monoplane rivals the Bleriot as one of the really attractive subjects for the scale replica model competition.

Drawings for a 48 in. span 1/8th scale version designed by

A.M. Funicars have been available through Aeromodeller Plans Service since 1954 and many examples have been seen successfully flying at the model rallies.

Equipped with a pendulum controlled rudder, the model is faithful to scale and the design power (Mills .75 Diesel) hides completely inside the upper half cowling so that it does not in any way spoil the external appearance. The plan is FSP567 and it sells at 6/6d, including post. For those who have little time to spare for the preparation of special plans to suit the contest, this is a thorough recommendation.

Bristol Boxkite

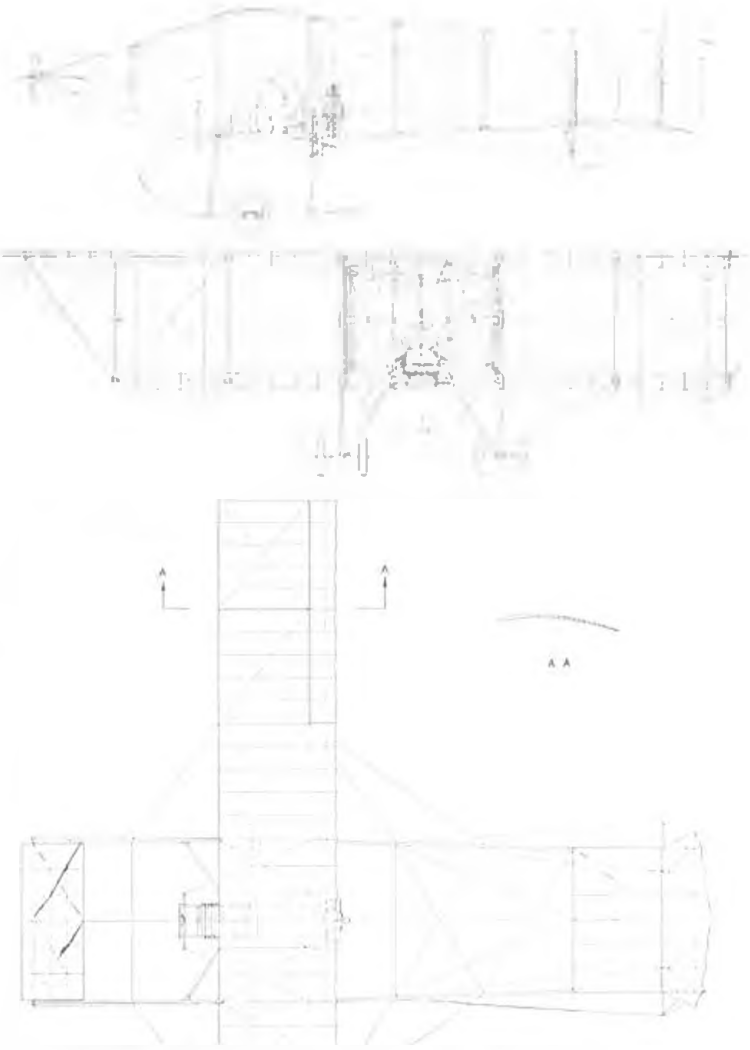
THE FIRST Bristol aeroplane, modelled on the lines of the Henry Farman biplane was produced in May, 1910, at Filton, and taken to Brooklands for flight tests. Satisfactory flight trials were completed and the Boxkite appeared at the big flying meetings held at Bournemouth and Lanark, 1910. Subsequently sheds were erected on a site near Stonehenge on Salisbury Plain for a Bristol flying school, while at the same time, the aerodromes Brooklands and Eastchurch were also used for this purpose.

It was a single-seat pusher biplane, having an airframe structure of wooden members and steel tubing lavishly wire braced. While single-surface fabric covered the lifting and control surfaces, the ribs were encased in pockets. Hanging ailerons, or balancing flaps, were used for lateral control from a universally pivoted vertical lever in the pilot's right hand, fore and aft working the elevators while a sideways movement worked the ailerons. The front elevator was inter-connected with the rear elevator forming an extension of the box tail. The three rudders, were controlled from a pivoted foot rest, in the usual manner. The engine was a 50 h.p. seven-cylinder rotary Gnome, driving an 8 ft. 6 in. propeller. Power was increased to 70 h.p. for the later military type.

This had increased upper wing span of 46 ft. 6 in. increasing the wing area from 457 sq. ft. to 517 sq. ft., and thus allowing extra fuel and a passenger to be carried.

From 1910, until the Great War of 1914-1918, the Boxkite gave invaluable service at the Bristol flying schools at Stonehenge, Brooklands and Eastchurch, training over 300 pilots, and in this connection the book "Just through the Clouds" by Warren Merriam brings back those wonderful pioneering days. The replica Boxkite built by Miles Engineering for the film is a faithful reproduction of the standard type, but differs in the power unit and propeller with a flat four Continental 0-200 engine of 85 h.p. It is a very pleasant machine to fly and has been seen about the home counties on many cross-country flights.

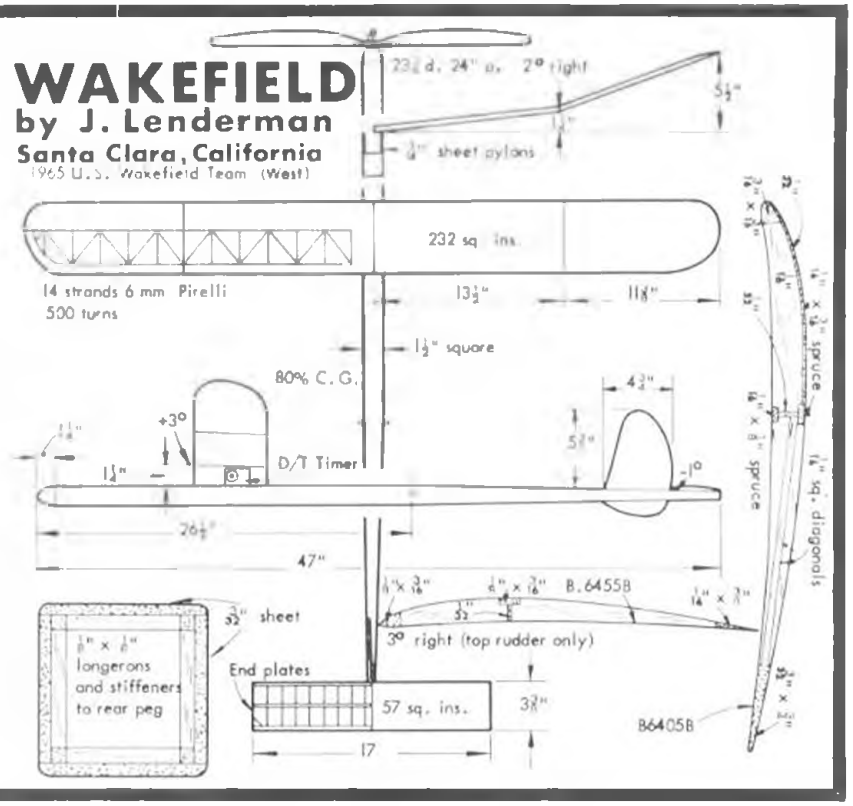
Drawing at right is to 1/144th scale, reproduced from the Book of Bristol Aircraft and shows the rotary engine as distinct from the Continental flat four in film versions.



Another of the United States Team models for the World Championships

John Lenderman represents the West Zone of the U.S.A. with his Wakefield class rubber model at the World Champs next July 8th in Finland. He will be flying a design that is basically the same as that he used to set a U.S. National record in 1963, when he won the event at the U.S. Nats. It is intended to try a longer tail moment and to increase wing aspect ratio as well as vary the wing airfoil in a series of versions being made in preparation for the great event. At present the model averages between 3:40 and 3:50 on 510 turns of a 14 strand motor and John is aiming for a four minute average.

Benedek airfoils are shown on the drawing, the wing section being B6405B, note the use on an "I" spar and anti-warp diagonals as well as the spruce upper and lower spar members.



Schweinhund !!!

March-May Contests

March 1st	*S.M.A.E. Event*, Area Centralised. F.A.I glider and rubber, open power.
April 4th	*Rolls Royce Pylon Race Meeting*. Thulston on B5010 near Derby, off A.6. Single channel and multi relay races. Enquiries to P. Clark, 70 Brisbane Road, Mickleover, Derby.
April 11th	*S.M.A.E. Event*. Area Centralised. F.A.I. power, open glider and rubber.
April 11th	*S.M.A.E. Event*, Centralised Control line meeting.
April 25th	*S.M.A.E. Event*. Centralised. Multi channel radio control.
May 9th	*S.M.A.E. Event*. R.A.F. Hemswell. Scale free flight, control line and single channel radio control plus "Magnificent Men in their Flying Machines" contest (includes static models).

THE PLANE MAKERS

Huddersfield Aeromodellers' Association may not be the most well known club to readers of Aeromodeller but they should be well known in their home town now, due to excellent publicity in the "Huddersfield Daily Examiner" newspaper. The report gives a very good image of the club and details the types of models they fly, in particular those of ex Lancaster pilot Brian Garner who is seen in a photograph holding a scale Sopwith Triplane with a 1.6th scale R/C A.P.S. Cessna 172 and a little known aircraft the Austrian Aviatik DI. Two other photographs illustrated two control line stunters being started up and one in flight. Titled "The Planemakers" it explained the silencer and noise problem, also detailing the clubs flying site problems. A new road is proposed to run right through the middle of it—ah well, it'll provide a runway 'till it's open to traffic.

Bristol M.A.C. R/C Rally

Held on January 10th the Bristol Invitational Rally for R/C models promised the chance of a good rally during the winter months. Unfortunately, blustery wind and rain put paid to this and the meeting turned into a "Fly for Fun" event. Two 25 ft. poles were erected and pilots asked to fly between them for points. Bonus marks were awarded if they touched a 3 ft. strip of balsa placed on the ground between the posts. This was an exacting task with a blustery cross wind blowing and Geoff Franklin just made it on one pass when the wing tip of his "Taurus II" clipped the top of the pole. Peter Greet (Leicester L.A.R.C.S.) went the whole hog by hitting the pylon with the right wing of his "Orion", the model twirling right round the pole until it reached terra firma. During the five minute flying period Geoff Franklin made 14 passes to win and J. Reynolds 12 with a Robbe "Thor" model. After the passing event came a pylon race with a difference. Pilots flew their models for a timed lap and multiplied this by five as a handicap time for the five lap race. Geoff Franklin won again, five seconds down on his handicap flying a "Taurus II" with Orbit proportional radio, Ed Johnson was second with his much flown "Taurus" equipped with Min-X 12, reed equipment.

Pen Pals Wanted

Jan Nilsen, Flekkeroy p.o., p.r. Kristiansand S/ Norway, age 17 would like to correspond in English or German on control line stunt and team racing. Jiri Pokorny, Gottwald 43, Prostejov, Czechoslovakia, would like to exchange magazines with an English modeller. Peter K. P. Sit, 12D Smithfield Road, 3rd Floor, Kennedy Town, Hong Kong, wants to correspond with an English aeromodeller. John H. Morris, Apt. 1, 10612 Collett Ave., Riverside, California 92505, U.S.A., would like to exchange plastic models. Sulit Kumar Saha, B.I.S. Footwear, Sadarghat, Dacca-1, East Pakistan would like to correspond with an English aeromodeller. Pavel Hubka, Komenskeho 156, Roztoky u Prahy II, Czechoslovakia, would also like to swap the Czech magazine Modelar with an English modeller.

How to Report your Club News

At this time of year Clubman is bombarded with reports of club A.G.M.'s and reviews of the past years activities of the club concerned, this is all very nice for members of that particular club but of little interest to other clubs. When secretaries or P.R.O.s are gathering information for reports they should make sure that they include "all" the facts of positive interest. It is no good saying that Joe Bloggs has a new radio model unless we know what type it is, engine size performance, etc. Send your news in the way you would like to read news of other clubs. Typed copy is preferred but hand writing is acceptable if it is clear and legible. If you never see your club reported in print get on to your P.R.O. or Secretary and tell him to pull his socks up. Better still—produce something newsworthy for him to write about.

Control Line Wins

Due to the local flying facilities of the Sidcup A.S. being limited to control line flying it is from that side of the hobby that their contest successes come. At the S.M.A.E. control line meeting on November 22nd, Ray (Gadget) Gibbs won the 2.5 c.c. open speed using a Carter Special and Junior Richard Wilkins went through to the combat semi-finals. As the contest finished early due to lack of light the semi's were postponed to December 12th where Richard was beaten into second place by D. Balch (Hayes). Richard also came second to Pete Tribe (Northwood) in the London Area Combat Championships on the same day. From the above it is easy to see why top junior of the club for 1964 was Richard Wilkins. Top in the senior class was R. Sibbald another combat flier who won this event at the South Midland Gala. Just to prove that they are not all control line fliers I. Andrews had his A.P.S. Peacemaker go free flight during a session at Hayes after a mid-air collision. Free flighting for about two and a half minutes it landed only 100 yards away. A gallant attempt was made to recover it before the contest ended but to no avail as he lost his bout by one point due to a cut, no points being lost on the ground.

EXHIBITION FOR SOUTHEND

The East Anglian Area S.M.A.E. are holding an exhibition of model aircraft on February 20th at the College of Technology, Victoria Circus, Southend-on-Sea, Essex. Any local modellers should make a point of attending, where all types of models and R.T.P. flying will be shown. Admission costs are 2/6d. adults, children 1/6d., doors opening at 10 a.m. and closing at 6 p.m.

Outlaws Concours d'Elegance

Held on December 4th at the Blake School, Cannock, Outlaws Annual Concours d'Eleeance competition, and party attracted over 80 aeromodellers to display their models and enjoy the fun. Refreshments were provided by members of the club committee and members' parents. During the refreshment period a series of Dutch auctions were held for small modelling items. The recognition contest was won by Gordon Burton, but unfortunately the treasurer had sold his prize during a hectic moment of the auction. The Concours competition was this year open to all Midland area clubs, and indeed they had entries from Wolverhampton, Walsall, Lichfield K.F.S., Handsworth, Bilston and of course Outlaws. The judges were faced with a difficult task in judging the models to award the vouchers donated by Mr. W. Daniells. First place went to M. Davies (Outlaws) who displayed a very well finished Mercury Crusader, on its second covering, and 18 months old. In second place came an unnamed Wolves modeller with a Hawker Henley.

Trade Notes (Continued from page 113)

Now for the plastics of the month:

Long awaited "Brewster Buffalo" from **Revell** has at last arrived in 1/72nd scale and we feel sure that it will prove most popular. It goes together well and is relatively free from gimmicks except for a sliding cockpit canopy. This is a nice idea but the fact that, due to mouldins of the slide guides and sliding tongues on the canopy, the movable unit looks far too bulky and oversize, and does detract from any scale advantage gained by a very nice undercarriage and simple fixing arrangement. Colours for our model are from official Brewster prints depicting a pre-lend lease machine—an aircraft ferried from the States under civilian registration before America came into the war. Hence British serial Nos and U.S. civilian registration—an interesting subject. Like the "Rata", the "Buffalo" could also be made Finnish.

Again from **Revell**, the "Polikarpov I-16 Rata" (not "Chato" as we called it last month) is a truly worthwhile and interesting subject. Three removable engine panels show power plant in place, but the small size makes engine detail impossible. What a tiddler this plane was! The kit goes together well and no difficulty was experienced—even the undercarriage of most unusual type and design on this aircraft goes together quickly and accurately. Colours for our example depict a Spanish Civil war machine of 1936 from the Nationalist ranks. Circles on fuselage and underside of wings are black with white crosses on upper wing surfaces and black on white on rudder. Colour details were taken from the "Aeromodeller" scale drawing, J1 2767.

Odd man out from **Frog** this month is that favourite with modellers of famous aircraft the much published "Ryan N.Y.P. Spirit of St. Louis". This 28 par. kit goes together as quickly as any and looks good when completed in its all silver colouring. A very simple one to build, this, but worthy of addition to any collection—indeed, any collection of plastic aircraft would hardly be complete without its "Spirit". Only faults which we would point out is the fact that the larger of the two N-X-211s falls badly short of scale requirements in that the figure 2 in this registration bears "no" resemblance to the actual 2 on the N.Y.P. (New York to Paris). Sorry to quibble but this peculiar figure 2 was a notable feature of the full sized aircraft. However, the correction is easily made with a razor blade. Other points we made last month. For 3/- this "Trailblazer" is certainly one to have in the collection.

Now on the bench . . . Airfix's Ju 52, Monogram's P-80—each a "multi-version" kit for the ambitious.

In the matter of the **COMPANIES ACT 1948**
and
In the matter of **ARTHUR MULLETT LTD.**

Notice is hereby given that the creditors of the above-named Company which is being voluntarily wound up, are required on or before the 31st March, 1965, being the day for that purpose fixed by the undersigned, Donald Edwin Bristow of 21 Withdean Court Avenue, Brighton, 6, the Liquidator of the said Company, to send their names and addresses and the particulars of their debts and claims and, of any security held by them, and the names and addresses of their Solicitors (if any), to the undersigned, and if so required by notice in writing from me, the said Liquidator, are by their Solicitors or personally, to come in and prove their said debts or claims, and to establish any title they may have to priority, at such time and place as shall be specified in such notice, or in default thereof they will be excluded from the benefit of any distribution made before such debts are proved, or such priority established or, as the case may be, from objecting to such distribution.

Dated this 25th day of Jauary, 1965. D. E. Bristow, F.C.A.

CLASSIFIED ADVERTISEMENTS

PRESS DATE for April issue, 1965, February 22, 1965.

ADVERTISEMENT RATES :

Private Minimum 18 words 6/- and 4d. per extra word.
Trade Minimum 18 words 12/- and 8d. per extra word.

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Box replies to be sent care of Advertisement Department, Model Aeronautical Press Ltd., 38 Clarendon Road, Watford. Copy received after first post on February 22nd, 1965, will be held over until the next issue, unless cancelled in writing before 20th of following month.

FOR SALE

Veco "19" R/C, R/C/S, 6 channel receiver and transmitter relayless. Three R/C/S servos. 7.2 volt Deac, Deac charger 0-450 m.a., range clunk tank, wheels, starter batteries and 5 ft. long model box, etc. Only used in one model for six weeks. Also just built R/C Viking multi job 62 in. wingspan, low wing, silk covered. The lot: £65 o.n.o. Apply: B. Farrar, 242 Crookesmoor Road, Sheffield 10, Yorks.

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"Aeromodellers" 1947-1959 (112 copies); "Model Aircraft" 1957-1959 (29 copies). Offers to: Goswell, 20 Birch Close, Buckhurst Hill, Essex.

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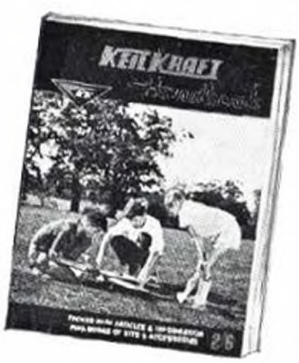

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