



I FIRST BECAME interested in Gliding in 1917, whilst working at Vickers and when I became friendly with a Swiss National, who had some experience of gliding, his stories fired my imagination, so much so that it became my ambition to design, build and fly my own glider. Joining the R.A.F. in 1921 I made a few abortive attempts whilst in the Middle East, but success did not come until 1929 when at Hawkinge (Kent) I built and flew my first glider. My first soaring flight (1 hour) was achieved in 1931 in my *Wren* Sailplane flying above the hills that overlook Folkestone—looking back I think this was the most thrilling hour of my life. Leaving the R.A.F. in 1933, I carried on building and repairing gliders at Dunstable where I had a workshop in the town. My second sailplane, *Willow Wren*, had been completed at the end of 1932—this I brought to Dunstable and sold to a syndicate. This machine held the duration record in 1933 of 6 hours 55 mins., and, in fact, I made my last flight in this machine in 1934, when I was able to reach Whipsnade Zoo. Although this intense activity of full-size gliding took most of my time, I had always been interested in modelling, starting with solids and then progressing to 'A' frame pushers. In 1930 I was lucky to obtain a log of balsa, and from this made gliders of up to 3 ft. span. Kites had always fascinated me, even today I occasionally fly one; perhaps one day a kite section will appear in *Aeromodeller*! After 1945 I became very active in modelling again, and in 1950 decided to concentrate on radio controlled gliders. I started with an ED Mk. I set; the weight of this gear decided me to make a large machine so I built my first R/C job with 11 ft. wingspan. The radio gear of those days was not exactly reliable, nor was it made to withstand rough landings.

With the introduction of the Unitone plus a Sigma relay we began to get more reliability, although I always had a spare set when I went flying and things were so arranged that a quick change on the flying field was possible. I found that Ivinghoe Beacon was the best site as it was possible to fly whatever the wind direction. I look back with pleasure on the weekend visits I had there, sleeping overnight in the car, and enjoying the early morning session of soaring.

Heading picture shows W. L. Manuel sitting in the cockpit of his own-designed and built glider. At right, the attractive, streamlined shape of this modern glider is evident in the upper picture, whilst the lower picture simply states the facts, ignoring the 2,600 hours of labour that went into producing this fine machine!

An aeromodeller tells how he made his own glider – and not the first!

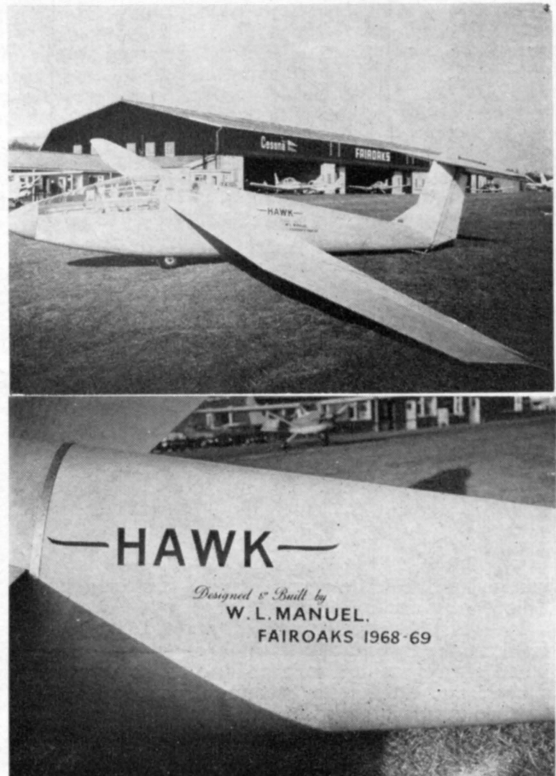
# HAWK

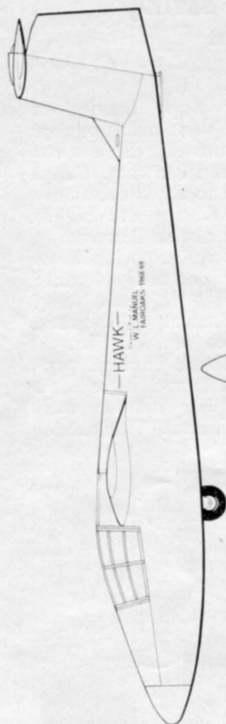
by W. L. MANUEL

who describes his interesting 50-plus years in aviation

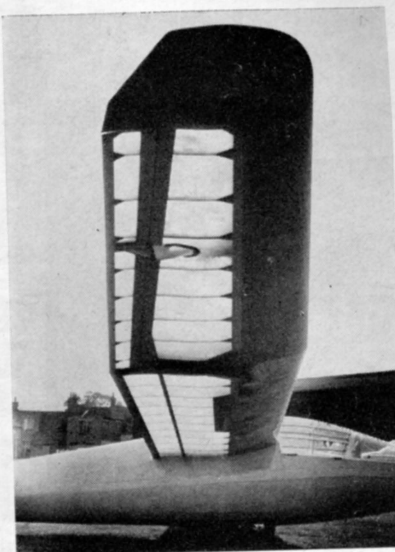
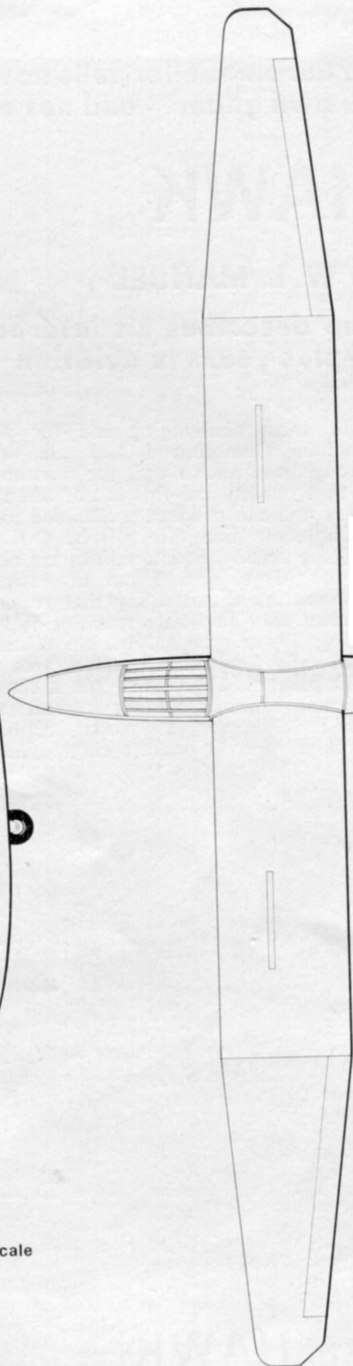
The most challenging site for slope soaring is Chobham Common; I still use this occasionally, although one has to wait for a south-east breeze for the best results, and this is not often blowing. I find that if one can produce a machine to fly successfully at Chobham then this will be O.K. for the bigger sites; the aerodynamic qualities are not so demanding for the bigger site. From my own experience of slope soaring I would say that rudder only is quite sufficient. My favourite machine is 9 ft. span, wing loading 13 oz. per sq. ft., tip dihedral 18 degrees, aspect ratio 12:1 with a rudder area of 33 sq. in.

The ideal R/C gear for this is single channel proportional. Thermal soaring is great fun; I have used 5/16 in. diameter (25 yards), rubber bungee with 500 ft. of line to operate single-handed. The model

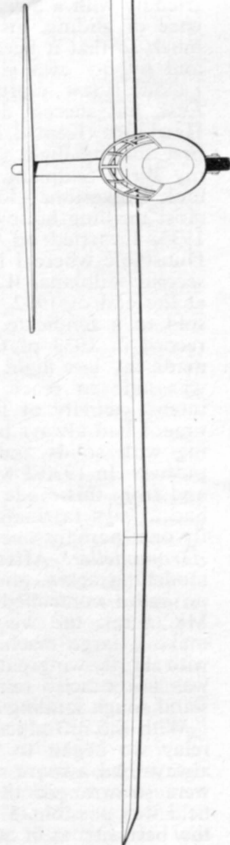




1/72nd Scale



Finished in clear-doped fabric the *Hawk* is instantly identified from its commercially-produced brothers. Attention to detail is very good - even the aileron linkages are carefully shrouded.



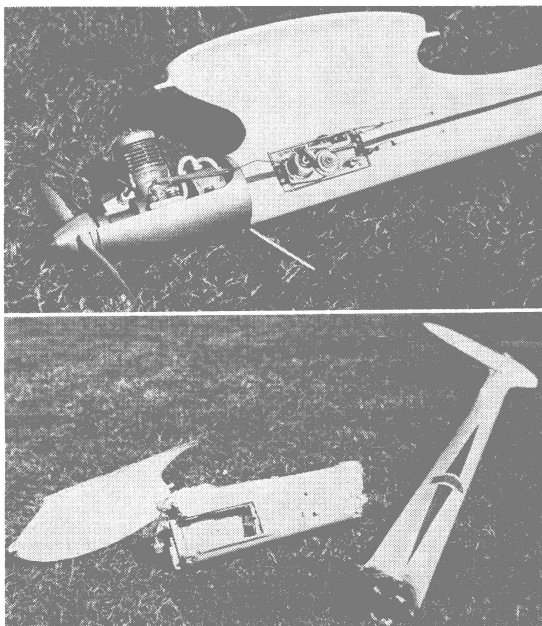
will go up like a kite when the wind is strong enough. This is most exciting flying.

In 1961 the idea of *man* powered flying became fashionable; this made me think of trying something I had always wanted to, that is to fix some wings to a cycle and attempt to become airborne! In 1962 I finished a machine which was 25 ft. span with a small fuselage and tail, together with a propeller at the front driven from the chain wheel. This machine created quite a lot of interest; I even went on tele-

vision with it. My idea was to use this on a slope steep enough to take-off and skim a few feet above the ground, as an aerial toboggan. I have had more laughs with this than anything I have ever made.

In 1966 I knew I would be retiring, so I decided to use the first part of my retirement in making another glider. As it was 32 years since making my last glider, things had changed considerably in design,

(continued on page 455)



### Vandalism

Dear Sir,  
The two enclosed photos show what happened to my F.A.I. Power Model at the Nats.

The model was found on top of one of the hangars minus engine, pan, prop, fuel system and Seelig timer.

If only we free flight modellers would organise ourselves downwind!

To clinch my misfortune, this happened after obtaining three maxes and not getting back in time to organise my second model.

Roy Collins

Romford, Essex.

### Prizes

Dear Sir,

I am surprised at the comment by John O'Donnell in your Nationals report, comparing a prizegiving for Vintage, but not for other events. I remember a Nationals at Barkston Heath where, at the instigation of Mr. O'Donnell's Area, the Council decided to award both certificates and prizes on the day, the idea being widely publicised.

As Records Officer at that time, I spent many hours in a tent typing certificates etc., as the results were available; the C.O. was on hand to

present the awards, but less than 15 per cent of the winners were there, including Mr. O'Donnell. In other words it was a dismal fiasco. Subsequently I have attended many rallies where prizes were presented at the end of the flying, but unless this is relatively early before the spectators and competitors begin to disperse, it does tend to be an anti-climax, and this at events where no-one is searching for lost models.

The inference that, as cash prizes are no longer awarded, S.M.A.E. members receive nothing, is untrue. Plaques engraved with the winner's name are awarded at the end of the season. It seemed, therefore, in comparing the S.M.A.E. and 'private' vintage events, that Mr. O'Donnell is only complaining that he will not receive money from the S.M.A.E. as well as his plaques.

N. J. Butcher  
F.S.M.A.E.

Hayes, Middlesex.

### Mouse Racing

Dear Sir,

I thought you might be interested to hear of my experiences in the Mouse Racing event at this year's 'Nats',

## Readers' Letters

### on the 'NATS'

when I was expelled from the final by virtue of not having an *expensive enough* engine!

Last year I built a profile model based on a half-scale model of a Class B rat-racer we were flying at the time. This model, powered by a standard Cox Golden Bee won the Class II event for me.

For this year's event I built a cleaned-up version of the model with box fuselage and internal controls etc. I used the same motor but this time with a few mods - mainly new piston-cylinder assembly.

I had pre-entered the Class II event and when I flew, made a time of 3:13, which at that stage of the contest was the fastest time of the whole Class I and Class II entry. I subsequently won the Class II final with a time of 7:50 despite 5 instead of the mandatory 2 pit stops (traced to a vibrating needle valve causing cutting at take-off).

Since the model was going so well, I asked the organiser if I could enter it in the open Class I event, to which they replied 'yes, if you think it's that good'. When I flew in the heats I set up the fastest time of the Class I entry with 3:02, beating all the Cox Tee-Dees with my Golden Bee. The crowd at this point had realised I was only using Class II equipment and cheered every time I overtook a T-D, booing when they overtook me! The atmosphere and interest shown was really outstanding. I suppose being the underdog everyone was rooting for me as the crowd was mostly concentrated around my pit.

Anyway, having f.t.d. I was asked to fly in the final. Just as this was to start one of the finalists pointed out to the organisers that the rules stated that Class I was *not* open as everyone had thought, but for motors costing £4 and over only. Everyone else there, including the two other finalists thought this highly ridiculous and wanted to fly against me, but the organisers were swayed and I was asked to remove my model from the circle, despite having been fully accepted for the heats. Surely, in the present trend of 'the one with most money to spend, wins', this is the classic case. I'm sure 'Pyloni' could think of words to say on rules that state in black and white that you have to pay a minimum of 'X' pounds for an expensive racing motor before you are allowed to compete!

C. T. Coote

Harfield Bristol.

### HAWK GLIDER (continued from page 429)

and even building materials were now up to the plastic stage. The choice of design is always proportional to your pocket when you consider the project as single-handed, so I settled for a machine made from spruce and plywood, and with a span of 42 ft. I visualised a machine that would be aerotowed and capable of aerobatics, in fact, an ordinary Club machine. I have always been fascinated with birds, particularly the *Hawk*, hence my choosing the name for my new machine. I carried on the design work in my spare time, getting the stressing done by a professional. As I progressed, I was able to arrange for a hut at Fairoaks Aerodrome to be available for the actual building which I took over in February 1968. Thanks for this are due to Mr. Norman Jones, a great

benefactor in the light aircraft field. I was able to get my timber supplies in 1967, and all machining on this was completed in that year. I commenced actual construction in February 1968 and after 2,600 hours of sweat and toil, completed the machine at the end of June 1969. All the fittings that did not require welding were made of stainless steel.

In the early days of gliding most machines were simply varnished and the fabric clear doped; the total effect was most pleasing, so this is the finish scheme of the *Hawk*. Against present-day aircraft where paint finishes prevail, the distinction is quite startling. Up to the time of writing the machine has not yet flown; I am hoping to find a buyer for it, and look forward to the day when I see it flying around like my *Wrens* of yesteryear.