

model 2!

Hobbies



WINTER ISSUE
JUNE, 1951

"51 Nationals" — Super Stunter — Team Speed Rules — Speed Cars
Club News — Fokker Tripe Controline.

FROG



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for
1951



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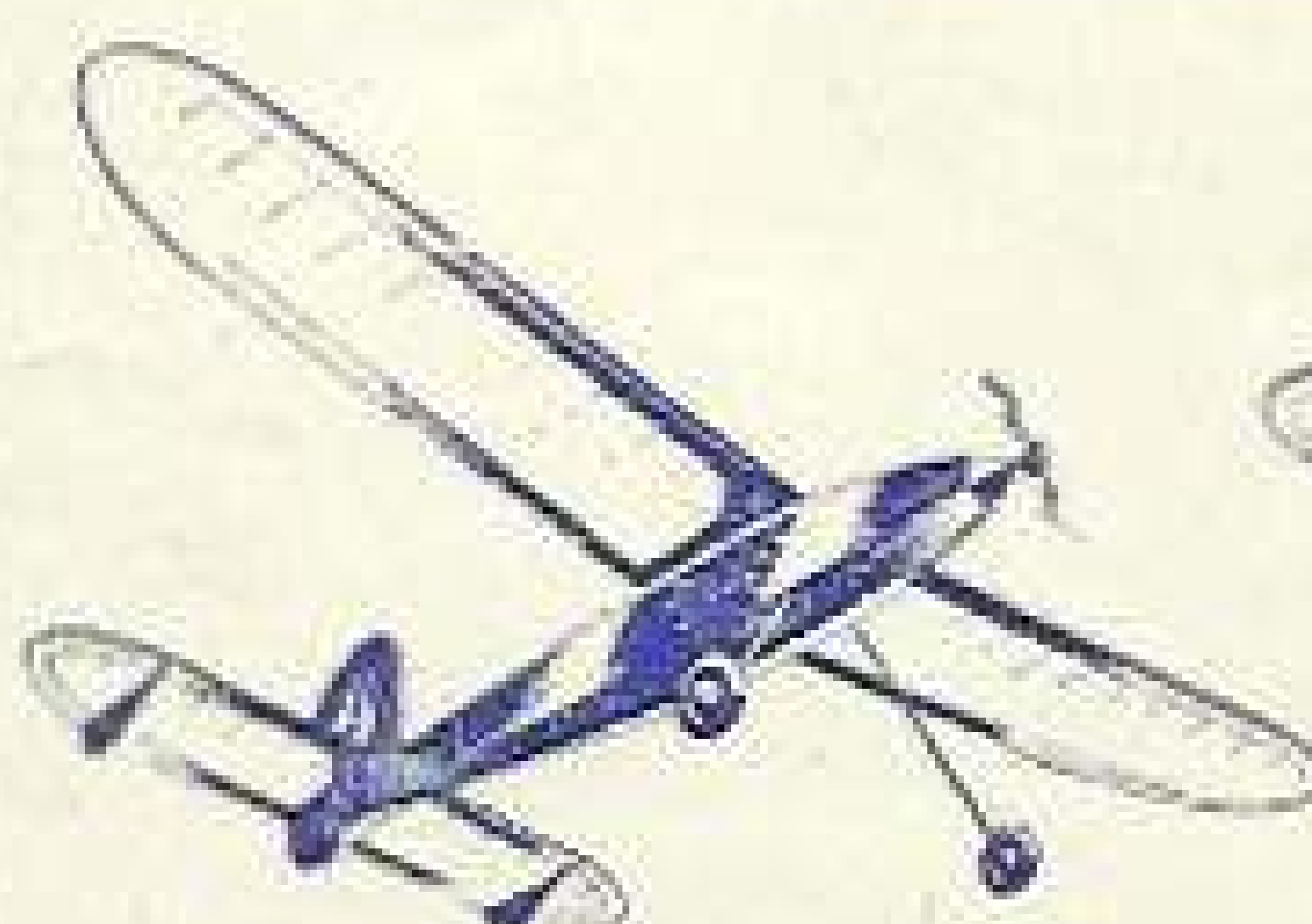
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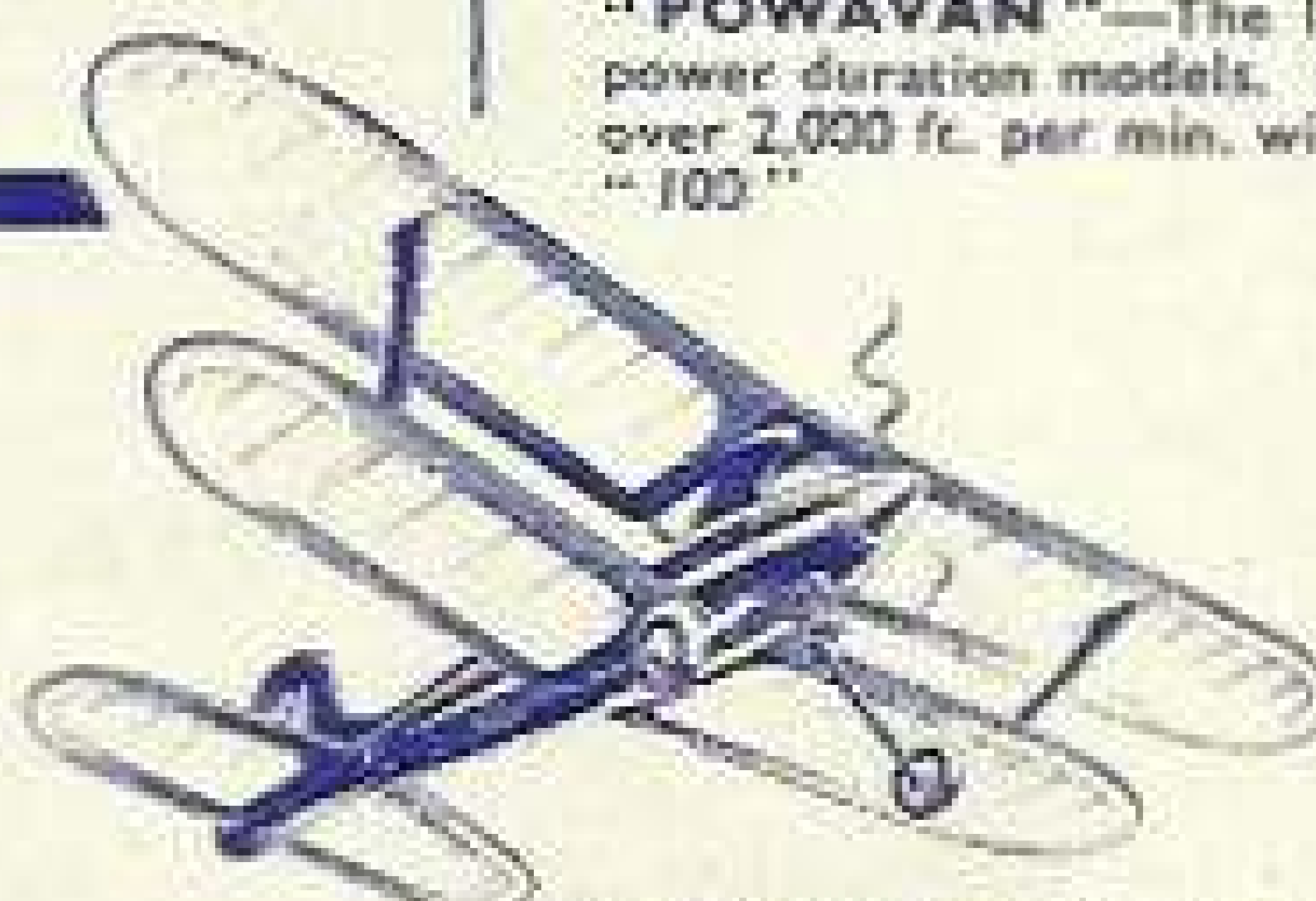
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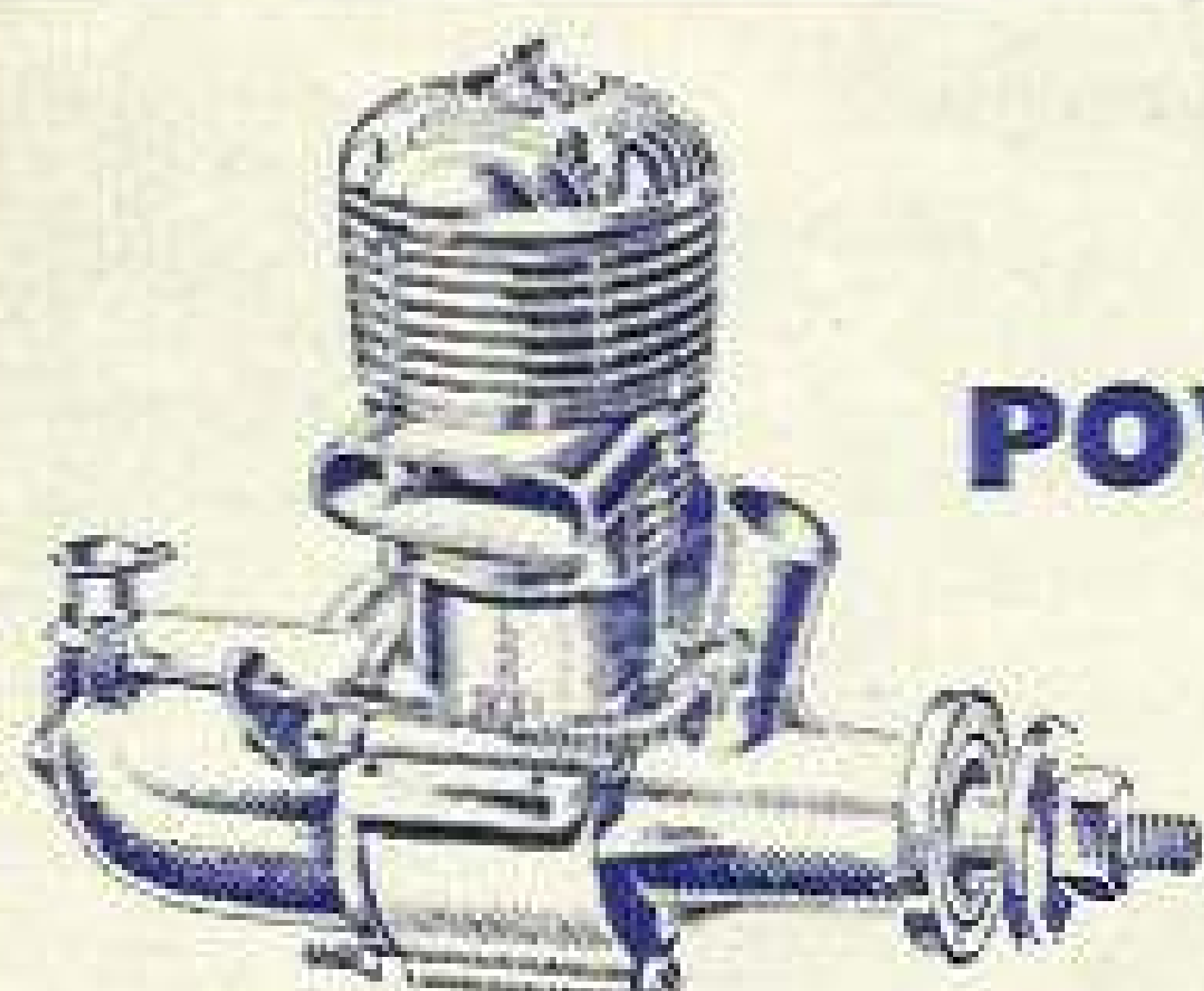
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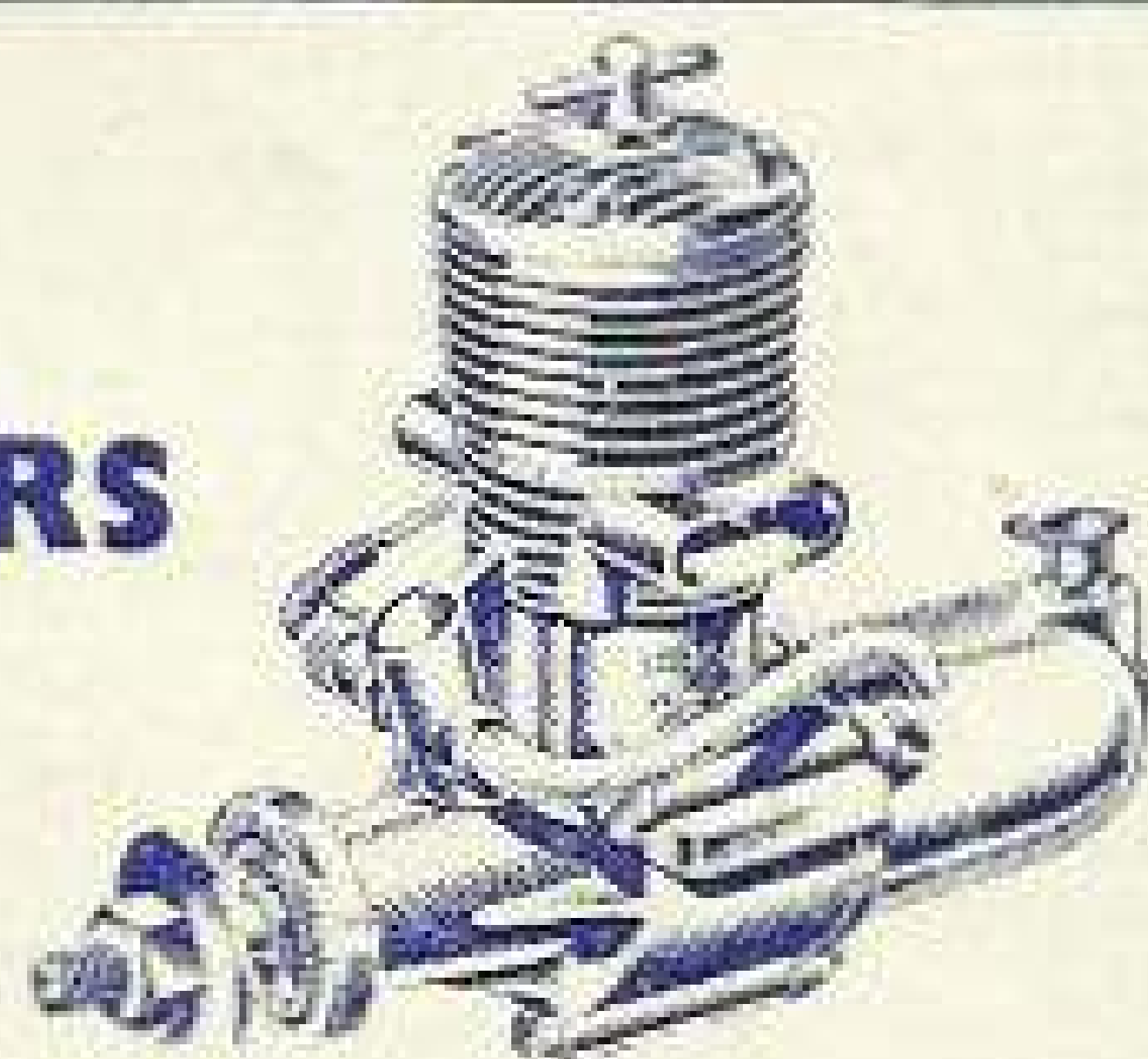


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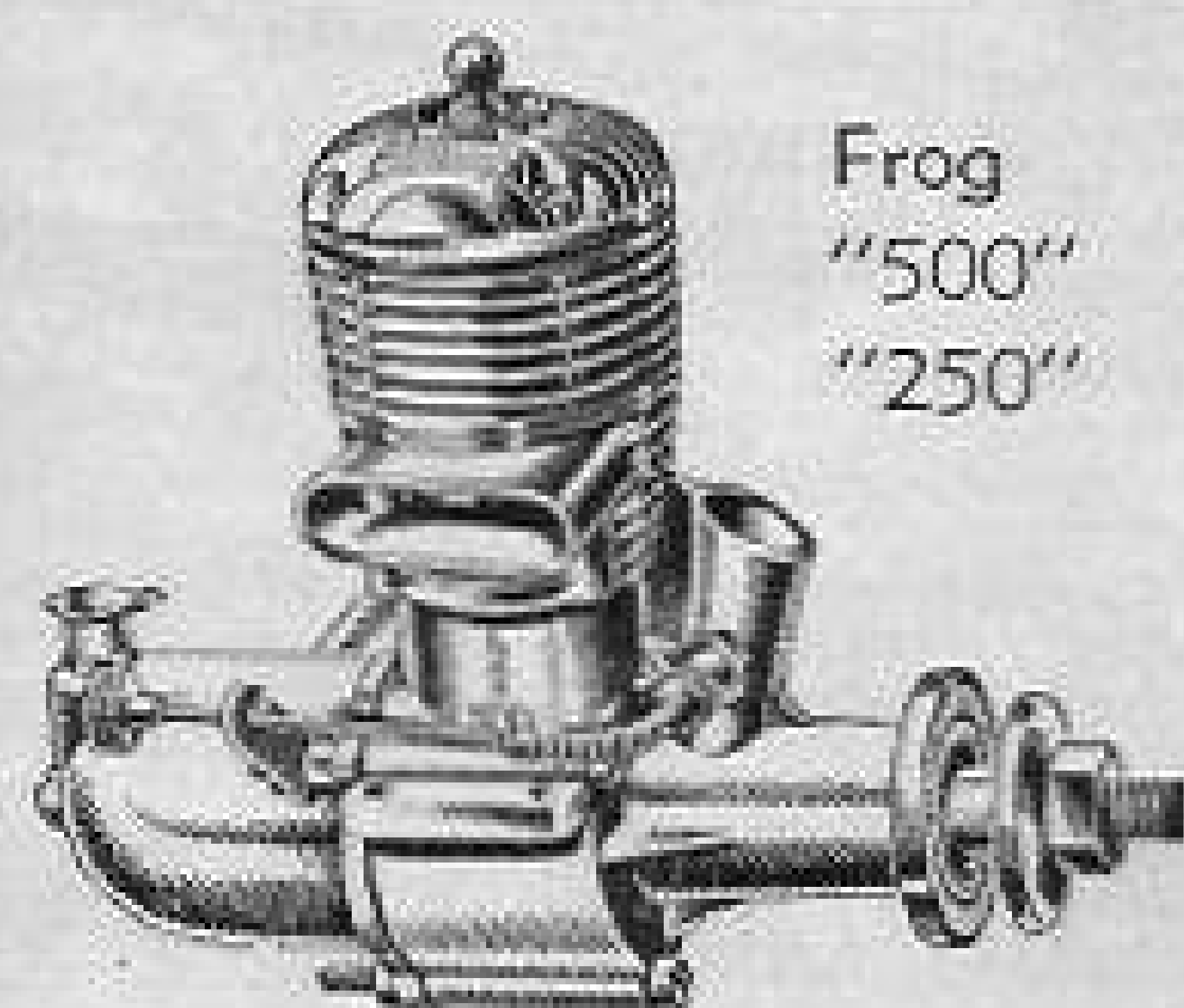
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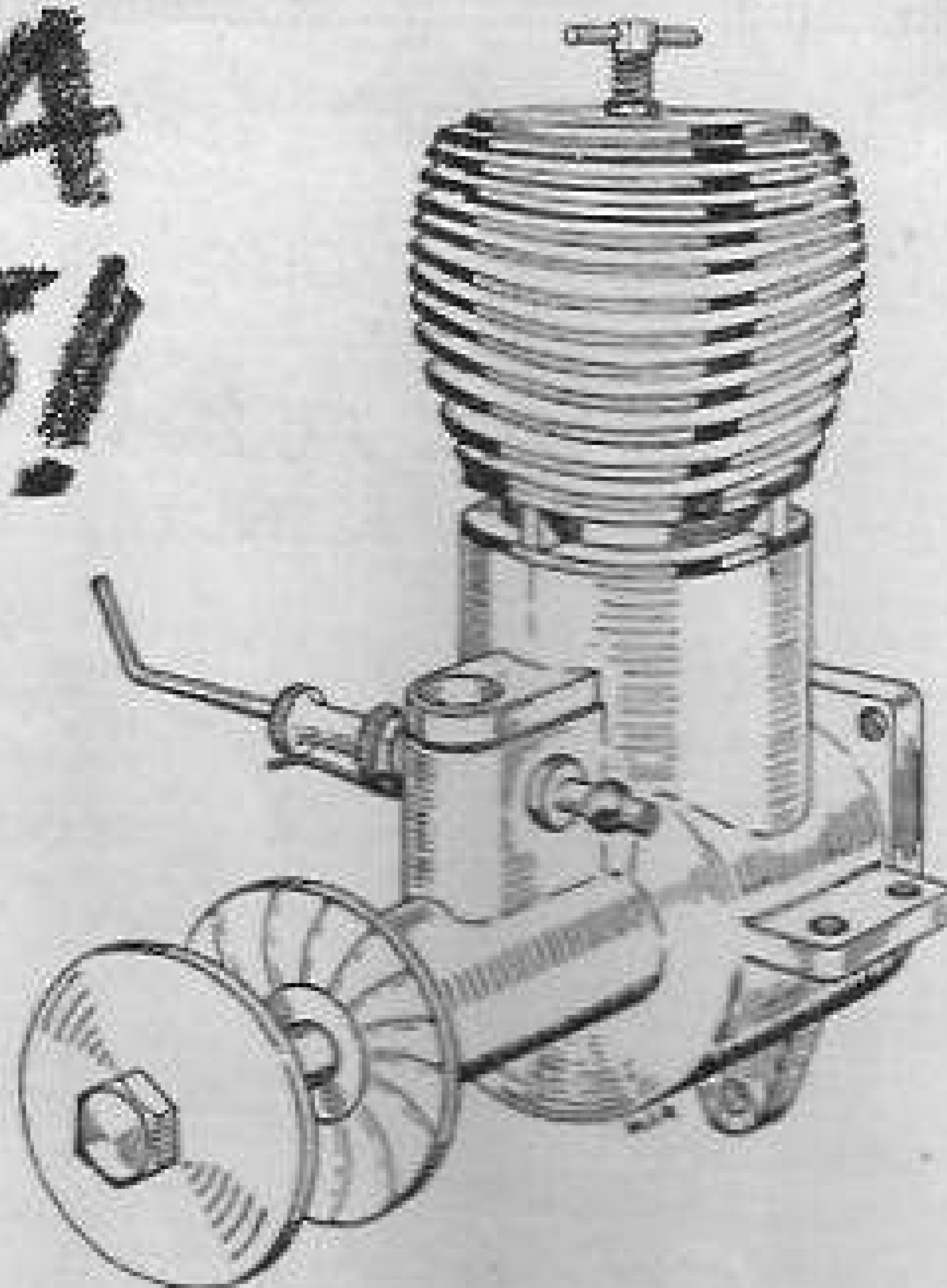
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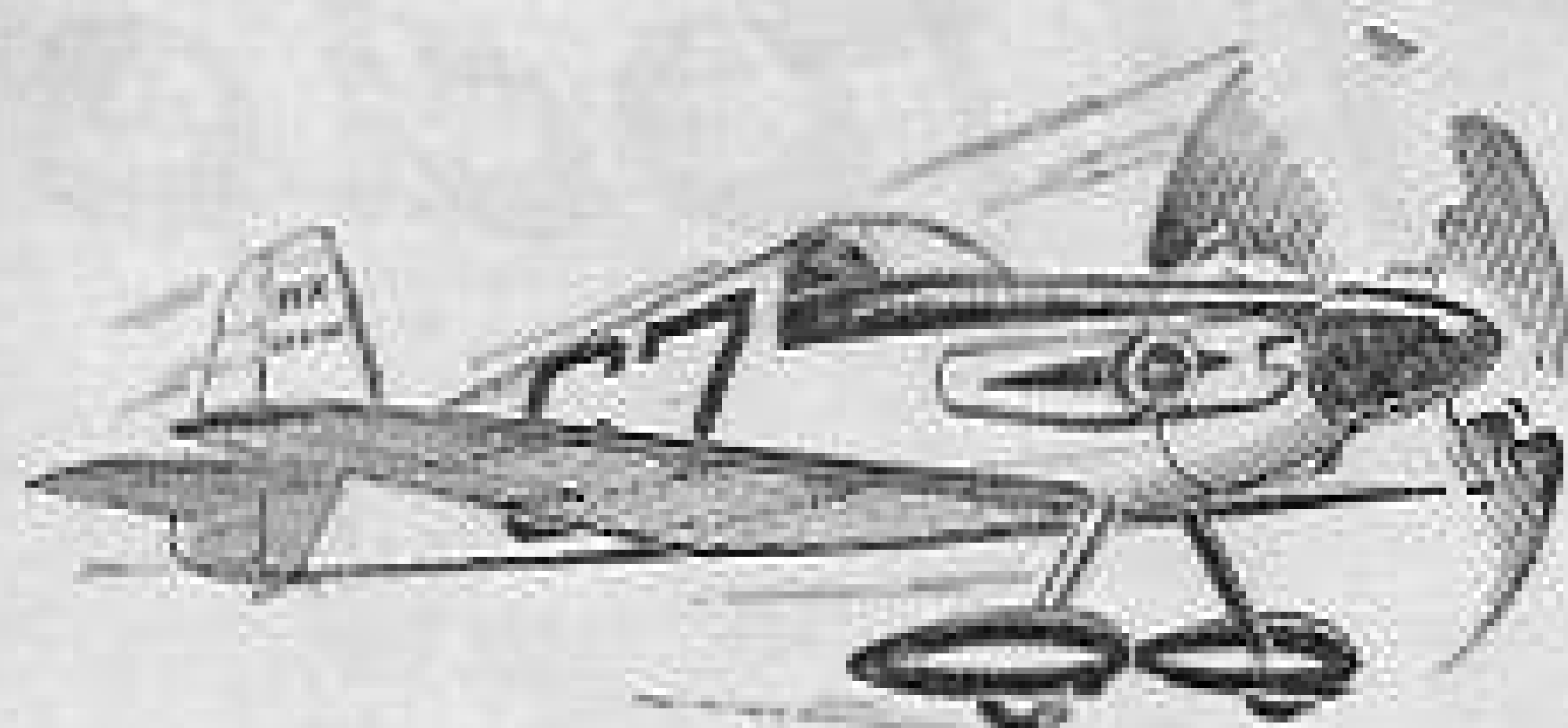
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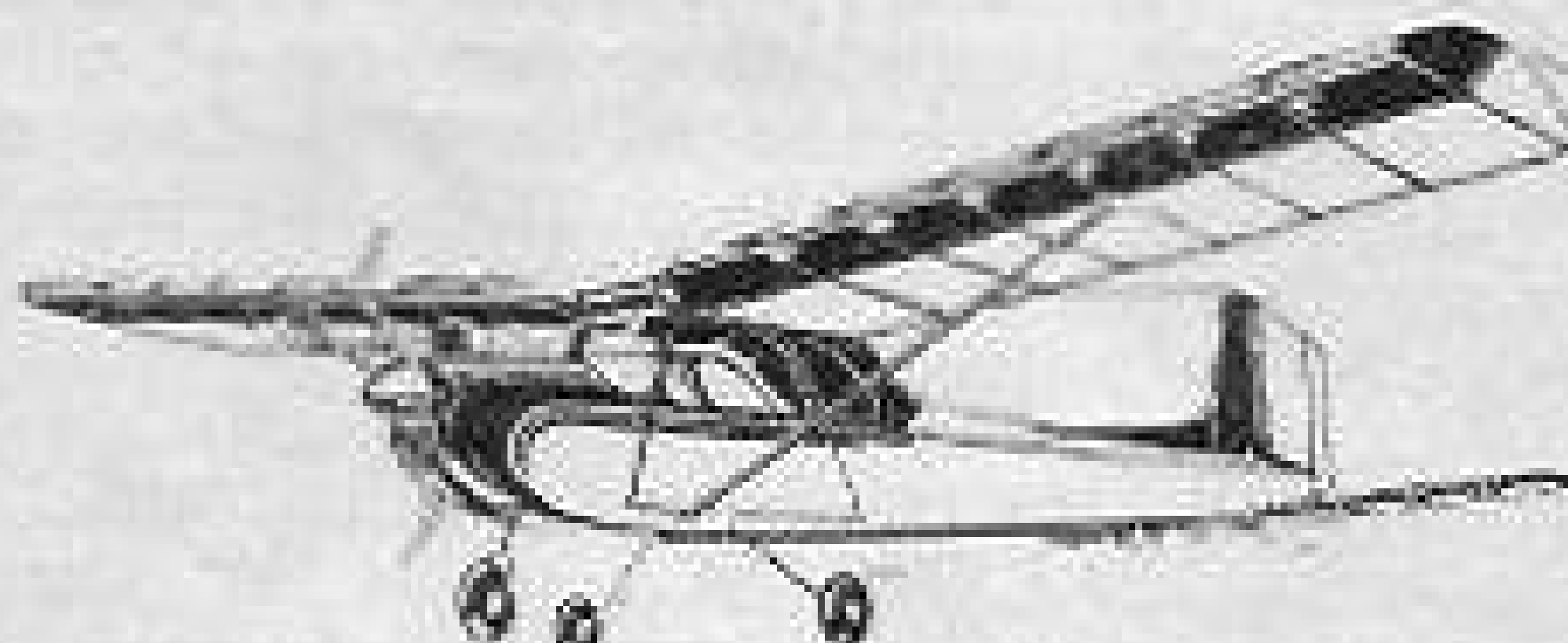


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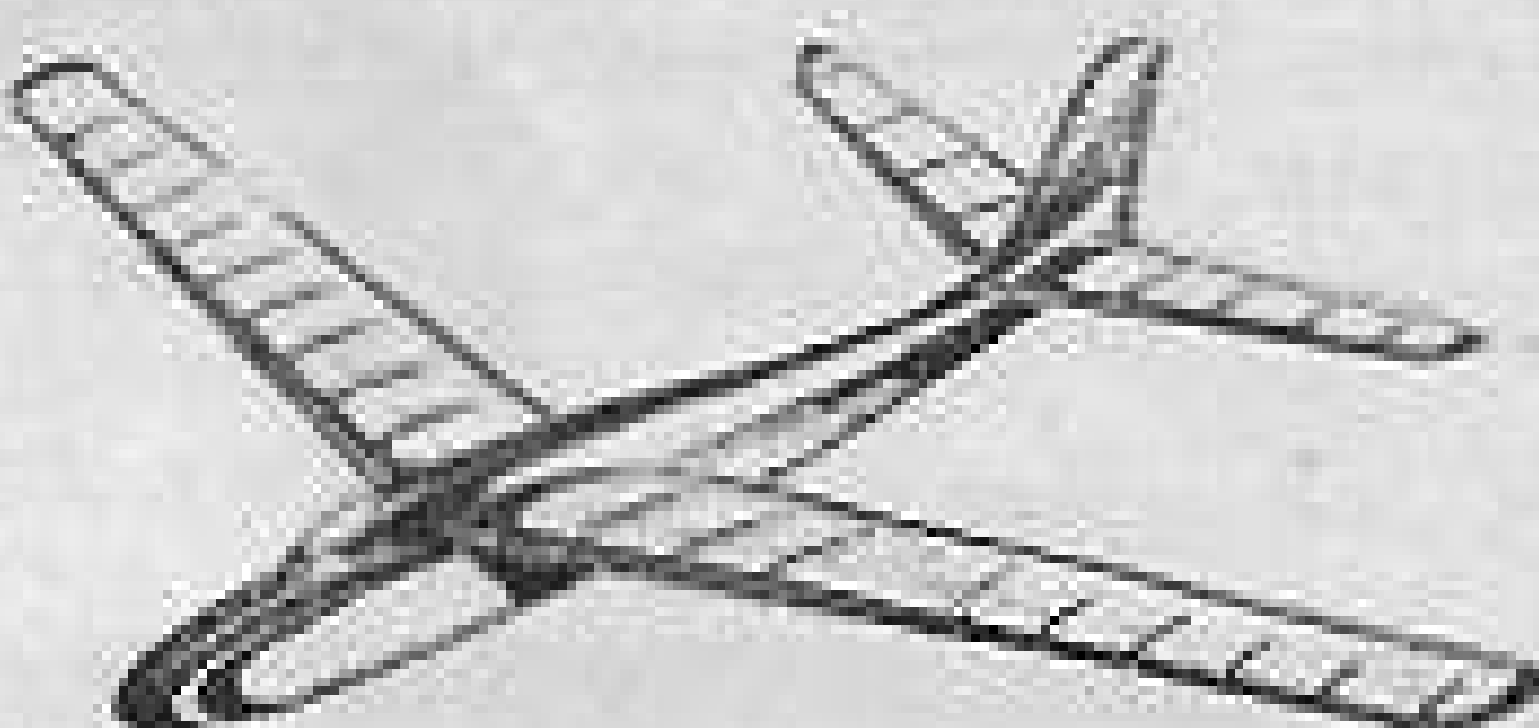


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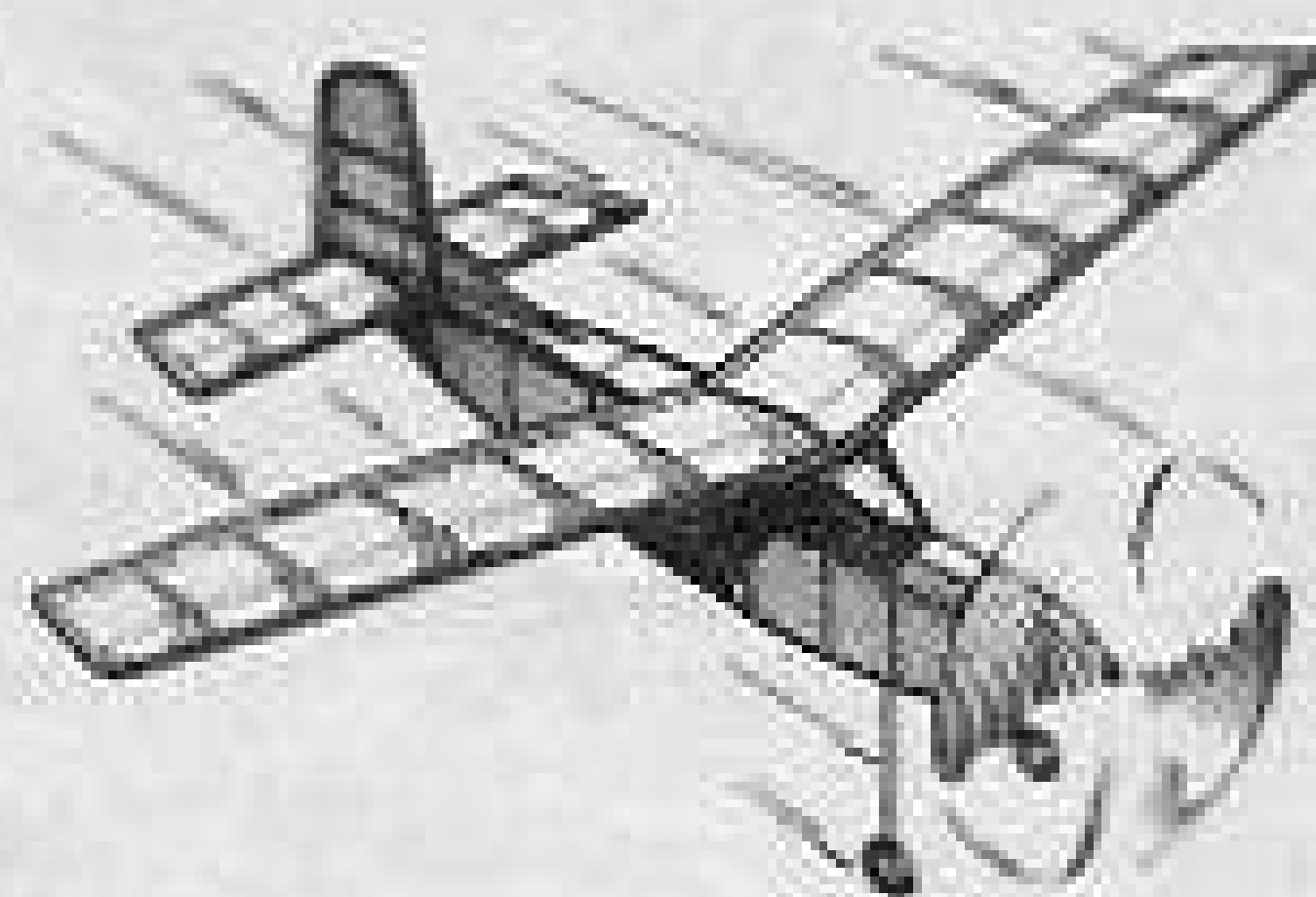


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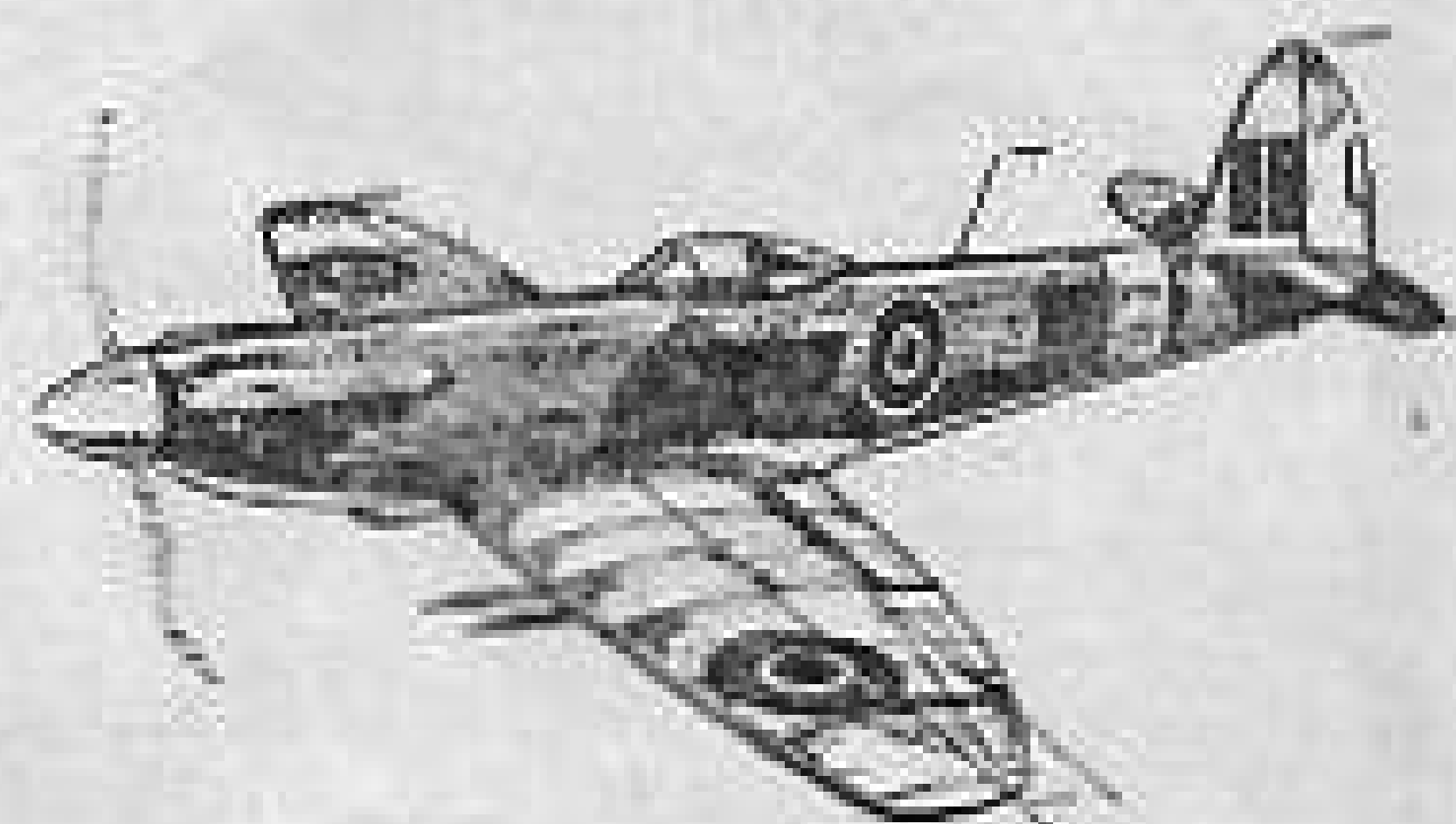


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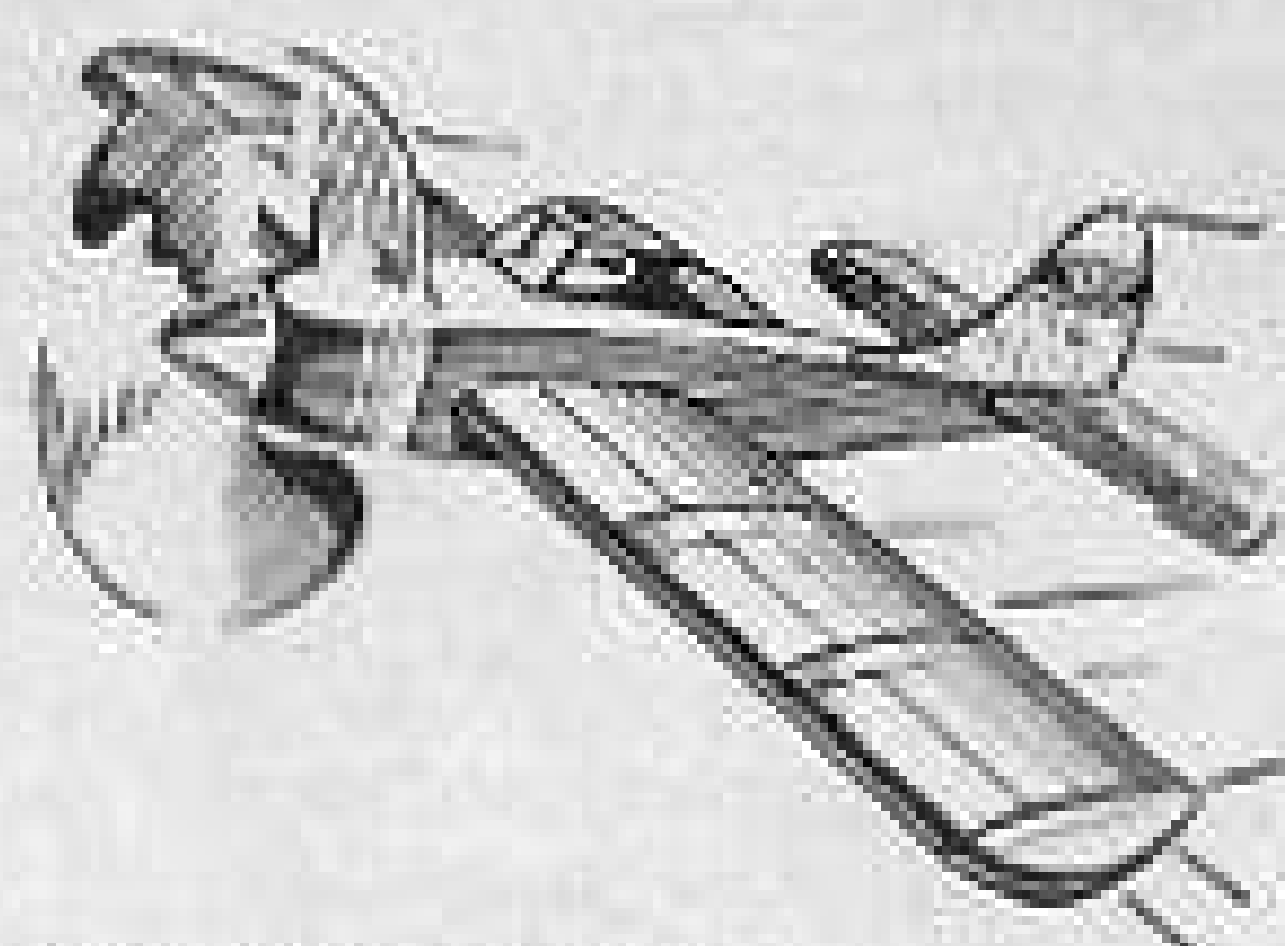


The "SPITFIRE" 22

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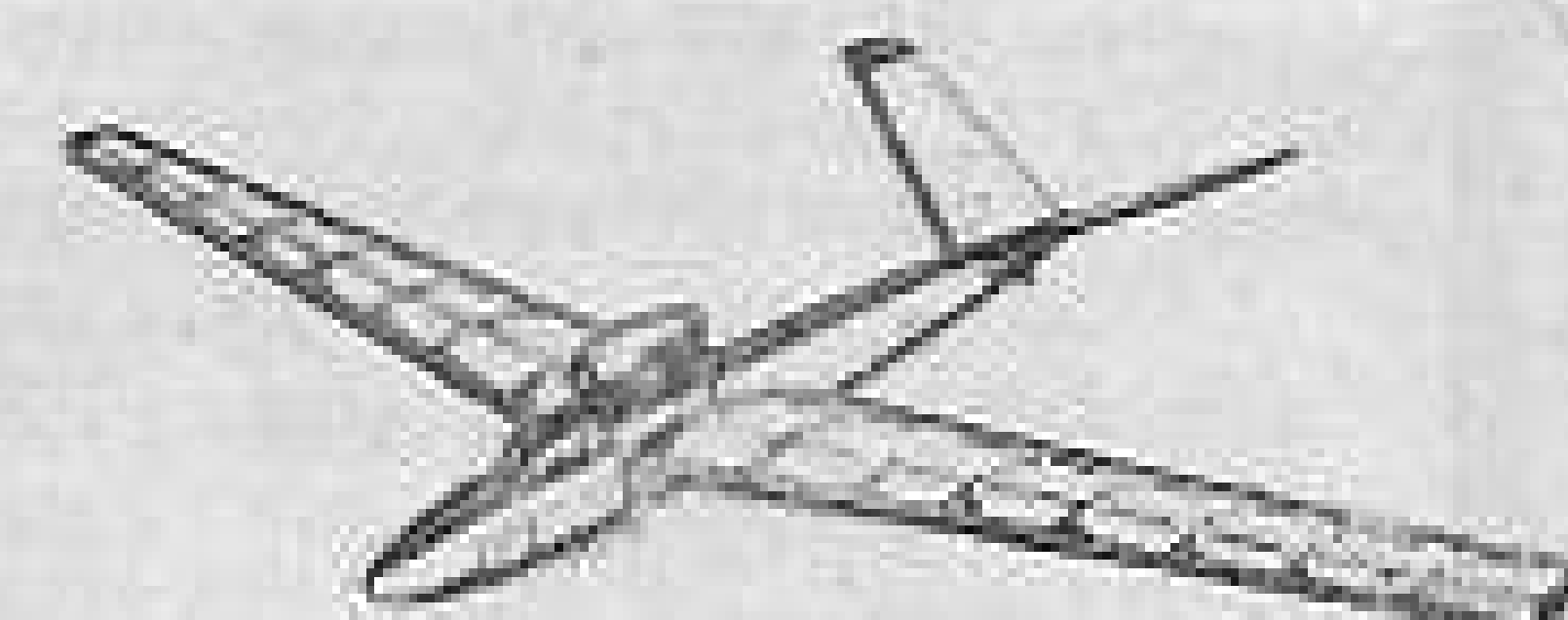


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EDITORIAL

This issue is even later than its predecessor, and no doubt many of you thought that you were again to be without an Australian Model Magazine.

Many factors enter into the frequency of publication, not the least of which is whether sufficient advertising and sales can be obtained to enable the publishers to give you a magazine up to overseas standards.

During the summer months there is a heavy falling off of modelling activities, and for that reason we have decided to arrange our publication dates so that the majority of our issues come during June to December when activity is at its highest. This means that the next issue of Model Hobbies is scheduled for August.

Beginners are rather neglected in this issue, but our August issue will contain a simple flying scale Taylor Cub and a Contest Rubber Model of 140 sq. in., both of which will be suitable for beginners—or experts—and are in a "Nationals" class.

Contributions from readers are still very few. Please remember we are interested in what you are doing, whether "back 'o Bourke" or a "Centennial Parker," so let us have photos, plans, opinions or any constructive criticism you may have to offer. I may not be able to acknowledge your help individually, and in some cases what you send may not appear in print, but your ideas are welcomed as it does keep me in touch with what you modellers have on your mind.

We are faring a little better with advertising, but we would like to remind our readers that without our advertisers we could not print MODEL HOBBIES, so please show your appreciation of our magazine by patronising those TRADERS WHO ADVERTISE.

and if your local model shop is not one let him know he can help keep an Australian Model Magazine in print by advertising in Model Hobbies.

1952 Nationals are to be held in Sydney, and although, as yet, we do not know the definite programme we have published at the rear of this issue the list of events complete as far as we are able to ascertain at time of printing. Complete rules, dates and arrangements will be included in future issues as advice comes to hand.

Six Wakefield Models from Australia should be on their way to FINLAND to compete for the International Wakefield at Jami-Javi Airfield in late July. It is interesting to note that both Great Britain and the U.S.A. conducted their Wakefield elimination trials in the very early morning and late evening to overcome any thermal conditions as much as possible, whereas the Australian eliminations were flown in very strong thermal weather. No doubt the six models sent overseas by Australia are the six best of those competing in the Australian contest, but if the Wakefield is held again in Finland next year, Australia would do well to follow the idea of "no-thermal" eliminations.

Bill Evans

Editor.

All correspondence: The Editor,
Model Hobbies, 3 Percival St., Glenelg,
Sth. Australia.

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HOBBIES

June, 1951.

COVER STORY—

Four competitors and a young helper at the '51 Nationals on West Beach Aerodrome, S.A. (from left to right:

Merv. Robinson, better known as a scale modeller, he gained second place in the scale control line event. Merv. was also placed third in the "JA" Free Flight with this flying "stop sign" powered with a "Sabre" motor.

Kev. Green was one of the unlucky ones, he lost his Super Hatchet "Sabre" powered (held by the helper in the lower right hand corner) in the gulf early in the morning, and badly crashed his original C of L.A. Frog 500 powered job a little later. The area of Kev's models show the trend to larger wing areas. The 2.5 c.c. model had 512 sq. in. and the 5 c.c. over 800.

Reg. Whitford, one of the few pre-war modellers who are active again. The model is a pylon type powered by a "Mills" 75.

"Uncle" Charlie Clark, well-known Victorian enthusiast who also lost his model in the morning, but was more fortunate than some others, as his did not reach the sea. Charlie uses an E.D. motor, and is chasing that special trophy for this type of motor. Twice he has been very close, so all the best for next year Charlie.



Henry J. Nicholls—one of London's foremost dealers—launches his scale Stinson L105. This 40" span model powered by a Dart 5 c.c. engine represents a useful way of employing the small capacity diesel. Henry J.—as he is more generally known—was responsible for the manufacture in England of the well-known Harold DeBolt Speedwagon series, featured on our title page last issue.

—Photo courtesy Ed. Stoffel.

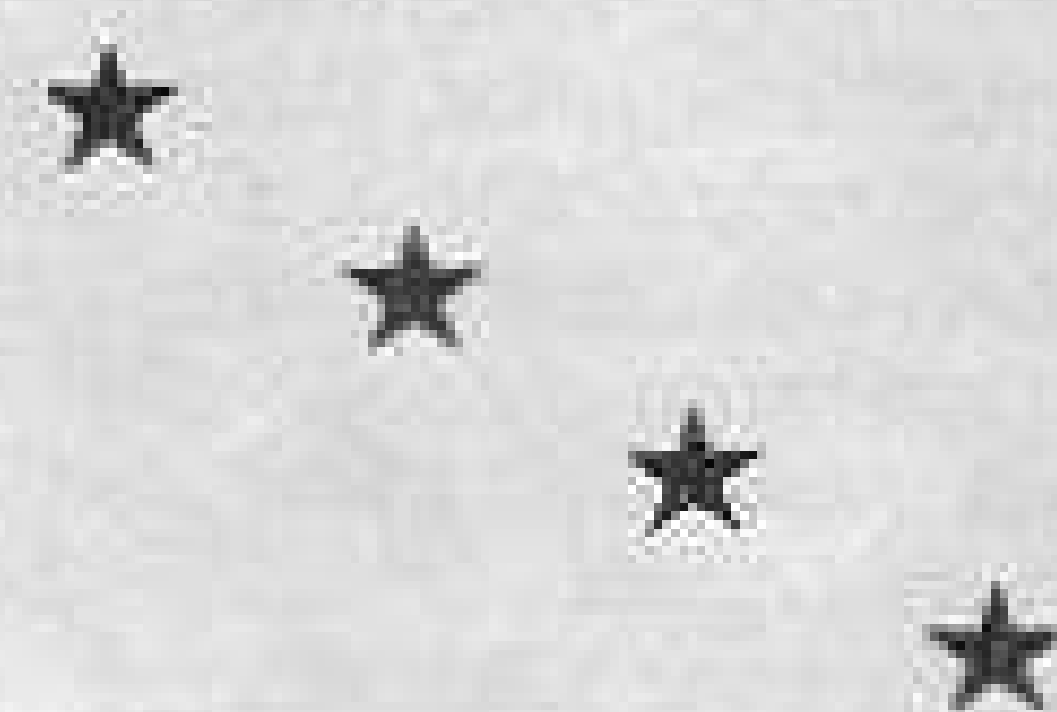
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1951 COMMONWEALTH JUBILEE

National Model Aeroplane Championships

From top across: Bill Evans' Hyphen at '50 Nats, Clive Wheatley and Harold Stevenson's T/Sers, Vic Sailplane '50 Nats, Gordon Burford Wombat Biplane Boyd Felstead, Indoor model, Harold Stevenson's 60 speed model and starter, Seaweed Wild's scale Thunderbolt being judged '50 Nats, U.K. Radio Control, Keith Hearn's jet, Allan Lim Joon's speed crash.



CONCEIVED in the idea that aeromodelling is something worthwhile, the Jubilee National Model Aeroplane Championships, conducted in Adelaide by the South Australian Associated Aeromodellers, were planned on a level never previously done in Australia, and the result was the most successful National Contest yet held.

Around 20,000 people saw the models in action during the five days over which the contest were run, many National records were broken, and at the prizegiving dinner in Adelaide's leading dining hall almost a thousand pounds' worth of trophies were presented to the fortunate placegetters.

The Commonwealth Government presented the Jubilee Champion of Champions Trophy, which was won by Allen

King, of Victoria. Jubilee medallions were also presented to all winners in each of the 25 events.

Added this year to the already impressive number of perpetual National trophies was the Advertiser Newspaper's Team Speed Cup, for competition by the highest placed competitor from each State in the Open Team Speed event. South Australian's were pleased to see this trophy won by Bill Brimblecombe, who was unlucky not to be placed higher in the open event.

The South Australian Associated Aeromodellers purchased several hundred pounds' worth of trophies covering all events, and all modellers present agreed that never before had they seen such an array of silverware.

One of the most appreciated arrangements made, was to house and feed all competitors in an Army camp for the very reasonable charge of £2 for the week.

Transport to and from this camp to the various flying sites was provided free of charge, and the trucks also proved quite an efficient recovery service during the free flight events.

All of these arrangements and trophies cost a great deal of money, but the final deficit of the S.A.A.A. was around £250, which, when what was achieved is taken into consideration, was not a very high figure, and it is hoped this will be made up during the year by various displays, etc.

One of the greatest blows to finance was when the free flight field was fenced in a few days before the contests, making the collection of an admission charge impractical, and according to newspaper reports over 10,000 people attended the free flight Sunday.

Bill Brimblecombe, winner of the Interstate Teams Speed "Advertiser" trophy, used a modified "Storey Key," powered with a Gee Bee 50 diesel. The first place in the open event looked like going to Bill also, but his lines were cut by another model; even so these were repaired to gain second placing.



fortunate enough to be present, the South Australian Associated Aeromodellers' effort outshone by far the Victorian and Sydney shows.

Considering the large entry list things went smoother than we expected, all the officials were courteous and obliging, and could not do enough to help or clear up any points of rules that arose.

Behind the scenes I don't know what happened, but except for a few small incidents, that when boiled down didn't really put anyone at a disadvantage, the show was great.

I think that the speed rules could have been carried out and enforced more strictly than was done in some points. I know I flew plenty of speed jobs for odd Bods who were incapable of doing so themselves, but I now believe that this is really against the book of rules, as I was not entered with the persons concerned as part of a team. Several other capable speed pilots obliged non-flying speed modellers also, and judging by some whispers, there was a bit of feeling about it in some camps.

The pull testing and line diameter measuring could have been more strict as well.

Regarding the stunt event, I don't approve of the putting in two extra vertical eights and two extra overhead eights, and the changing of the points system. This was done at the beginning of the contest, at briefing time. A pattern and points were laid down in the entry form and should have been adhered to. Although I don't approve I was not very worried about it and neither were the other advanced stunt flyers in the three sections. By the protests though the average battler who can just stagger through the pattern, did not like the extra manoeuvres at all. I don't think the placings would have altered though, but it may have given the tries a better chance for a place higher up.

INDOOR FLYING

This year the indoor flying attracted only around a dozen actual competitors in the stick event and many less in the fuselage class, although many more had entered.

Many Australian Records Set and Broken Almost 20,000 People Saw Meet Contestants from all States and N.Z. Conducted by S.A. Associated Aeromodellers

Those of us who attended the "51 Nats" will no doubt hope that the precedent set by S.A. was not in vain and that the next Nationals in Sydney will be even a better show.

Much was learned this year by the mistakes made, which should add to the smooth running of future events.

Monty Tyrrell, probably the best-known model flyer, sums up the '51 Nationals as follows:—

I think from the average contestant's point of view the NATS was a terrific turnout, and I amongst others, observed things originated by the S.A. boys that can well be incorporated in future shows.

Sydney put on a great show in '48, Vic. did it in '50, but, speaking for myself and immediate friends who were

The star of the "Nats," Monty Tyrrell, of Victoria, who almost could have put on a one-man show. Here he is shown with his Sammy Mason Stearman biplane which gained third place in the scale event.



1951 Nationals

The lack of interest in indoor flying appears to be the result of the lack of the few experts needed to help the beginner over the initial stumbling blocks. At present South Australian lads are the most active and probably successful with the microfilm jobs mainly, it appears, because of the help Boyd Felstead has given to the younger chaps who have become interested.

Indoor is one of the most fascinating of all types of models, and to build and fly a model with reasonable success is not beyond the ability of the average modeller providing a little help is forthcoming in the initial stages. One modeller, for instance, tried outdoor power, rubber, sailplane and control line, and although he was a good, average builder he met with very little success, owing to his inability to adjust the free flight models or control the stunt jobs, but he proved to be quite capable of building and handling the slow flying indoor model, and the very limited amount of adjustment possible was not beyond him. Here in indoor he found his glory and whereas possibly he would have drifted from aeromodelling, because of his high casualty rate outdoors he has continued to build and learn about models.

Back to the Nationals!

Only three fuselage models actually appeared and there seems good reason why this event should be dropped in favour of a more simple type such as the baby 30 square inch jobs, which are the easiest of all indoor models to build and fly.

The rental for the hall used for these contests was over £30 for the day, and it seems a pity that so few competitors flew.

STUNT CONTROL LINE

This event was the most disappointing of the whole meeting, and with very few exceptions the flying was nothing like what was expected. Monty Tyrrell was the only stunt flyer on the field whose flying was in top class. This may have been because of other considered top-liners having bother, but whatever the reason, the overall standard of flying was poor. The general opinion of the modellers present was that "Stunt flying had had it. It is on the way out."

Why should this phase of control line flying be in the doldrums? Certainly not because we are all that good that we can do the complete flight schedule with so little effort that we are bored with it, and so no longer interested.

The type of equipment being used appears to be to blame for lack of many newcomers making the grade in stunt flying. The glowplug motor is not the power unit for the beginner to use for stunt flying.

The winner of the senior event, Monty Tyrrell, used an Anderson Spitfire powered "Go Devil" model designed by Bob Palmer, who is also responsible for the well known range of American kits, the Veco Squaw, Warrior Chief, etc., all of which are equipped with large trailing edge flaps.

South Australia's only hope in the senior event was Brian Horrocks, but he failed to show any form, mostly, I think, because of motor trouble. At a demonstration just recently Brian showed the capabilities of his model by flying inverted, looping, and stunting his big stunter after it had lost the outside wing panel. He was unlucky not to be placed higher at the Nationals.

Rod Ashton, the only stunt entrant from West Australia, flew the "Stunt wagon," but he could not match Monty's flying.

TEAM SPEED

This event was the show of the control line flying, particularly when the less capable models were eliminated in the early heats.

A large pylon about 8 feet high was used in the centre at first to force the pilots to walk around in a circle, but as several of the flyers complained about it, the pylon was removed.

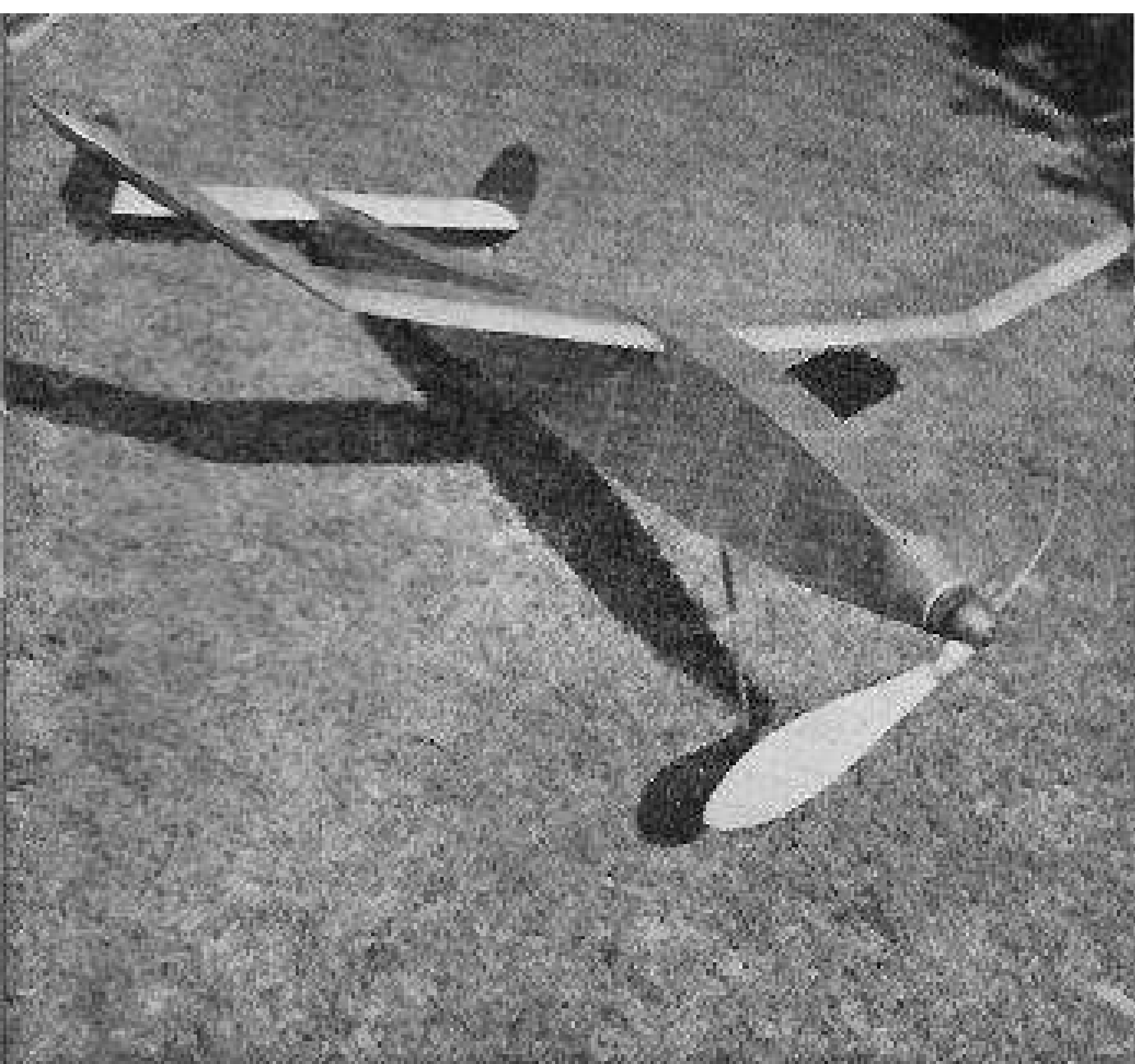
Risking the wrath of the "anti-ylon" group. In almost every case where the pylon was considered a hazard it was because of one of the competitors doing the wrong thing or being with inexperienced team speed pilots.

Much was left to be desired as far as discipline of the teams in the circle was concerned, and had the rules been strictly adhered to, many would have been disqualified, but as this was the first time Team Speed was flown at a Nationals event — seriously — a great deal of latitude was allowed in an effort to get this type of model flying under way. Disqualification is unpleasant at any time, but the laxity shown this year, in an effort to make Team Speed events as successful as possible, must not be repeated next year, otherwise the event will be spoiled for those who take it seriously.

As the model lands the lines MUST be got right out of the 10 foot centre circle as quickly as possible, and the pilot must stay on the edge of this circle until his model is in the air again, then he must close in on the pylon. On landing approach, move out to the edge of the centre

Voted by all as the most popular contestant of the meet was Angus Macdonald, of New Zealand. He was always ready to help out with the "hard work." He gained second place in the special invitation T/S race and is here congratulating the winner, Don McDonald (S.A.). Angus used a Mercury Team Racer powered with a D.C. 350, and Don a "Key" fitted with a Gee Bee 50 diesel.





National Champions' Wakefield. This model of Allan King's is typical of the Wakefields being flown so successfully by members of the E.S.M.A.C., before the changes in rules. Allan won the National Wakefield with this model.

FREE FLIGHT POWER—CLASSES “ $\frac{1}{2}$ A,” “A & B”

The standard this year was higher than last, and the number of contestants who completed official flights was far more.

West Beach Aerodrome, where the flying was held, had the reputation of being a “thermal-less” area, but as if to prove the locals wrong, many models were lost early in the morning in the heavy thermals. Unfortunately some reached the ocean, and have not yet been recovered. This change in the characteristics of the field somewhat spoiled what would have been an even more outstanding day's flying. No doubt thermal flying is preferred by many modellers, but “dead air” usually indicates the truer capabilities of a model aircraft, and is preferred in such events as the Nationals.

Kevin Green's “Supa Hatchet”, identical to that which won the 1948 “Nats”, had been performing particularly well and many unprintable quotations were heard as this model disappeared out over the gulf. Soon after went Jack Dunkerton's (N.S.W.) and Charlie Clark's “ $\frac{1}{2}$ A jobs.”

The only noticeable trend in the free flight power events was to larger wing areas, which meant that in general the models were more easily adjusted than the high speed small wing area jobs of a few years ago. Rules as they stand at present encourage the use of large wing area with low loadings in preference to the screaming (up and down) critical “Zipper” type models.

The main interest was about evenly divided between “ $\frac{1}{2}$ A” and “A and B” class, whilst class “C” was rather poorly patronised, although the large models certainly proved a crowd pleaser, and it will be a pity if they are withdrawn from Nationals competition, as is almost

(continued on page 29)

circle so that the model lands outside of the actual flying area.

The use of the pylon makes it impossible for one pilot to stand in the centre and force other competitors to walk around.

After a few races with the large pylon most chaps will approve of it.

The Open Event final saw six competitors lined up, each of whom were flagged away separately to avoid accidents or a false start. Motor trouble soon put two planes out of action, leaving Rod Ashton (W.A.), Chris Gallagher (Vic.), Bill Brimblecombe, and Don McDonald (S.A.) to battle out the 140 laps. Bill Brimblecombe gained the lead after the first refuelling stop, and looked like a certain winner when at one stage he was 40 laps in the lead, but disaster overtook him when one of the other contestants ran over his controlines, breaking them. The lines were repaired and Bill got back into the race, but not before Chris Gallagher had overtaken him. The model flown by Chris was particularly consistent, and had about the same speed as Bill Brimblecombe's, which meant a win for the Victorian.

FLYING SCALE

Entries in this event were more numerous than last year. The standard of workmanship was high. The winner, Arthur “Seaweed” Wild, of Sydney, earned his first placing with his now well known Chipmunk.

The most pretentious model on the field was Neil McKeller Stuart's Lancaster, powered by four “Kestrels,” but he did not get it into the air owing to motor trouble. Two of “Stewie's” motors were in use in Merv Robinson's Mosquito, with which he gained second place.

Monty Tyrrell was placed third, with a well built Sammy Mason “Stearman.”

SPEED

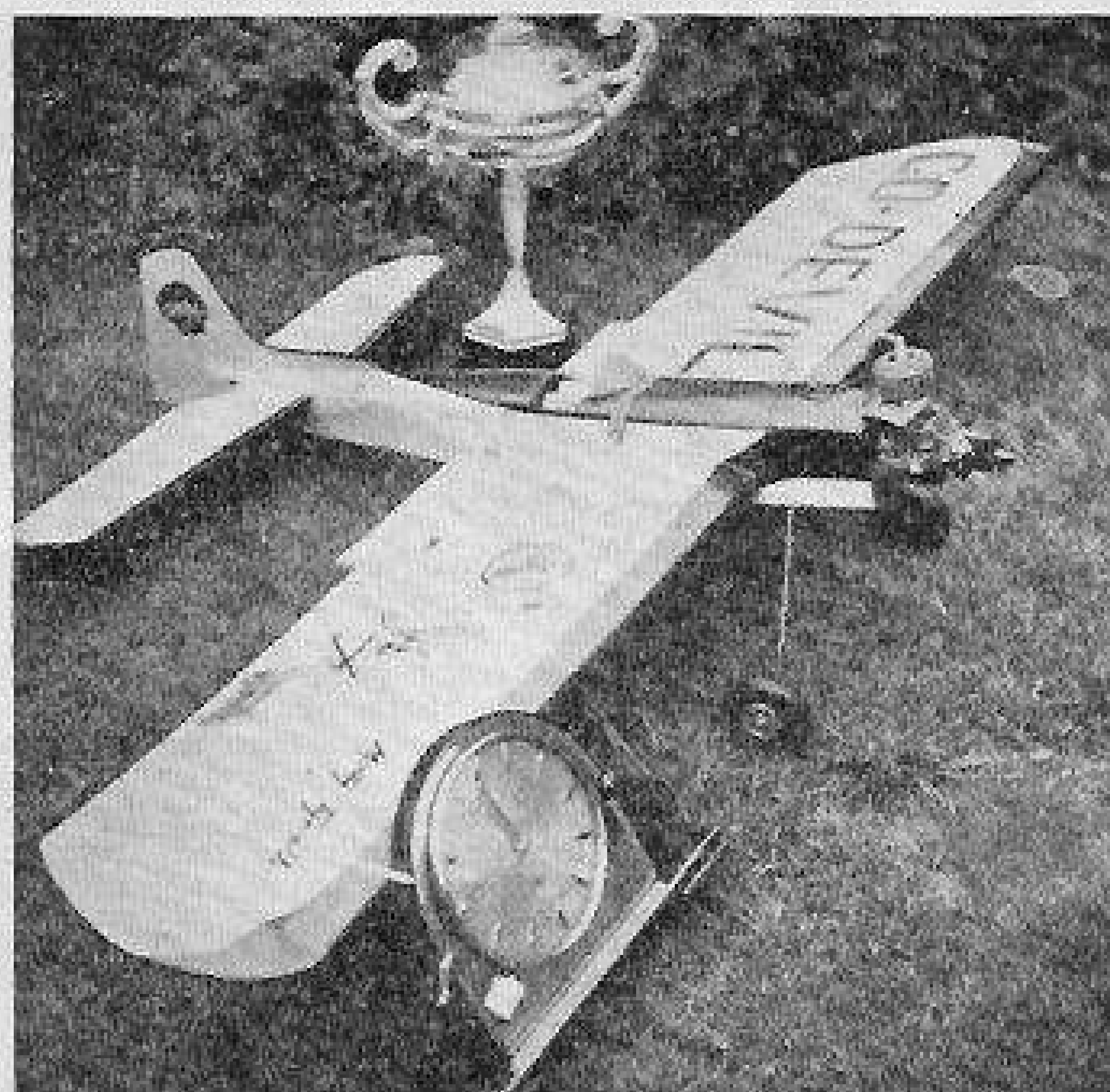
One speed circle was used for all classes and was in operation for two full days, which allowed plenty of time for all the required speed runs to be made.

Speed made quite a comeback this year after a poor showing at the Melbourne Nationals, and several records were broken, and established.

The surface was reasonably good, but most competitors used hand launch method of getting the speed jobs away.

The results speak for this, the most successful speed meeting.

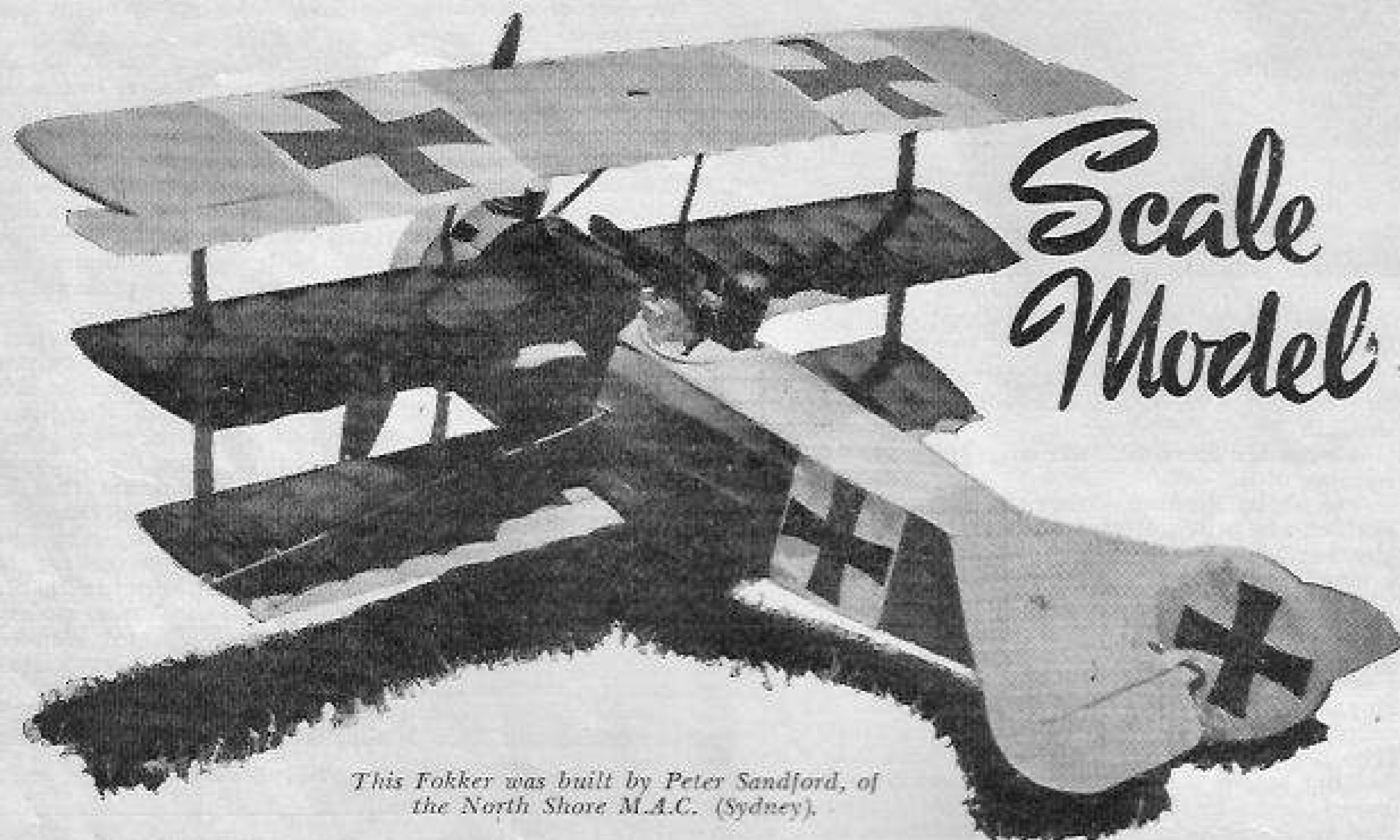
Bob Palmer designed Go-Devil, built by Monty Tyrrell was the outstanding Stunt model. Monty won the Senior Stunt and National Stunt Trophies shown in the photo. The model is powered with an Anderson Spitfire.



Fokker Triplane

FOR SMALL DIESELS 75—2.5

x 10 $\frac{3}{4}$ " on the top. These blocks are then carved to give the fuselage a circular cross section in the front merging back into the rectangular shape (See plan). When satisfied with the shape of blocks remove them and hollow out as much as possible, then cement back in place. Cut out the cockpit in the top block and cover the rim with a piece of plastic tubing which has been split along its length. Cowling is carved from a solid block 1 $\frac{1}{2}$ " x 3" x 3 $\frac{1}{2}$ ". Motor mounts should be cemented to the sides of the fuselage before assembly. Sandpaper fuselage thoroughly. Check plan constantly whilst building.



This Fokker was built by Peter Sandford, of the North Shore M.A.C. (Sydney).

The Fokker Tripe is a natural for a control line scale model, fascinating in appearance, relatively simple to build and there is ample opportunity for detail if desired for competition work.

Construction has been simplified as much as possible, and the sheet box type is used for the fuselage.

Many types of motors can be fitted, but should it be one of the very small light engines it will be necessary to weigh the front to bring the centre of gravity far enough forward for stable flight.

Extreme care must be taken when assembling the model, making sure that all three wings are mounted at the same neutral angle. The positive angle of the tailplane is unusual but does not detract from the flying of the model.

CONSTRUCTION

Fuselage.—This is formed from medium soft $\frac{1}{4}$ " sheet and $\frac{1}{4}$ " block. Separate top and bottom shapes are shown on the plan. Shape of the sides must be accurately cut as the centre wing and the tailplane angles depend upon the shape of the top of sides. Assembly is simple, as can be seen from the diagram on the plan. Fuselage bottom is marked "H." Top sheet "G." Rectangular bulkheads "B," "C," "D," "E," "F." All are cemented together forming a rectangular cross sectioned box. On to this are lightly fixed two soft balsa blocks $\frac{1}{4}$ " x 2 $\frac{3}{4}$ " x 7" one each side and one 9-16" x 2 $\frac{1}{4}$ "

UNDERCARRIAGE

Study plan for detail. Note the "U" bend in cross axle to act as shock absorber. Build up the U/C completely and then attach to fuselage in position shown by "sewing" with heavy thread, and using several coats of cement inside and out.

TAILPLANE

Cut the stabiliser and two elevators from medium soft $\frac{1}{4}$ " sheet, and sandpaper to a streamline cross section. Join the elevators to the stabiliser by "sewing" with heavy thread in a figure 8 manner—that is through the elevator down through the join between elevator and stabiliser, then up through stabiliser and down through the slot, etc., etc.—The stitching should be $\frac{1}{4}$ " back from the slot. Put a few drops of castor oil on hinges so that the thread will not become brittle when the tailplane is covered and doped. The elevator horn on the plan is shown on top for simplicity, and the control plate is mounted on the wing outside of the fuselage, but if desired the elevator horn can be mounted below the elevator—as is more usual—and the control plate in the fuselage with the control rod running inside.

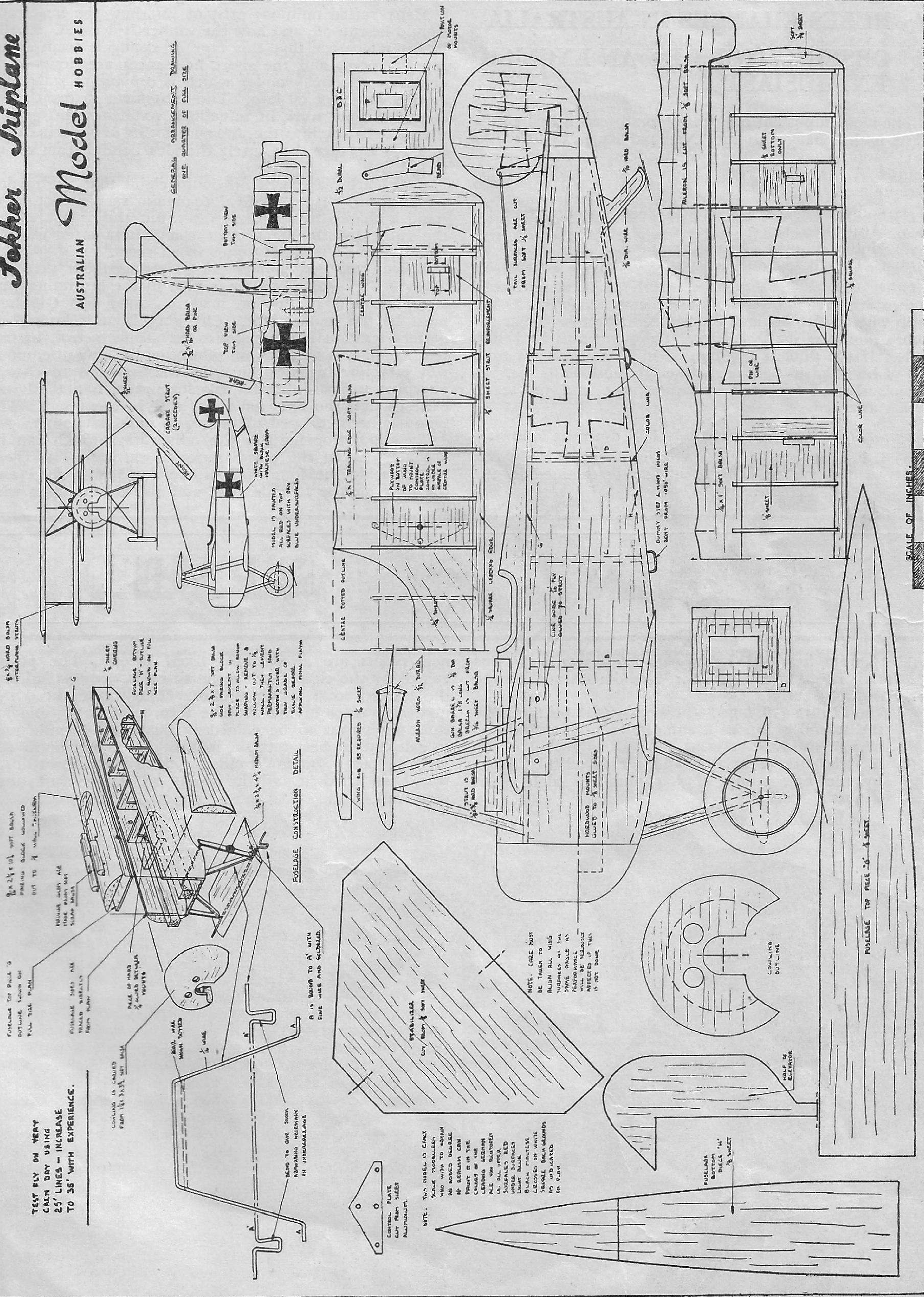
RUDDER

This is cut from the same wood as tailplane and cemented in place, after it has been covered with tissue.

(continued on page 25)

"Fokker Triplane"

AUSTRALIAN Model HOBBIES



★ RULES CHANGES IN AUSTRALIA

★ OBSERVATIONS BY AN ENGLISH ENTHUSIAST

The most important happening to all team speed enthusiasts is the changes in the "National Rules," and at the last National meeting the full Academy of Model Aeronautics (U.S.A.) rules were adopted with the following exceptions:—

- (1) Spinners are optional, and need not be fitted for Australian rules.
- (2) Motor cut-outs are not required.
- (3) 20 G pull test only at contest directors' decision.

Other points in the rules which are not generally known are that minimum fuselage cross section is $3\frac{1}{2}$ ins. deep where pilot sits and the width of the fuselage at the pilot's shoulders shall be 2 ins. The pilot must be 1/10th scale. If the pilot is not housed in a canopy then from top of his head to bottom of fuselage must be $3\frac{1}{2}$ ins. All models shall be judged for appearance and up to 20 points awarded.

Elimination heats are definitely laid down as follows:—

- (1) Half-mile heat (7 laps).—All models will fly this race in groups of 2, 3, or 4 as determined by the contest director.

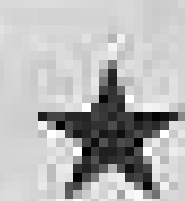
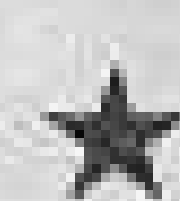
Many varied opinions exist of just how the heat races should be run off, and how the winner is decided. Firstly, let us remember that this type of racing is team speed, repeat, speed, and the short heat races are designed to eliminate the freak motor which is capable of staggering around for 70 or 80 laps. The excitement in team speed is in the team work in refuelling, restarting and getting the model back into the air, and if this only occurs once in a 140 lap race then surely the idea behind team racing is lost.

Some enthusiasts will no doubt claim that the models will require "Hot," difficult-to-obtain racing motors to stand a chance in the short races, but this is not so, for the rules definitely state that competitors must use the same type and make of motor in all races.

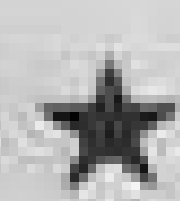
This means that motors can be changed but that if a "Frog 500 glowplug" motor is used in the beginning, and a replacement has to be made a "Frog 500 Gloplug" must be the replacement. Changing from "Gloplug" to battery ignition is not permissible. Some petrol, battery ignition motors will run on glowplug, but any attempt to run on glowplug for the speed dashes, and to change glowplug to sparkplug for the long races is not allowed even though the same motor is still in the plane. The type has been changed (glowplug to ignition motor).

Fuel and propeller are the only things which can be changed during the entire series of races.

To decide the four finalists for the 5 mile race, and the four for the 10 mile race, and also the outright win-



TEAM

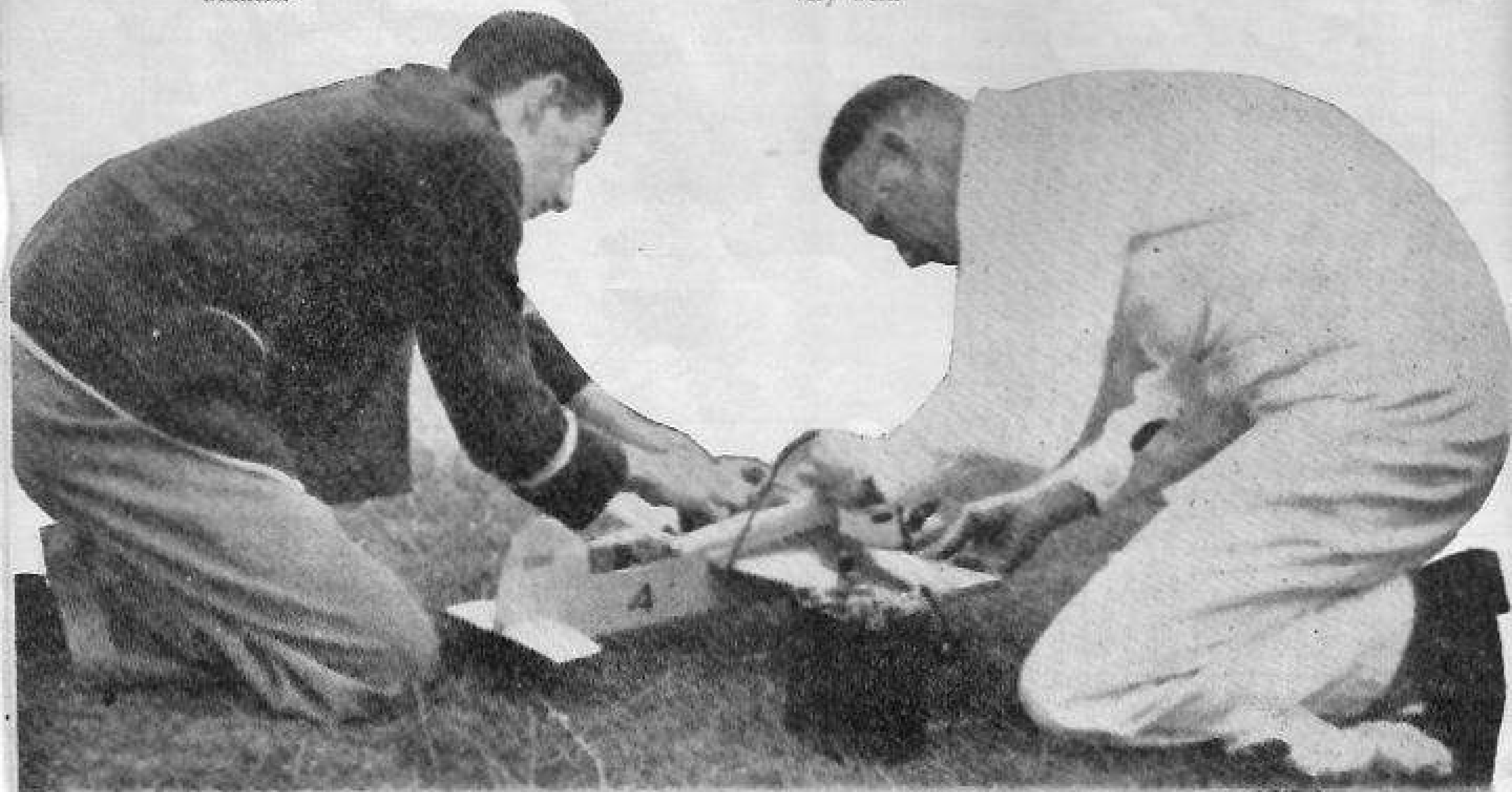


SPEED



- (2) $1\frac{1}{2}$ mile heat (21 laps).—All models will fly this race in groups of 2, 3, or 4 as determined by the contest director.
- (3) 5 mile race (70 laps).—This race will be flown by the second group of 4 cumulative high point winners of the heat races.
- (4) 10 mile race (140 laps).—This race will be flown by the first group of 4 cumulative high point winners.

ner, points are awarded as listed below. The points gained by the eight finalists, in all races, are totalled and the highest total is the winner. The winner need not necessarily race in the 10 mile race, as it is possible for sufficient points to be gained in heats and 5 mile race to gain the highest total, if models should not finish the 10 mile race. Do not condemn this arrangement until you have tried it, as the point allocation works out very well.



POINT SYSTEM

Race	Points			
	1st	2nd	3rd	4th
$\frac{1}{2}$ mile (7 laps)	15	10	5	2
$1\frac{1}{2}$ mile (21 laps)	20	15	10	5
5 mile (70 laps)	30	20	15	10
10 mile (140 laps)	50	40	30	20
Appearance and realism ..	20			

etc., etc.

Models considered equal are given equal appearance points.

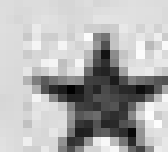
All models must be judged for appearance points.

FIELD LAYOUT

Flight area shall be marked out in concentric circles of 5 ft., 15 ft., 65 ft., and 75 ft. radius. A ground marker,

Photo on page 12: Jack Hill (S.A.) getting his Team Speed model away at a recent contest on Colley Reserve, Glenelg. Good team work is called for as the model lands, refilling of fuel tank and checking of lines by one of the crew, as the other attaches booster or glo leads, primes the motor and starts it. Malcolm Chase is Jack's helper.

A very attractive scale team racer of one of the actual "Goodyear" racers. Winner at the New Zealand Nationals. Photo by L. J. Perry, of the Auckland M.A.C.

**NEWS**

post or pylon must locate the common centre of the circles. The racing zone will lie inside the 65 ft. radius circle. The landing, and take-off zone will lie between the 65 ft. and 75 ft. radius circles. The refuelling and servicing zone will lie just outside the 75 ft. radius circle.

Adherence to this field layout is essential for safe conducting of team speed racing.

TEAM RACING IN THE "YUKAY"**INTERESTING OBSERVATIONS OF ENGLISH MODELLER J. SNELL**

Quite naturally, team racers are divided into classes according to the capacity of the engine used. In the U.K. the original class was for all engines up to 5 c.c.—this has now been divided into Class A (up to 2.5 c.c. capacity) and Class B (2.51 to 5.0 c.c.). Class A calls for 85 sq. in. minimum wing area, 15 c.c. tank, fuselage 3 in. deep at cockpit, $1\frac{1}{2}$ in. wheel diameter, then to fly 200 laps on 42 ft. lines. The wing area has now been altered to 70 sq. in. and there may be further changes. Class B models now must have 4 in. deep fuselage and 2 in. diameter wheels. Thus, an Elfin 2.49 racer built to the old rules is now useless, having, in particular, a 30 c.c. tank, while a Class A racer built to the current rules may suffer a similar fate. Moral—think well before setting down any rules — then keep 'em!

In the August A.M.H. there are the seven modified EAST rules for the Nationals. Those 60 ft. lines might be clipped to 52 ft. 6 in. (ever known it be less than a gale for a comp.!)

The proposal of several lengths of races also surprised the writer. Given sufficient competitors, (see Australian T/S notes) running-off the smaller races hence deciding runners for the Consolation and Feature events would fill most of a day—and somebody has to organise and control the whole affair. The short races appear useless

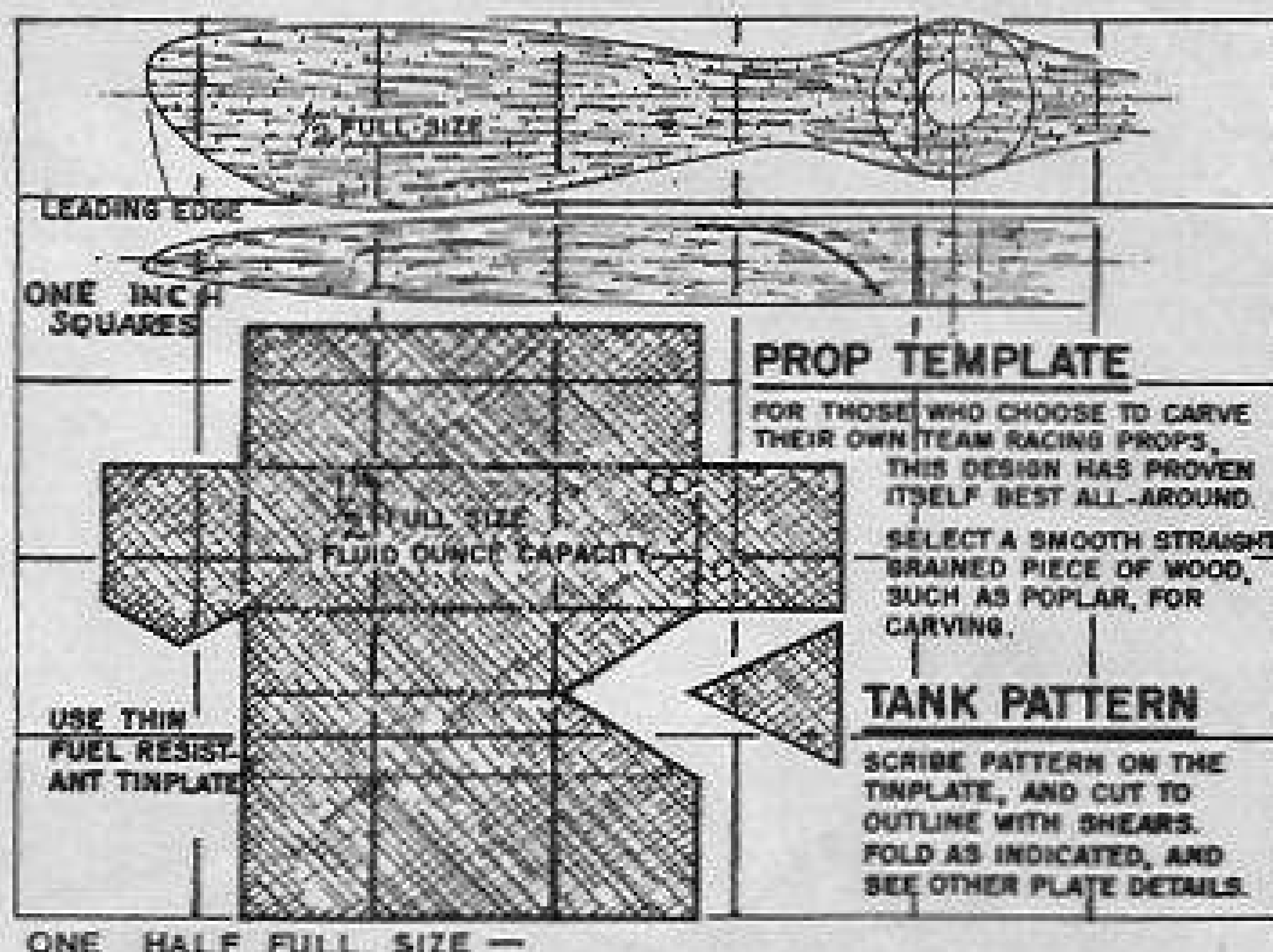
unless commenced with the entrants starting their motors (not necessarily from cold). One of the primary factors in racing as understood in the U.K. is the refuelling and re-starting while the race is in progress. These short races combined with the possible use of mechanical starters would surely lead to high-speed freaks—which is not the objective of Team Racing.

To the British modeller the very use of mechanical starters seems 'wrong.' Team Racing should give a chance to the average type who cannot afford a really hot powerplant and has been none too successful in stunt. Of course, a healthy bank-balance is an advantage (as in full-size racing) but this may be minimised by insisting on hand-starting. Perhaps more accurately, an advantage may be gained by purchasing several engines and finding the most satisfactory and by experiments with expensive equipment and accessories, but remember that racing engines are not necessarily best for our purpose.

Certain engines are obviously better suited to racing. The main characteristics to look for are ease of starting when warm and high efficiency (b.m.e.p., to be technical) and hence low fuel consumption. The Elfin 2.49, E.D. 3.46 and Frog 500 largely fulfil these conditions and are currently popular in the U.K. Consideration of a suitable

(continued on page 28)

This fuel tank and propeller is that recommended by Keith Storey, member of the F.A.S.T. club, which started Team Speed racing. Illustration is half full size.



June, 1951.

Model Aeronautical Ass. of Qu'sland

Notes from "Gorrie" and others

The State Association has been reformed, and is now quite an active and financial body, with various clubs making great strides.

For a time Brisbane model flying was in the doldrums, but it has made a comeback with a vengeance, and is now at an all time high, capable of standing its own against competition from any of the other states.

Pete Weaver informs us that all the top men are capable of doing the complete flight pattern with stunt models, and they are now flying Team Stunt, which certainly sounds like the Brisbane lads are really cracking.

Team Speed is very popular with the Mercury Team Racer and Firecrackers showing the others the way round, mostly powered with Frog 500s.

Des Slattery of the Stardusters, gave the locals the impression that he thought nothing like the Adelaide Nationals could ever be held in Australia. They were "mighty."

All contests in Brisbane must be sanctioned by the M.A.A.Q., and clubs apply to hold the various type contests. Providing dates do not clash, the M.A.A.Q. circulates notices to all clubs and hobby shops. All affiliated clubs can participate in all sanctioned contests. Some contests of course are organised by the M.A.A.Q. itself.

The Newtown and Stardusters clubs seem to be the most energetic workers behind the Association and are responsible for a lot of the field work and organisation.

A Ladies Committee operates to the advantage of club funds. This group of girl friends, wives and mothers conduct a refreshment booth on all flying days the proceeds going to the Association.

We are aiming to raise £500 by the end of the year to help finance a team of 20 to the next Nationals. Each club has been set a figure to raise, and some have already collected a fair portion of their quota.

The Publicity Officer of the M.A.A.Q. has been busy getting support for aeromodelling, and so far, radio broadcasts, two weekly columns in the newspapers, support from business firms in the way of transport, and many other helpful services have been obtained through his efforts. 4KQ announces all coming contests and gives results when the events have been held.

Australia Day was one of our most successful demonstrations. This was part of the celebrations held at the Showgrounds. Model Aviation is recognised in Queensland as a worthwhile sport, and we have now been asked to fly on Jubilee Day.

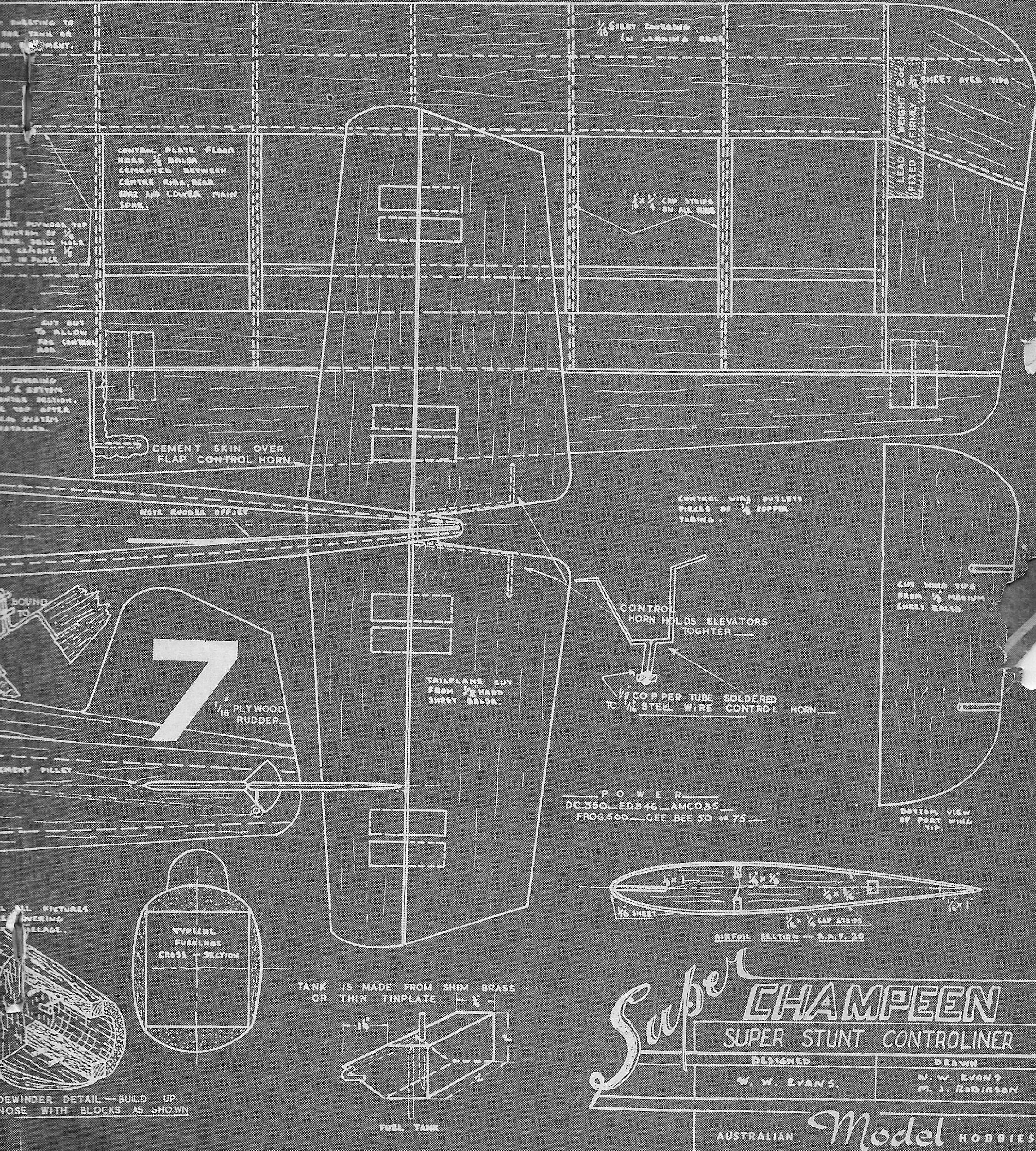
Downley Park, Wilston is of sufficient area to keep over twenty models in the air at one time, and there is

(continued on page 31)

Top: Queensland toplineer Bill—Wee—Weekes, with his scale "Midget Mustang" and a modified "Squaw," which are so popular in Brisbane.

Below: Successful A.M.H. design "Firecracker" (August issue), which won the Queensland speed Championship, held on the Archerfield Aerodrome. Powered by a Frog 500 this team speedster did 71.97 m.p.h. Built by Fred Burgess of the "Stardusters" club.





Victorian Model Aeronautical Ass.

Hon. Sec.: R. A. Rose,
Railway Terrace, Laverton, Victoria.

Notes from Monty "Zilch" Tyrrell

VICTORIAN CLUB NEWS

The Victorian Model Aeronautical Association recently held a gala day at Point Cook R.A.A.F. aerodrome, which was turned over to the modellers for the day.

All types of models were much in evidence and members of the V.M.A.A. were surprised that there were so many model aircraft and enthusiasts around Melbourne.

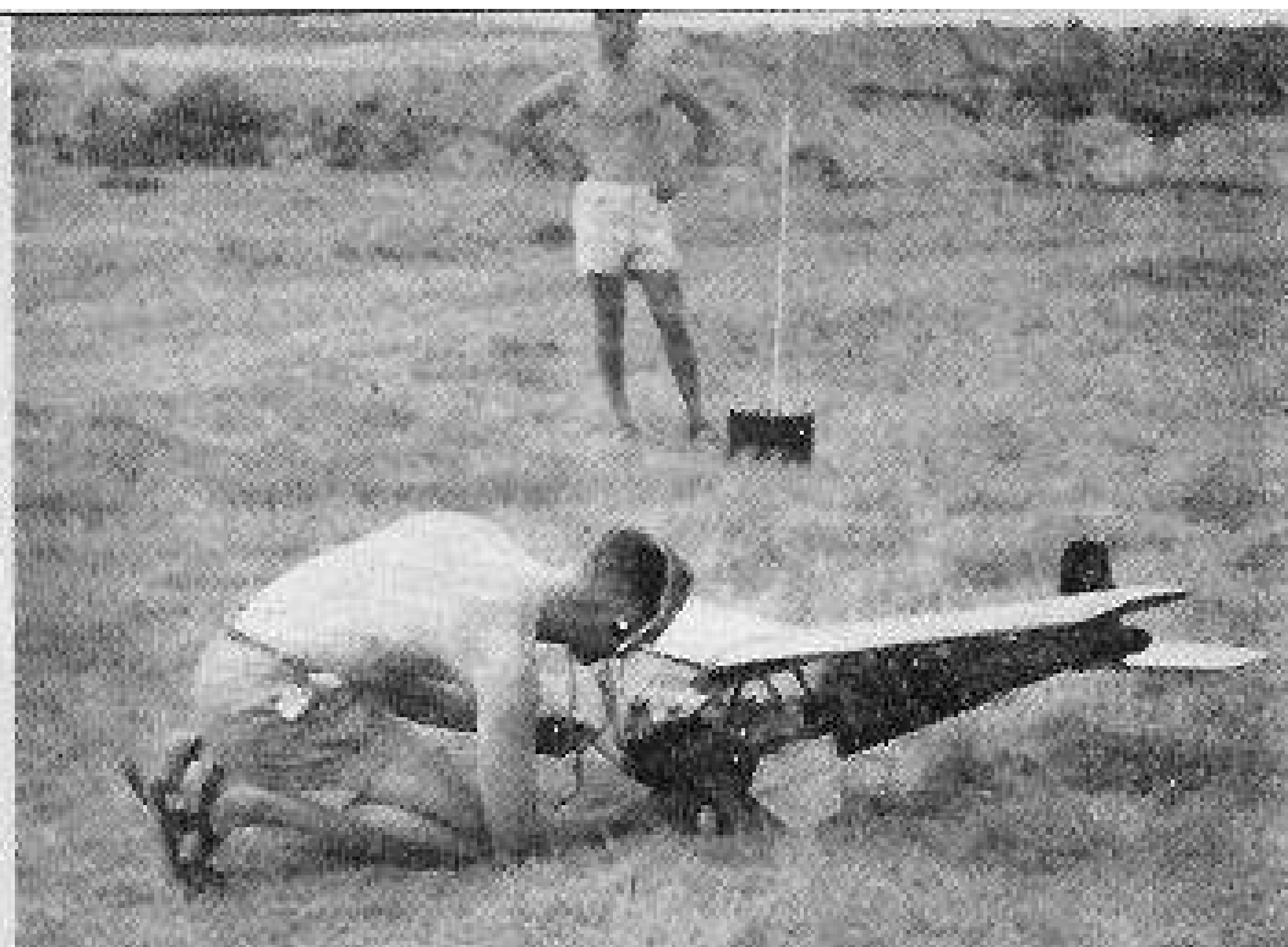
Transport to the aerodrome was provided by the Air Force.

From a spectator's viewpoint the exhibition must have been an outstanding success, but, unfortunately, due to lack of co-operation among the modellers, they suffered many crashes because of over-lapping control line circles, owing to the impatience of many of the chaps to fly. There were six or seven and sometimes up to nine over-lapping circles operating on the flying area and the crowd watching the near misses and mid-air tangles were more than satisfied with the spectacle. All day there was never less than two or three models in the air at the one time.

The main speed circle saw some outstanding flying — Herb Henke set a new class C record of 129.6 miles per hour with his McCoy 60 Hell Razor. Max Wright was out on Herb's tail with flights of 124 and 125 m.p.h. throughout the day. The Vampire 60 motor, which was successful in Adelaide Nationals, is manufactured and was being used by Max on this day. Norm Bell regained his old form and set a new class A record of 103 m.p.h. with a McCoy 19 powered Speed Waggon. During this record speed run Norm nearly collided with my Spit-Fired Super Zilch several times, due to the overlapping circles. On my other side I was being pressed hard by another stunt ship, which in turn was being squeezed. Mac Munro and some of the other boys were getting over the 100 with their class B jobs, but could not get near the record. In the small A1 and A2 classes Syd Smith was outstanding — he did approximately 79 and 90 respectively in these classes and applied for record, but due to some discrepancy in the timing these speeds are not official. They were done and clocked over four laps by 3 watches. Jets were also flown, but no records were broken.

Stunt, combat, and team racing was carried on at various parts of the field all day. Jack Black's model crashed in what was considered the most spectacular of the day's many "splashes."

Out on the runways the free-flight and radio control models were flown. Two "Rudderbugs" were in action, one flown by Jack Hearn, and the other by an airforce modeller. Reg. Cooper flew an original design R.C. job, powered with an E.D. 346, which he looped a little too low, and slightly damaged it, although this was the first time a radio-controlled model has been looped officially in Victoria. George Mallet and Harry Forest demolished their R.C. job when they failed to pull it out of a vertical dive from 600 feet.



Jack Hearn testing the equipment of his winning radio control "Rudderbug" at the '51 Nats. Les Anderson in the background working the transmitter.

Free flight models were being flung into the air throughout the day, some of them finding their way out into the bay, but these were retrieved by R.A.A.F. crash boats.

At dusk there was a general exodus of models and modellers, who although weary from a hectic day's flying, agreed that the V.M.A.A. had rarely staged a better show.

VICTORIAN CONTEST CALENDER

Sunday, 3rd June, at Surrey Park, from 10.30 a.m. Official speed attempt.

Sunday, 5th August.—To be conducted by St. Kilda Club from 10.30 a.m. Official speed attempts.

STATE CHAMPIONSHIP SERIES

Sunday, 2nd September.—To be conducted by Parkdale Club at Reservoir, from 10.30 a.m. F.A.I. Sailplane. Scramble. Radio Control.

Sunday, 30th September.—To be conducted by Northern Suburbs Club, at Reservoir, 10.30 a.m. Weight rule rubber. Jetex. Hand-launched gliders.

Sunday, 14th October.—To be conducted by West Preston, Northern, Essendon Clubs, at Reservoir, from 10.30 a.m.

Free flight power classes A1 and A2 (up to and including 2.5 c.c.).

Free flight power classes A and B 2.501 up to and including 5 c.c.).

Free flight power class C (5.001 and over).

Sunday, 28th October.—To be conducted by Windsor Club at Como Park from 10.30 a.m.

Junior stunt (under 18 years).

Senior stunt (18 years and over).

Open flying scale.

Sunday, 18th November.—To be conducted by E.S.M.A.C., at Surrey Park, from 10.30 a.m.

All classes of control line speed. A1, A2, A, B, C and Jet.

All classes team speed.

VICTORIAN CHAMPION OF CHAMPIONS TROPHY POINTS ALLOCATION.

1 point will be given to each contestant completing at least one official flight in any of the State Championship Series, in addition to the points listed below.

1st placegetter, 12 points; 2nd, 8 points; 3rd, 5 points.

Champion of Champions will be the contestant who gains the highest points in these series.

South Australian Associated Aeromodellers

Hon. Sec.: B. N. Felstead,
5 Shoreham Road,
South Brighton, S.A.



S. A. CLUB NEWS

NORTHERN M.A.C.

Recent club championships were the most successful to date, and covered all types. Jack Hill gained the position of Club Champion by virtue of his efforts in control line events. Jack's diesel (G.B. 50) powered Team Speedster won by it's easy starting.

PETER ARNOLD has a new team speed job powered by an inverted Frog 500, but the set-up of high wing and low C of G does give the best ground handling characteristics.

MAX STARRICK is the first S.A. modeller to effectively control a model by radio although others have been flown here, this model was obviously under control and particularly responsive to signals from the ground. Powered by an Elfin 1.49 c.c. and fitted with radio gear of Max's own design. Unfortunately late in the day after several flights the model shed a wing about a 100 feet up in a tight turn, and was completely wrecked.

IVAN STACEY and RON MILL have completed their 11 feet sailplane and hope to give it a thorough work-out before the Nats.

HELICOPTERS have attracted considerable interest. WAL REEVE started it with his indoor job at the Nats. Max Starrick has a rubber powered copter going very well and Wal Reeve has been experimenting with a powered job in which the torque of the motor mounted with the shaft vertically upwards is used to rotate the rotors. A large prop is fitted and the rotors fixed to the body of the motor. Lateral instability is causing trouble.

STAN GREY won the recent indoor contest with a larger than average model. Indoor is quite popular with this club.

CONSTELLATION M.A.C.

BOB HOWIE got to Sydney at Easter for the Wakefield, but did not get to the flying field owing to lack of information. He was not over concerned as his model did not even get to Sydney.

BRIAN LITTLE is still quite active (?) His latest effort a "AII" T/S.

BRIAN HORROCKS was rather surprised recently when the front of the crankcase of his motor fell out for no apparent reason. Just fatigued apparently and cracked.

GLENELG M.F.C.

KEV COLWILL has built up seven Amco 3.5 T/S jobs this year, and says he is now around 40 laps at 75 m.p.h.

GARY COOPER is doing well with "AI" Elfin 1.49 speed job, so far 75 m.p.h. is his best.

FRANK BURDEN is quite satisfied with his new M.S. 29, the motor manufactured by Bill Marden and Harold Stevenson, so far his best speed claimed is around 105 m.p.h. Frank intends to try T/S as well as speed.

VIC TULLET is concentrating on speed, and "Speed-wagons," but so far has had "all the trouble." Vic's a stickler and his new job looks good.

GEOE. BARREN has his Jetex 350 going well. This is the most successful Jetex model seen so far, and is capable of outperforming the average free flight model.

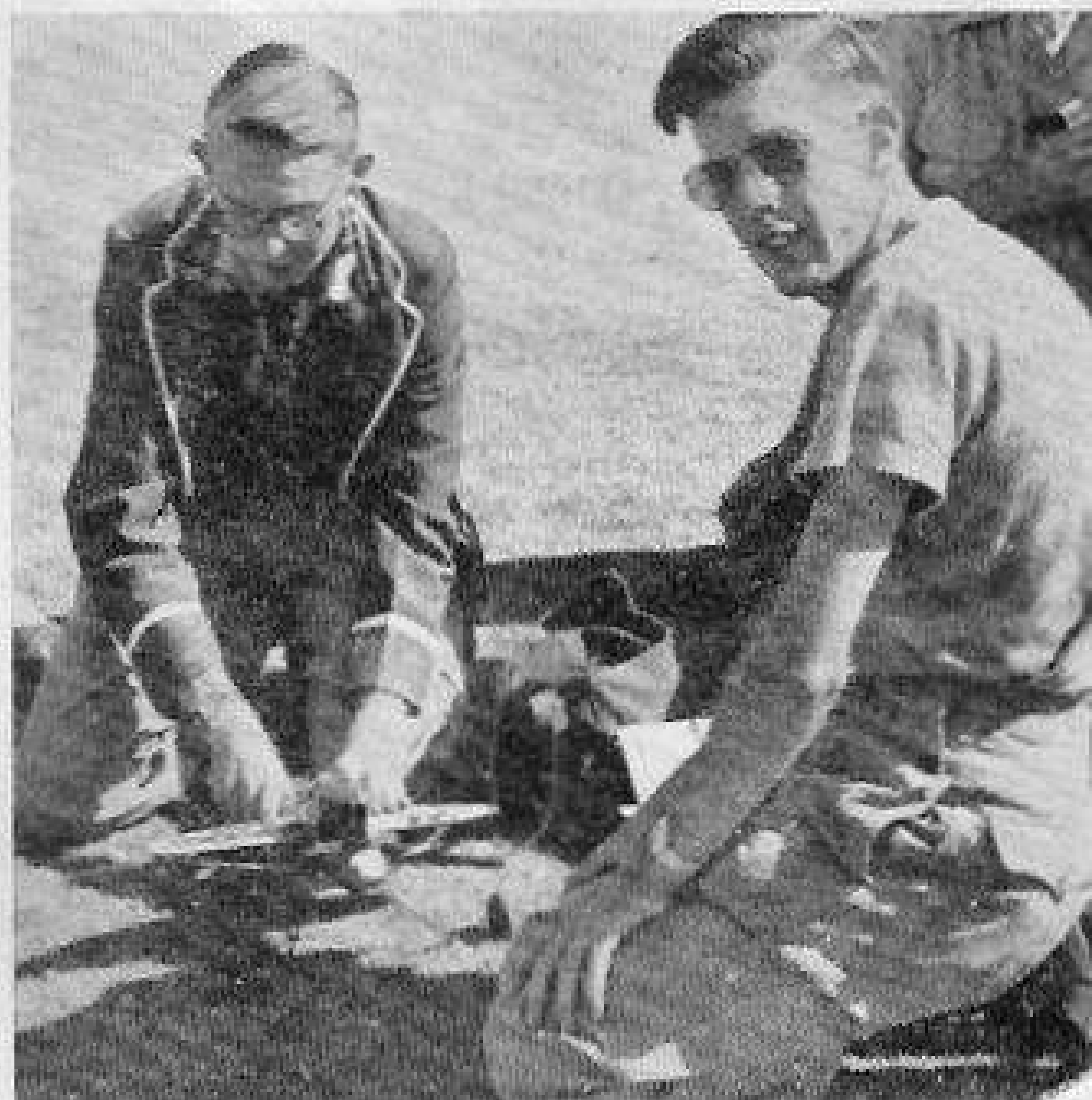
IAN GILES is another really promising junior. At present he is flying a "K" powered Foote Racer, and getting results.

SOUTHERN M.F.C.

This club has recently been reformed, and has attracted many of the states most experienced free-lap modellers. Bluey Coppock is chairman, Ron Dunn secretary, Andy Vidale treasurer, Kev Green contest sec with Mal Sharpe helping all round.

IAN MACDONALD has been successful with Flamingo in recent scrambles, but is having trouble with the Fox in his T/S.

TINY THOMPSON has acquired a D.C. 350 for team racing. L.G. HART turned from U/C to F/F has a "K" powered profile Hyphen.



Motor Preview

- ★ M.S. 29 RACING GLOPLUG
- ★ FROG 500, PETROL IGNITION
- ★ "E.D." 2.46 RACING DIESEL, GLOPLUG, OR IGNITION
- ★ FROG 150 DIESEL OR GLO

The M.S. 29 Test carried out by the manufacturer over many months of actual flight conditions.

Designed and manufactured by well-known speed experts, Bill Marden and Harold Stevenson.

Distribution: By manufacturers.

Price: £10/10/-, complete ready to run.

Bore: .780; Stroke: .625; Capacity: .298 cubic inches (4.890 c.c.).

Weight: 6½ ozs.

Castings: All castings are Y alloy sand cast and heat treated.

Liner: Alloy iron.

Piston: Y alloy. Rings: Alloy iron.

Bearings: Two precision ball races.

Crankshaft: Heat treated steel.

Disc Valve: Precision bakelite moulding.

Con-Rod: Machined from heat treated bar stock aluminium alloy.

PERFORMANCE—

R.P.M.:

With 7"D x 10"P speed propeller, 17,000.

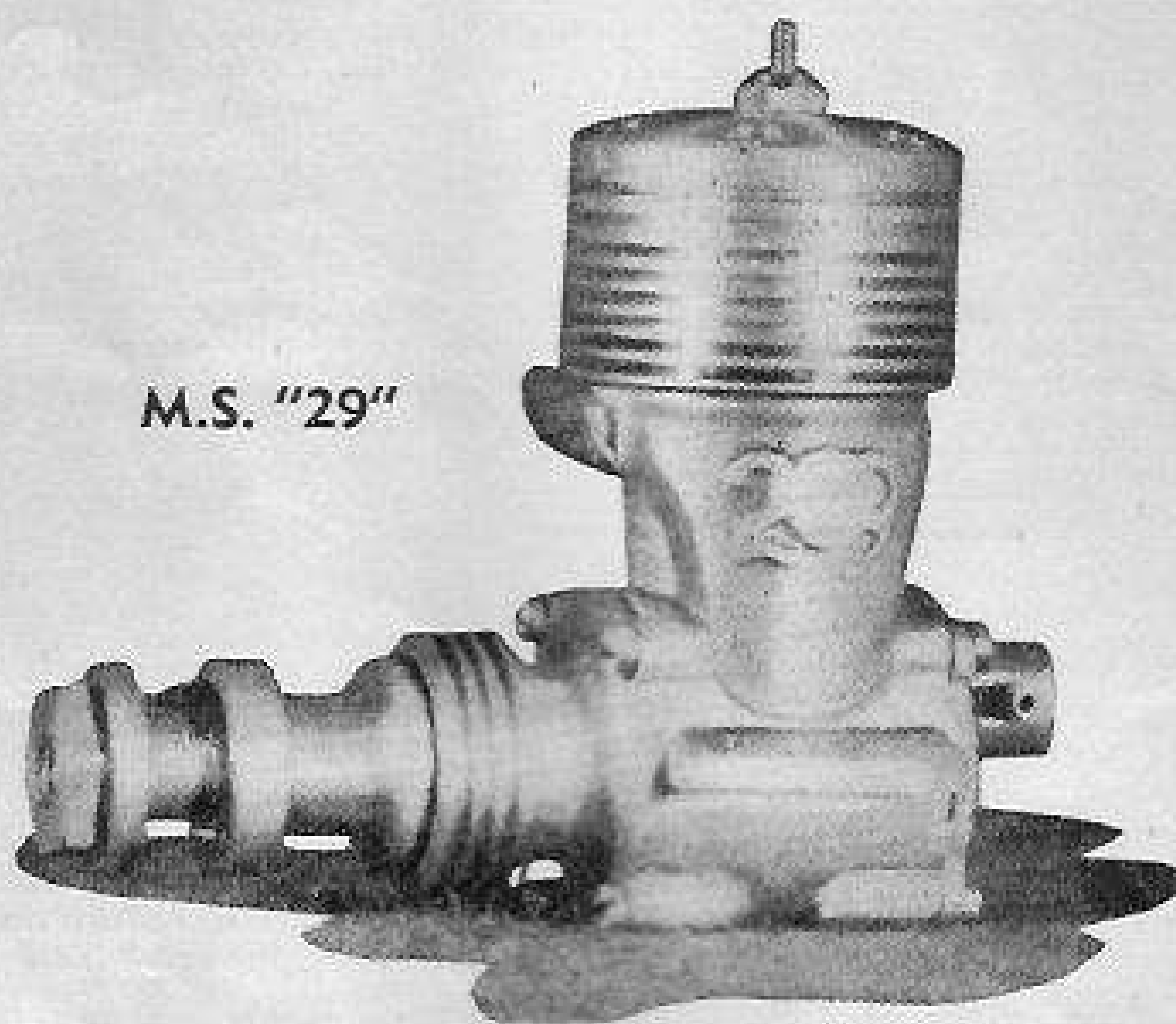
With 10"D x 5"P stunt propeller 10-11,000 (motor fitted with choke insert).

The above readings were obtained using standard fuel, but for maximum performance 25% Nitro Methane is recommended. The motor was fitted with an MS Gloplug which has a platinum element, and will shortly be distributed throughout Australia.

GENERAL—

The motor will give 40-48 laps in a suitable Teamster—fitted with a 1 ounce tank—at approximately 75 m.p.h. For the one mile speed dash heats the speed can be increased to 85-90 m.p.h. This reduces the economy and at this speed 20-27 laps can be expected.

M.S. "29"



These figures are based on the performance of Harold Stevenson's model which has 130 sq. inches wing area and weighs 23 ounces. During a heat race in the recent N.S.W. Championships this model officially recorded the speed of 84 m.p.h. in the Team Speed Event.

A choke insert is supplied with the motor for stunt or teamspeed work which gives reasonable hand starting performance, and makes the motor practical for these types of flying.

Speed is, of course, the main purpose for which this motor was designed, and in this field in particular, it has proven capable of beating the considered world's best. In the N.S.W. Championships it recorded the near-record speed of 120 m.p.h., and the designers feel confident that the motor is capable of the 130 mark.

With the choke insert fitted the motor has proved quite reliable for stunt work.

"E.D." 2.46

This motor was not available for test, but as soon as a unit becomes available A.M.H. will pass on performance details to readers.

Quite different in appearance to what modellers have been used to from the manufacturers, Electronic Developments, this, the latest of British motors to appear on the market has many impressive features.

E.D. MK. III SERIES (2) RACING ENGINE.

Type—Diesel, also convertible to Gloplug and Spark Ignition.

Bore—.590 inches.

Stroke—.550 inches.

Capacity—2.46 c.c. (.150 cu. inches).

Weight—4½ ounces.

Mounting—Beam.

Crankshaft Bearings—Two ball bearings.

Con. Rod—Dural forging.

Main Casting—Magnesium alloy with integral exhaust stacks.

Exhaust Porting—360°

Bypass Porting—360°

Intake Porting—180° disc valve.

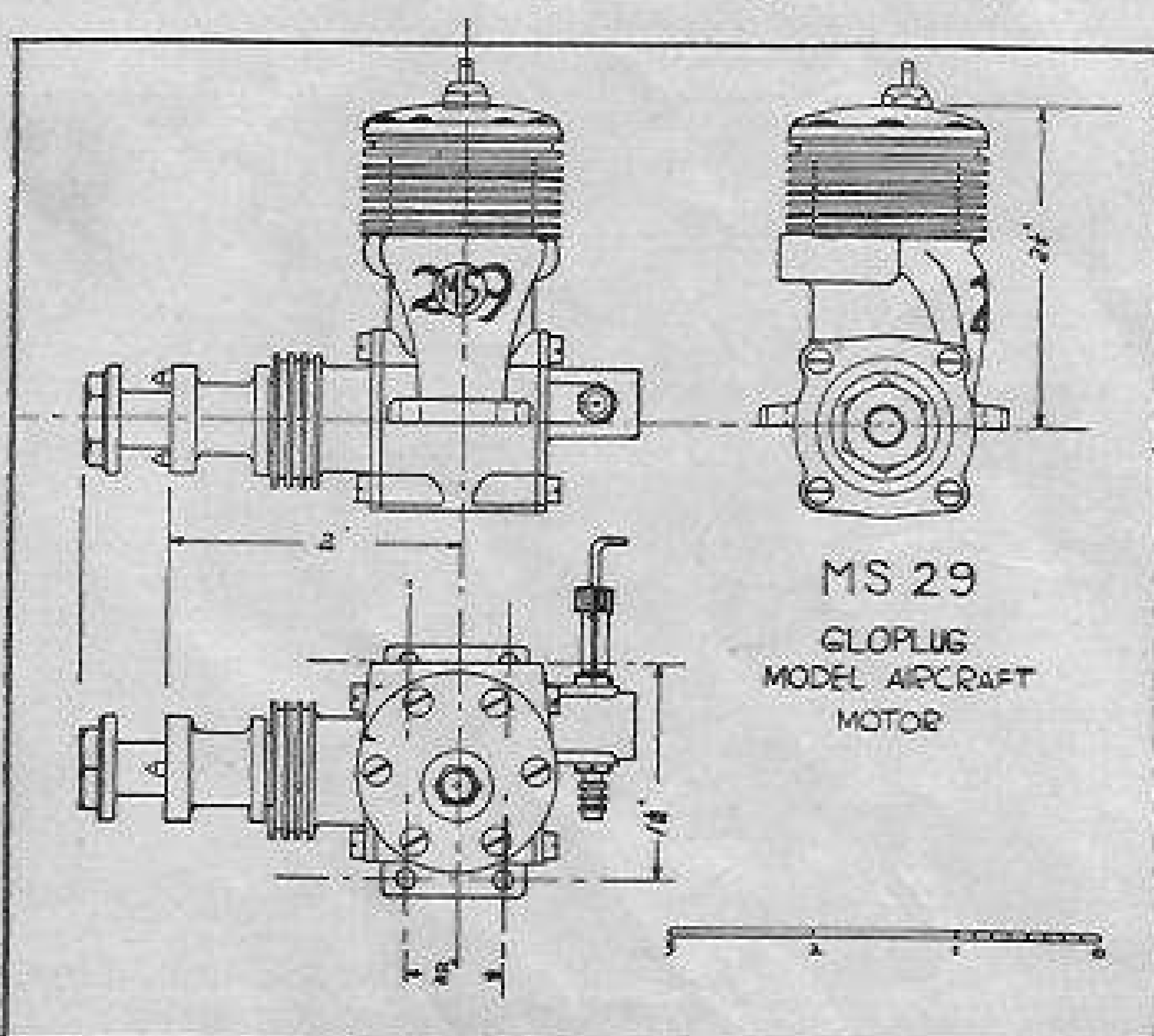
R.P.M.—14,000.

B.H.P.—.25 at 14,000.

Height—2½ inches. Length—3½ inches. Width—1½ inches.

GENERAL

The "E.D." 2.46 is designed to operate as a diesel gloplug, or petrol ignition motor, and as it is fitted with a



double ball bearing crankshaft and disc rotary valve, it should prove to be outstanding in small team speed and speed models, and is the first 2.5 c.c. class ball-bearing motor to be produced in Britain.

"FROG" 500 PETROL IGNITION

The rapidly growing number of team speed, and radio control enthusiasts will be interested in the new battery-operated ignition motor produced by International Model Aircraft.

Fuel economy, and flexibility of performance are the virtues of a well designed petrol motor, and the Frog petrol motor appears a well constructed unit, and is similar in all respects to the popular Frog 500 gloplug motor, excepting that a compact contact breaker assembly has been added to the front of the crankcase. The design is simple and practical.

No coil or condenser is supplied with the motor, but they will no doubt be available separately.

To the majority of post-war modellers a petrol engine will be a novelty, and no doubt many will turn to battery ignition expecting a cure-all, but they will more than likely be worse off than with their diesel or gloplug motors.

The ignition motor is specialist's equipment, and is capable of doing many things the other types of motors cannot, but its operation must be thorough, and the electrical system must be understood, or more troubles than ever will be encountered.

To the radio control man who wants motor control, or the team-speed enthusiast who can make his speed runs on alcohol fuel and then change to a petrol/benzol mix for the long distance races, this new Frog motor should prove very popular.

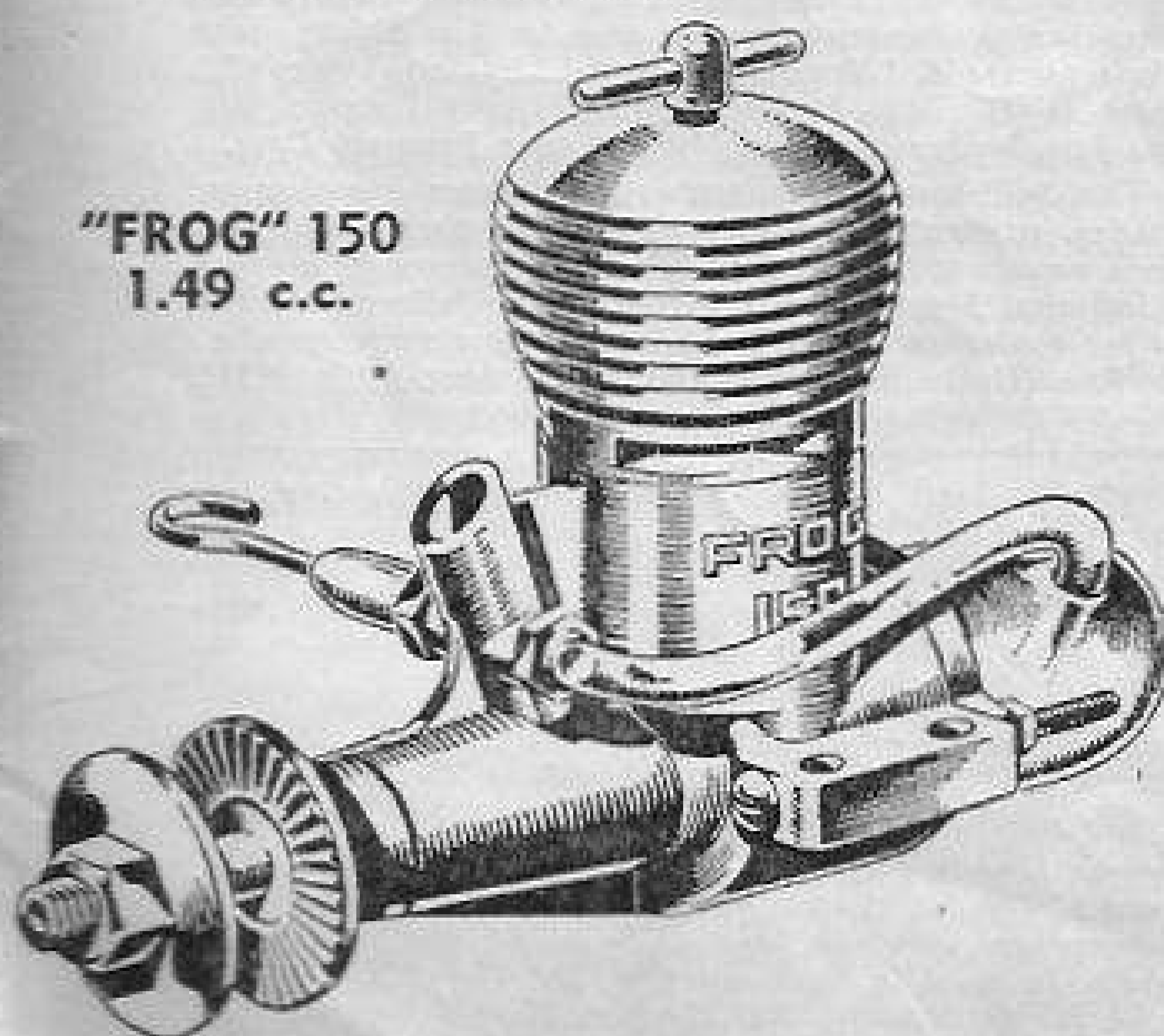
FROG 150 DIESEL OR GLO

Another new motor from International Model Aircraft, this time a 1.49 c.c., known as the 150, it will replace the well known Frog 100, 160, and 180. The 150 is available either as a glow motor or diesel, and is the latest effort of A. A. Judge, designer of the well known Frog 250 and 500.

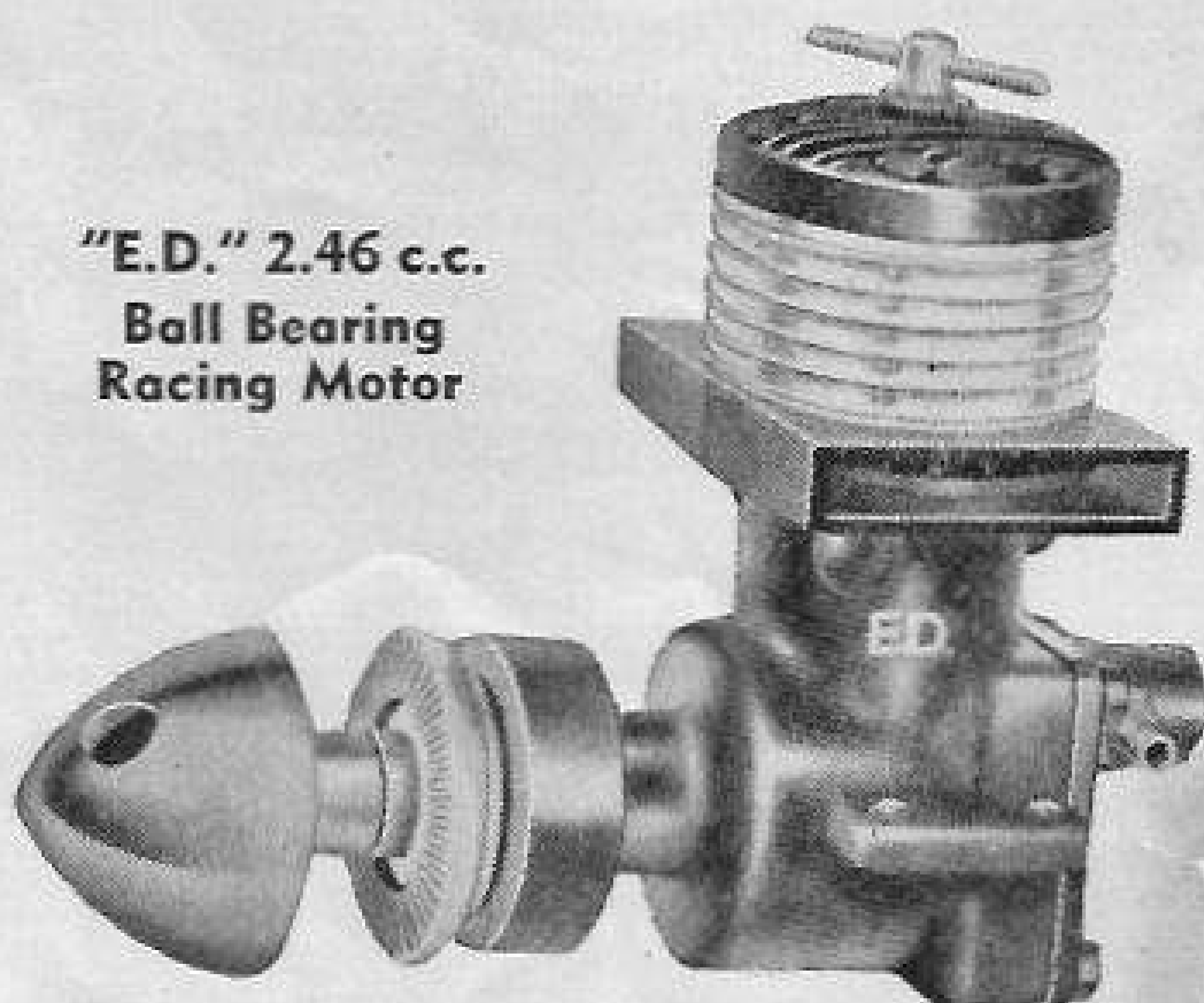
(Judge, most Wakefield enthusiasts will recall, won the Wakefield way back in 1936 with the fine average of 249 seconds.)

Very little detail is available yet on these new Frog motors, but as soon as full specifications come to hand we will pass them on to readers.

"FROG" 150
1.49 c.c.



"E.D." 2.46 c.c.
Ball Bearing
Racing Motor



- Chapter I—Definitions of displacement, capacity, compression ratio, rating.
- Chapter II—Principles of operation of two-stroke miniature motors.
- Chapter III—Carburettion, types of carburettors.
- Chapter IV—Fuels; petrol-oil, methonal mixtures; diesel and glow plug fuels.
- Chapter V—Spark-ignition circuits; components.
- Chapter VI—Operation and maintenance of spark-ignition motors.
- Chapter VII—Operation of glow plug motors.
- Chapter VIII—Operation and maintenance of diesel motors.
- Chapter IX—Propeller design.
- Chapter X—Care and maintenance.
- Chapter XI—Jet engines.
- Chapter XII—Control and development.
- Chapter XIII—Practical bench and field testing.
- Appendix I—Full-scale general-arrangement drawings of popular British and American motors.
- Appendix II—Design data.

160 pages: 8½ x 5½ in. Over 100 illustrations.

10/6

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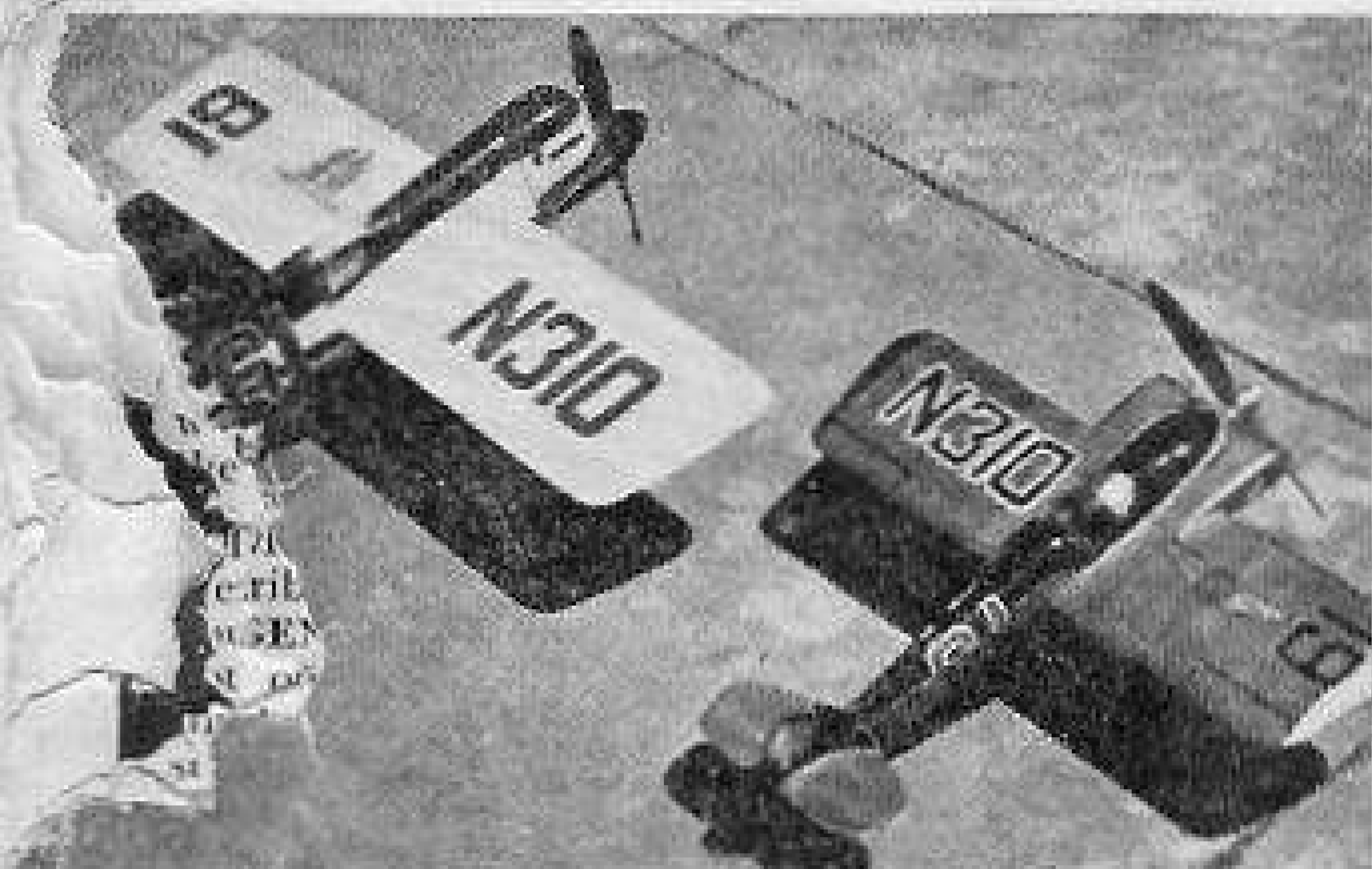
June, 1951.

Model Aeronautical Ass. of N.S.W.

Hon. Sec.: J. Dunkerton,
15 La Mascotte Avenue, Concord, N.S.W.

1951 Championships

Reported by Eric Nicolli



The N.S.W. Championships were conducted by the M.A.A. of N.S.W. on the 25th and 26th of March. On the Saturday, the Australian Wakefield Event was won by Arthur Lonergan. With this event being held, we N.S. Welshmen were glad to have several interstate visitors present at the championships.

The weather on the free flight day was absolutely perfect. It was just what an aeromodeller dreams about. Cloudless thermal packed sky and no breeze made flying dangerous unless your model was equipped with a reliable D.T., in fact many aeromodellers learnt their lesson (including yours truly)—a lot of models going out of sight upwards!

On arriving at the field, which unfortunately was rather out of the way, I was immediately impressed by a very pretty flight by Mr. Miles, with his R.C. model. This model was the most successful in its class during the day. Another R.C. model that attracted a lot of attention, was a "delta" shaped pusher, powered by a Frog 500. Unfortunately this model did not fly.

Unhappily I missed the Open Rubber, A1, A2 and A and Flying Scale Rubber Events through chasing my Banshee for about five miles (on foot). So therefore can not give a true account of these events. I might mention here, that I expected a few chasers on motorbikes provided, but unfortunately every aeromodeller had to chase his own model. The model that won the flying scale rubber was an A.P.S. Westland Widgeon built and flown by Frank Taylor. This really was a nice model. The class A Power ratio was won by Jim Shieky, with his six-year-old "Zipper," powered by an Amco 3.5. Later in the day in the "Scramble," this model also was lost, last seen gaining height over Prospect Dam.

The Sailplane Event attracted a large number of entries, particularly of the Nordic A2 class. The tow lines were not measured. This is an unexcusable error. I feel that I must also criticise the modellers here too, as far too many of them had to borrow someone else's towline. (Unlimited run is allowed by Aust. Rules E.D.).

Top: Australian Wakefield winner 1951, Arthur Lonergan, of Sydney, one of Australia's younger Wakefield enthusiasts. This year he placed on top of the "hot" E.S.M.A.C. boys, Allan King, Jim Fullarton and Allan Lim Joon, all of whom placed in the team of six to be sent to Finland.

Centre: Two very smart T/S models by Tony Shennan (N.S.W.). "Twinfan" is powered by Frog 500 and "Golden Gal," the 1/4 A job, does 65 m.p.h. with an Elfin 1.8 up front. Below: Harold Stevenson, who placed first in class "B" speed at the N.S.W. champs using one of the MS motors featured on previous page. The speed was 120 m.p.h., which is solid recommendation for the "MS" motor. With his team mate, Bill Marden, Harold impressed all present when his Team speed model did 84 m.p.h.

The standard of modelling on the whole was really top rate, and the spirit displayed by the modellers was tip-top. The only thing I think that marred the day was a little lack of organisation. There was no P.A. System and once again there was that crowding around the take-off boards. This can become very dangerous. Also I think the least that members and officers of the M.A.A. could do to help their championships was to turn up on the field whether they were flying or not. Several officers and members were prominent by their absence.

The C.L. day produced just as perfect weather. Every C.L. enthusiast was looking forward with expectancy to seeing Max Cummings compete against Monty Tyrell. (I think somebody even opened up books on the Stunt Event.) These two lads no doubt, are the cream of C.L. flyers in Australia at the present moment, although I would like to see them matched against the Ted Gregory of 1948.

Monty Tyrell was flying his Go-Devil (Anderson Spitfire powered). He went through his manoeuvres very calmly, possibly the only fault being the bottom side of his square loops. These were a little wavy. Max Cummings on the other hand, seemed to be a little nervous. He flew a Fox 29 powered original which was much faster than Monty's model. Unfortunately while going through his manoeuvres, Max pranged and Monty came out the winner, but I will say that Max would have gone close to beating him. (In fact I would say that Max would have beaten him, but perhaps this is because I am a N.S. Welshman). I think that Monty will have to do a lot of solid practising to beat Max at the Nats.

Notable amongst the flying scale models were Arthur Wild's Chipmunk and Peter Sandford's Helicat.

Biggest surprise of the day was the defeat of Jack Finneran in the class B speed, but I feel sure that even Jack is proud of his defeat because it was an Australian made motor that beat his crack Dooling 29. Jack was flying his model that won in Adelaide at the Nationals. I believe he was touching the 116 m.p.h. mark. Then Bill Marden and Harold Stevenson flew their new M & S (Marden & Stevenson) 29 powered job. This model wound up to 120 m.p.h. which is really creditable. After this flight, Bill said that he firmly believes this motor is capable of 130 m.p.h. so we should really see some good speeds at the Nats. I must here remark on what a good team these two chaps are. Bill tuned the motor and hand launched the model and Harold flew it. The hand launch was beautiful to watch while the straight and level flight was perfect. These two chaps were also prominent in the team race, once again using their M & S 29. This motor, I believe, is in production. Think I'll sell my Dooling 29 and get one!

Two jets attempted to record a time but unfortunately both failed.

Harold Stevenson also recorded fastest time in class D speed with his good old 65 (speed was about 112 m.p.h.). The speed circles were kept going all day which I think goes to prove that this type of C.L. flying is becoming more and more popular. In these events also the organisers should be criticised. On at least one occasion the three stop watches on one model all recorded a different time, the variation being at least one second! Surely the watches were checked?

The team races were very popular, and they kept one circle going all day. Bill Evans' model was particularly pleasing having a nice turn of speed, but not quite as reliable as Ron King's Frog 500 powered model which won the ten mile race. No doubt Bill Marden and Harold Stevenson's model was the fastest and very reliable also. (I don't know if they were placed in this event). Much of the credit for the success of the team races must go to W. Vaugh who did a really excellent job in keeping the models in the air.

Once again the organisation must be criticised. Once more we had people strolling across the field; also team racers were not given a G test pull.

I don't know if this was the case with the speed models too?

(G. test is optional at Contest Director's discretion in Aust. Rules—E.D.)

Unfortunately I did not attend the dinner that was given after the C. L. day.

As I have said before the standard of modelling and the spirit of the lads were extremely high and really the only contests was the lack of organisation. Unless something is done about this in the near future, I hate to think of the next Nationals.

(Comments I would like to make are that some points in the organisation could have been improved if all members had pulled their weight).

(Compliments to Jack Dunkerton, Mr. Miles and their few helpers who made these championships a happy affair. "Coop" Cooper as "Contest-Director" for the "Wakefield" showed he had the right outlook in keeping this contest a pleasant "affair." Who was the grouch who caught the S.A. model before it landed?—E.D.)

Model Flying Club of New South Wales & East Coast Speed Club

The M.F.C. of N.S.W. & E.C.S.C. held their Quarterly Competitions on 4th February, at Centennial Park. Once again the weather was against us, and was the cause of many prangs with stunt models, and also grounded speed models, although the jet was given a static run.

A good performance was put up by George Freeman flying an Albon Javelin powered Skystreak 26 on 40 lines. This model was really performing until it with its inevitable fate.

Eric Nicolle won the Stunt event with his McGowan powered original designed "Stuntwagon."

Arthur Larritt was placed second, but was at a disadvantage with his Dooling 29 powered lightweight.

Later on in the day Miss J. Freeman won first placing in the Novice Stunt event by doing a wing over, loop, then unfortunately pranged. She was flying Eric Nicolle's plane. Sister M. Freeman got second placing.

Towards dusk Max Cummings put up a very polished display with his Fox 29 powered stunt model. This lad really can fly.

Trophies were presented and this concluded a most enjoyable day.

All members have been issued with the Club's yearly programme and many have entered in the Free Flight Point Score competition. Alf Williams is getting some excellent times with his Chuck Glider as also is Reg. O'Brien.

Our next flying day at Centennial Park was marred by a heavy storm in the afternoon. Only for this, the day would have been the biggest flying day ever held at Centennial Park. Boys from as far as Gosford, Wyong, Woywoy and Newcastle came down.

The lads have started to prepare already for the Model Flying Club of New South Wales & East Coast Speed Club Championships which are scheduled for the 29th and 30th September and 1st October, 1951. This contest should prove a good dress rehearsal for the Nationals.

Practically all events in the National Programme will be covered and it is expected that the Trophies will be up to National standards.



U. K. NEWS

from I. C. Snell and Others

The current trend is towards scale models. Mercury kits for the Monocoupe (64 in. span) and the Voyager (42 in.) already on the market and intend to follow these with a smaller version of the Monocoupe for 5 c.c. engines. A whole range of rubber-driven models at 3s. (plus tax) has been put out by Keil, who further reflect the current tendency in their new 'Ladybird' kit. There is also a veritable rash of Jetex-powered scale jobs. But perhaps the most surprising facet is a revival of interest in solids which one manufacturer reports. Could it be that flying models—power models especially—are proving too expensive because of the all-round rise in prices?

Skycraft announce that they may soon be kitting British Champion Johnnie Gorham's highly successful 'Contender.' This 46 in. Elfin 2.49 design has won three major comps. and placed high in six others to date.

Minimum weight of models eligible for the International F/F Power comp. to be held near Paris on June 16-17 is 17½ ozs. Thus some of the 'favoured' British entries may have to appear with ballast added about their c.g.! Maximum engine capacity is 2.5 c.c.

Watchmaker Gorham is, of course, well up amongst those in the running for a place in the British team for this event. At the moment, however, Wakefields appear to hold greater interest for him; his programme of development has so far entailed the building of six models. Latest airframe tips the scales at just under 3½ ozs. And he also has an A/2 in his stable.

Delivery of the new E.D. 2.46 is daily expected. Although this is a diesel, a spark/glow version is promised soon. Should collect very little dust on the shelf

at 72/6d. including tax. This engine has many features in common with the long awaited 5 c.c. version, which seems to have progressed no further than a few hand-made specimens which designer Basil Miles has turned out. The transfer and exhaust system of these engines may owe something to the original Yulon system, there being four slots to give both transfer and exhaust through 360 degrees. Weight is 8½ ozs. and price £6 10s., excluding tax. But the latest Yulon displays four nasty great gashes for exhaust ports instead of the previous two dozen small holes. Weight has gone up by half oz. but price is £4 7s., including tax.

L.M.A. have the Frog '150' diesel/glow engine coming along, with the possibility of a '50' (49 c.c.) to follow. Elfin also intend to enter the ½ c.c. field. Until such time as these materialise, this field is nearly barren by virtue of the whole Allbon plant being uprooted in the interests of Town and Country Planning. The supply of Allbon engines is thus virtually suspended until their works are rehoused.

Anybody interested in Team Racing (Team Speed, that is!) and not possessing a Dooling 29 may find ground for fatalism in the news that the West Essex bods are using this engine to pull their racers at 90 to 95 m.p.h.!

Mick (Freddie) Guest tells us of his latest attempt to make his Doolings go even harder than at present. This season Mick was the most outstanding of the speed boys in England, and set records in both class "B" and "C."

Two fuel tanks have been installed in each of Mick's speed models, one tank contains the normal methonal fuel and the other distilled water. The two tanks feed two separate needle valves mounted in the venturi intake, and the motor is started on the methonal and then the water is fed in. Both tanks are pressurised.

Mick says, "If you could see inside my Dooling 61 speed job you would think I am crazy, the crankcase is tapped for pressurising, this and the two tanks, two needle valves, and a fuselage full of fuel tubing. Anyway it all works."

Next season should see the water injection Doolings burning round the U.K. speed circles with Mick Guest showing how.

Latest form of State Aid comes dressed as a purchase tax (33 per cent. on wholesale) chargeable on engines and certain kits and accessories. There may be an appeal against this: there is even talk of it being made retrospective!

Next season our Nationals will be divided into separate C/L and F/F meetings. Separate classes are to be introduced for F/F power duration. Also, a new championship between England, Wales, Scotland and Ireland is to be instituted.

E.D.'s new 5 c.c. and 10 c.c. spark glow motors will be preceded on the market by a 2.46 unit for spark, glow or diesel operation. Price cuts and changes in distribution by E.D. and Elfin have left their retail prices unaltered.

Miniature R/C grows in popularity, being easier on the pocket, quicker to build and easier to transport than the Rudderbug species. Veron Skyskooter is sound start for beginners, but smaller radio seems more prone to failure and the economy may be false.

The DC 350 is now supplied with a 'competition' cylinder head.

**KINDLY MENTION AUSTRALIAN
MODEL HOBBIES WHEN REPLY-
ING TO ADVERTISERS.**

Farewell to the Midgets??

IS THE SPEEDCAR TO DISAPPEAR FROM AUSTRALIAN SPEEDWAYS?

A little self-analysis may help to restore Speedway Racing to public favour.

UNASHAMEDLY we have taken our title and theme from one of the leading U.S.A.'s leading speedway magazines, for there, as in Australia, the last speedway season, was the worst for the midget speedcar since the war.

A statement issued in a "United Racing Association Bulletin," read: "Due to conditions beyond our control, midget auto racing, as you well know, has lost its interest to fans, and promoters all over the country." Enthusiasts realised that this meant the end to organised midget racing within the jurisdiction of one of the largest, oldest and best operated midget controlling organisations in the United States of America.

Australia during the 1950-51 season fared relatively even worse than the U.S.A. No track operated in Melbourne or Brisbane at all. Adelaide had two tracks operating for most of the season, but the speedcar racing was just not good enough on either track. One track, Kilburn, held its meagre patrons with some excellent sidcar racing, but attempting to carry the car side of the programme with something less than six cars, was not any help to the prestige of the midget. The other S.A. track, Rowley Park, is too small for cars in its present shape. Speed is kept down, and quite a good deal of the fence was demolished by wayward cars during the season, which as always, boosts the gate takings — but the racing left a great deal to be desired. High quality precision racing, coupled with a reasonable amount of novelty and showmanship, is what fills a speedway with paying patrons. The show must be good or the gate takings are down, with it the prizemoney, which enables good cars to be built and raced. In South Australia the gate takings indicate just how good the racing was. The total attendance was an all-time low.

Sydney could possibly have had a good season had not the weather washed out several of the meetings, but here too I doubt if the racing could have equalled previous years. The races on both the showground and the sports-ground all too often developed into a procession, with no new faces in the line.

The appointments of the two Sydney tracks are good, and the potential attendance the best in Australia, but although certainly the most successful last season it does not draw the crowd it could, or even used to do. Many, many times I have heard the comment: "Oh, I used to go but got tired of the same old thing."

What is the matter with our speedways, particularly the midgets?

Well, let us follow through the similar points to those considered the failings of midget speedcar racing in America.

Where did the small car racing originate, and in what form? The mid-thirties saw midget cars racing in both England and America, and not long after, these small cars were seen on Australian speedways, and proved to be great crowd pleasers. Local enthusiasts built up cars (?) around all types of motors — usually motor cycle engines. Some of these backyard cars went well, but others were capable of almost anything other than the ability to go fast in the desired course, and the crowd loved it. Nothing pleases an Australian audience more than to see a battler, and the progress made by these home-made cars and their pilots was what kept the crowd coming back each

week. There was interest in each and every car on the track.

Soon overseas drivers appeared on our programmes — Ralph Secreton, Bud Stanley and Bill Reynolds driving JAP powered Skirrows and Palmer Specials came out from England, adding an international flavour.

At this stage the game was a sport. Cars were built by all types of chaps who had become enthusiasts, and the motor cycle or old type car engine worked over, could prove a winner. The cost of operating and owning a midget speedcar was comparatively small.

What is the position now? The Offenhauser, Edlebrock V8, Supercharged Jeep mounted in expensive cars, and the one or two stars who are beaten only by motor trouble, makes the outcome of each night's racing the same.

Higher and higher have gone the costs necessary to get a car into the show, but attendances have not increased, and as prizemoney must be dictated by the gate takings, enthusiasm has waned, and most tracks are struggling to get sufficient cars to stage a meeting. Here lies another fault, for nothing is more monotonous to the speedway spectator than to see the same few cars week after week, event after event, circling the track in similar types of races, and gaining similar placings.

One of the most destructive aspects of Australian speedway racing is dissatisfaction between performers and promoters, and this alone may be blamed for a good part of the failure of the last season's racing.

Midget racing is failing through three reasons — (1) lack of organised suitable competition; (2) lack of discipline; (3) lack of finances.

Programme arrangement comes under the heading of suitable competition, and this is one of the great offenders. Several years before the war I attended the first midget races held here, and saw a mixed programme of bikes, sidcars and speedcars racing a programme of events almost identical to any meeting held last year. Week after week the same types of races are run, with an occasional long (?) distance one thrown in. (This has been particularly true in the Southern States).

If a recognised Australia-wide controlling body could be formed, a definite schedule of Championship events drawn up, and these events rotated throughout the various States, interstate match races and perhaps team racing, then public interest may be regained.

Stock car racing is at present filling American race tracks with satisfied paying spectators, where previously the midget has reigned. Can we use the stock car to capture the public's imagination, and so draw them back to a more varied programme, and improved speedcar racing.

Many enthusiasts will no doubt shudder at the thought of stock cars on our speedways, but the idea is more practical than it may look on first impression. A car would not cost as much as a top-line speedcar — plenty of suitable stock cars are readily available. With safety belts they are safe for the drivers, and would be able to negotiate the existing speedways with reasonable success. Most important, with a little showmanship, the stock car would bring the crowds back to the speedways, and would give us dozens of potential drivers to build the programme around the more serious speedcar racing.



Model Speed Cars

Like their larger counterparts on the dirt tracks the model speedcars seem to be making very little progress, and although there is a good deal of interest many of the would-be enthusiasts are lost owing to lack of materials and tracks on which to run the cars.

Few if any model shops in Australia carry much in the way of supplies for the model car enthusiast other than perhaps wheels or motors, but this is not entirely the fault of the model shop. Model car racing is a difficult hobby for which to cater. Most of the experts in the Eastern States where model car racing is most successful use American equipment which is obtained through friends in that country. The chap who purchases a model aeroplane motor from the local model shop finds himself hard put to compete against the fabulous American "Dooling" found in most of the cars in the high speed bracket, as does the modeller who builds up a car on the kitchen table so to speak, for the all-metal high speed car seen on the tracks is a workshop job with access to lathe etc.

Should you be interested in building a model car then the best idea is to try and contact one of the clubs listed below, who should be able to advise you of the type of car to build and motor to use. A visit to one of the model shops advertising in this magazine may also help as they can tell you what materials they have available.

TWO MODELS BUILT BY READERS

The car shown at the bottom of this page is a 10 c.c. proto job, designed and built by Don Hall, a member of the W.A. Model Engineer's Society.

Motor is also of Don's own design, incorporating the considered better features of both the Dooling and the McCoy racing motors. The bore is .940 inches and the stroke .875 inches, and the compression ratio has been increased to 13 to 1, which gives a good performance on straight fuel. When fitted to a 4 ft. 6 in. wingspan stunt control line model aeroplane, it pulled it around at almost 90 m.p.h., running on gloplug.

Chassis and the independent front wheel coil suspension components were fabricated from $\frac{1}{8}$ inch dural plate with a file, and polished.

No clutch is employed, the drive is direct through high tensile steel bevel gears, which were obtained from an aircraft fuel pump. The crown wheel is keyed and pinned to the back axle, as is the pinion to the drive shaft; nickel steel is used for these parts, which run in ball bearings. Wheels are $3\frac{1}{2}$ ins. in diameter and run on ball races.

An aluminium casting forms the top body shell, and this was obtained from a model supply house, but the bottom is beaten out of heavy gauge aluminium sheet.

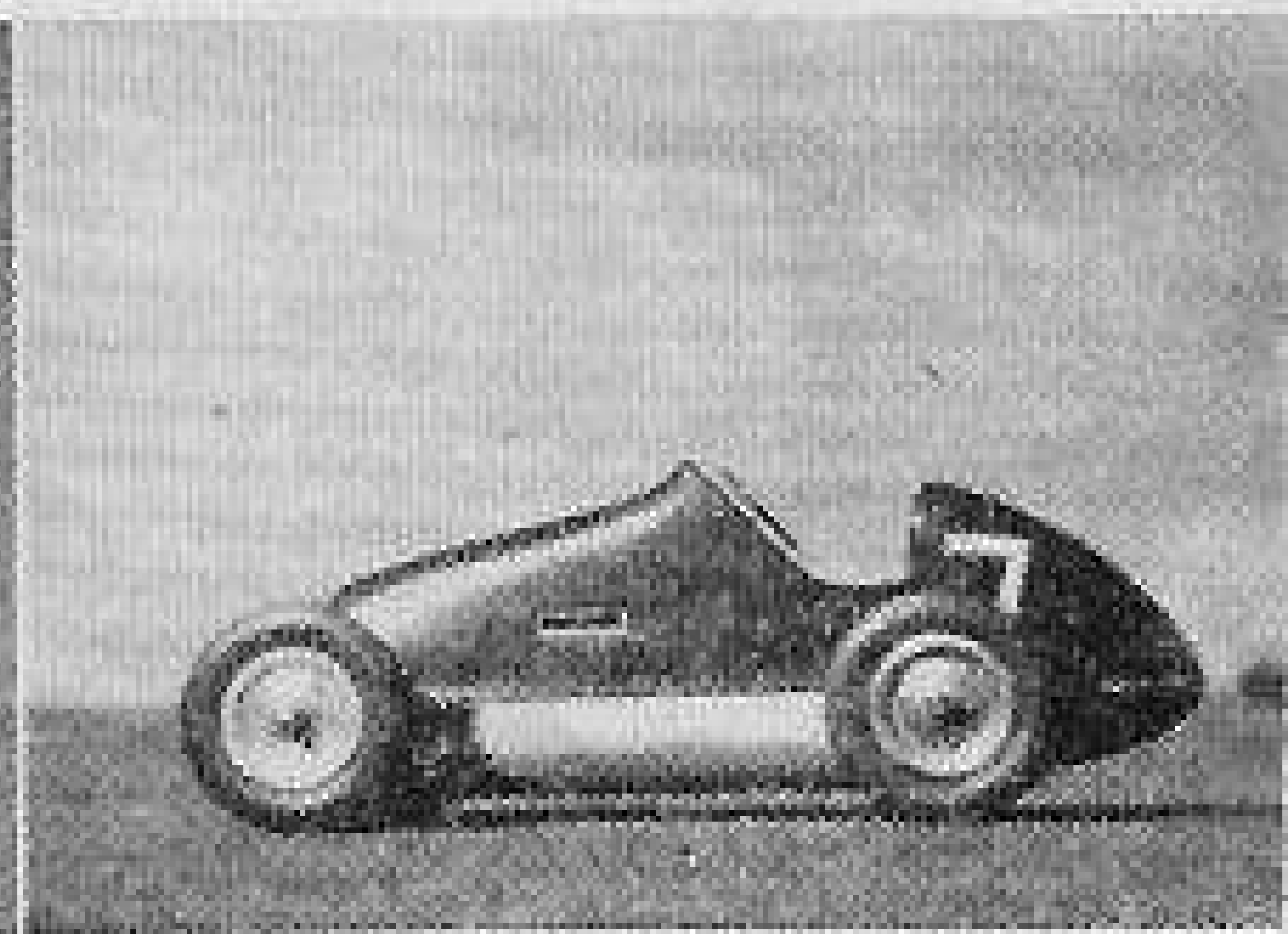
All up weight is 7 pounds, and with the motor pulling through a 2 to 1 gear ratio the car has been timed at speeds over the 70 m.p.h. mark, using gloplug ignition, but a magneto has now been fitted and with a little finer tuning much higher speeds are expected. The magneto is driven off an extension on the rotary valve shaft, which has been modified for the extra load.

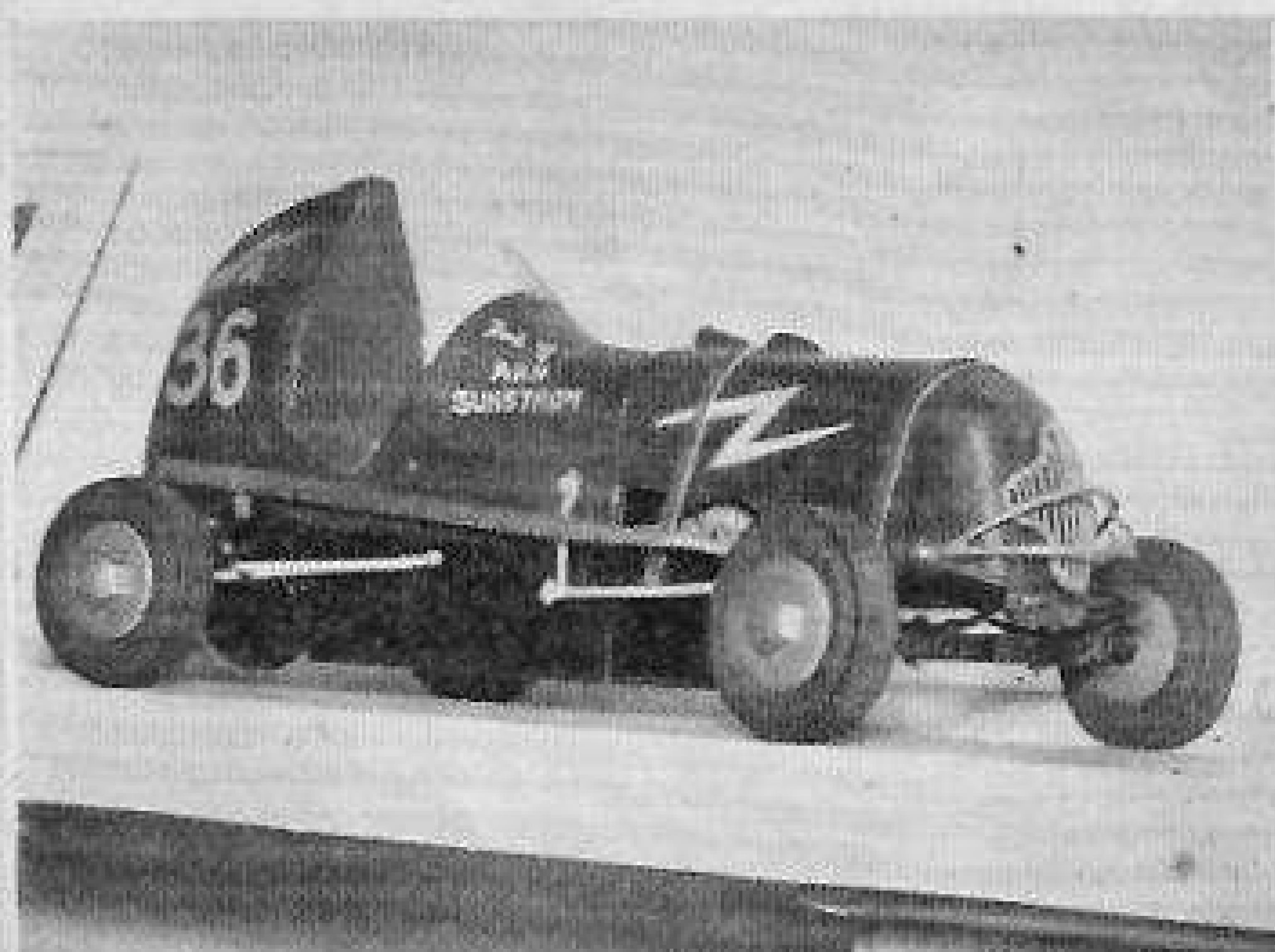
Finished in a combination of red enamel, polished aluminium and white, the model is most attractive and can be seen by the photos on this page.

Pictured on the following page is a car built by one of our readers. This is one of the "kitchen" built jobs with very few tools.

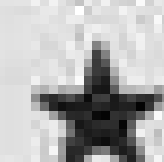
The builder Ron Smith, describes the car as follows, "Last November Arn Sunstom, one of the local speedway drivers approached me to build a scale model of his car, a V8 powered job which has been rather successful on the S.A. Rowley Park track.

Chassis is conventional in design formed from 20 gauge sheet steel. The three are made up from 22 gauge spring brass each leaf being separate and then sweated together. Front axle is steel filed and drilled to shape. To keep as close as possible to scale with wheels were available I used the E.D. Speedicords. direct drive is fitted with a short tailshaft fitted with two universals. The differential housing was made up from sheet steel and welded. Ball races are housed in the





dummy brake drums. Thirty gauge sheet steel forms the body and the crash bars are rough chromed brass rod.



TEAM SPEED NEWS (cont.)

powerplant for Class A illustrates the kind of problem that T.R. presents: is the Elfin 2.49 (very efficient, great power — but new rules call for 1 in circle, which is tough on the pilot) better than the 1.49 (lighter consumption, hence fewer pitstops, and easier speeds)? In the end, few racing motors are used, although the ETA 1.44 (44 laps at 85 m.p.h.) has distinct possibilities. The front rotary McCoy 29 is capable of 47 laps at 75 m.p.h. Promising newcomer is the DC 350 — expected to be very economical despite its power.

It is possible to try a few eligible engines on the bench, but it is better to experiment with your final choice to decide on the engine mounting — inverted (looks best but liable to flood), sidewinder (easy operation but construction awkward) or upright (easiest operation but looks odd). Standard stunt type tank is safest but avoid pressure feed by taking the feed pipe across the tank and through the side on the inside of the flight circle. Mounting tank with feed below level of carburettor may help fuel economy.

Choice of the most suitable prop is another important mechanical problem. Pitches of about 8 in. appear best: steep props are "out" because of poor acceleration and starting difficulties, similarly fine pitches because of high consumption. Speed obtained with a given prop is not the deciding criterion — the number of laps is all-important. In a 200 lap race a plane doing 49 laps per tank needs 4 pitstops, whereas if it does 2 more laps per tank it will need only 3 pitstops. The saving is obvious — one pitstop for a very slight loss in speed. A stop can "cost" upwards of 10 laps; a wasteful last stop may thus give your rival a winning advantage.

Engine speed control would allow the plane to be taxied to the pits, refuelled and sent off without the engine stopping. The writer would like to experiment with a miniature "deck arrestor" system (as used on aircraft carriers) — the plane would be flown "into" this and, as above, the engine would not be stopped. Flexible props may also be advantageous — removing a broken wooden prop, spinner, fitting a new prop and the spinner would almost certainly put one out of a race.

Much has been written about the layout and dimensions of racers, but the elementary trainer type of model is

This was my first attempt at power modelling, and I think the resulting speed of approximately 75 m.p.h. when powered with a Frog 500 is quite successful, when racing in a 30 foot diameter circle.

MODEL CARS CLUB NEWS

QUEENSLAND MODEL RACE CAR CLUB—

Secretary: E. J. Leison, 117 James Street, New Farm, Brisbane.

The Queensland Model Race Car Club is nearing the completion of their new track at Bardon, Brisbane, about four and a half miles from the G.P.O.

Two of our members recently visited Sydney for the N.S.W. Championships, but coming from a thirty-three foot diameter to a fifty-two foot six inches diameter track, they encountered difficulties and secured only fifty miles per hour. Although very disappointed with this performance, they returned with an abundance of knowledge and are hoping to have their revenge when the M.R.C.A.A. comes to Queensland, early in the New Year.

Members are busily working on their cars for the opening meeting, when new motors and cars will make their first appearance. Most cars are on the secret list at present and every member is looking forward to attaining high speeds, but results of this first meeting will be the only indication of things to come.

N. ROBINSON (Publicity Officer).



quite satisfactory, although a symmetrical wing section minimises tendency to climb into wind. Appearance is improved if a small element of caricature is incorporated (fin outlines, oversize cockpits, etc.) — but be prepared for a howl from the purists if you take it too far! Despite all the propaganda, few of the early racers had that "real aircraft" look.

New A.M.A. rules restrict minimum fuselage cross-section (Australian rules call for fuselage cross section minimum width of 2 ins. and depth of 3½ ins. at pilot's position) to outlaw "thin-man" and profile pilots. But these freaks are still permissible under the new S.M.A.E. rules which only restrict the height of the pilot — ¼ in. for Class A and 1 in. for Class B.

Opinion is divided upon the strength of the actual structure — should it be light to give snappier acceleration and higher speeds or heavy to withstand the prangs? This introduces what may well be the fundamental weakness in the whole conception of team racing — that the best man may be put out of the running by the carelessness of another (especially in the eliminators). But, then, this is also true of most racing. Perhaps the time available for repairs will decide the type of construction used!

On its showing under British conditions, the bent dural type of u/c. is not a good bet. Piano wire (10 or 12 g.) firmly lashed to the bulkhead or bearers is safer. Fairly large elevators with small angular movement will give smoothest flying; beware of backlash in the control system. Avoid excessive line tension — it's tiring and absorbs power. Bizarre and distinctive fin decor will avoid confusion and aid visibility.

Special fuels for racing will provide many problems for the serious experimenter. Spark and glow plug engines can use petrol (easily the most economical) or alcohol fuels (giving greatest power). For economy, spark ignition wins every time, but speed (less power, more weight) has to be sacrificed and reliability is questionable. A blend of alcohol and petroleum, perhaps stabilized by pure benzol or benzene, should be considered. Diesel engine fuels should contain as little lubricant as is safe, only sufficient ether to ensure quick starting and correct type of accelerator. Economy and cooler running favour the diesel.

Have the right fuel for the type of day and race. Don't lose the pot because "the engine doesn't go on that other brew, after all."

Give each member of the team a set job. Acquaint the engine cranker with the snorting fiery beast he has to master. Unfortunately, the pilot usually builds the plane and owns the engine. "The third member of the team should be short" ("to duck under the other planes as he retrieves").

1951 NATIONALS (cont.)

certain to happen if class "C" is combined with the smaller classes.

The winner of "1/2A", Ted Pascoe, S.A., flew an original design of around 600 square inches, powered with an Australian made "Sabre" motor, as was also used by the third placegetter, Merv Robinson, S.A. Norm Bell (Vic.) gained second place with an American design Foote Racer with an Elfin 1.49 providing the power. Much was expected from Alan King (the Victorian topline), but he failed to get his little job really cracking, although he came out top in the larger "A and B" class with a flight very late in the day, just snatching the lead from Merv Borella, of Albury, N.S.W., who had lead most of the day, with an original design model powered with a G.B. 50. Dean McDonald placed third flying an Eta 29 powered Hyphen.

Alan King used a Dooling 29 in his winning model. It is rather interesting to note the extremely different power plants in the first two models, one a comparatively slow revving diesel, and the other the extremely "hot" American racing motor, which seems to suggest that it is not the type of motor that matters as much as the application to the type of aircraft in which it is mounted.

Only three models completed their official flights in class "C", and only one remained intact at the end of the day. Gary Cash, Victoria, spattered his Tempest powered monster soon after he had recorded the winning

times, shortly afterwards Geoff Willeston, S.A., saw his model fly over the "Hump" and dive into the ground with motor full bore. The most consistent performer of the "C" models was Neil Evan's McCoy 49 powered double size K.G.S., and he was unfortunate not to place higher.

WAKEFIELD

The winner was Alan King, who proved to be National Champion. The weather on this particular day was sultry and true to form in the fact that the field was devoid of thermals. It was expected that the winner would be found from either King or Fullarton of Vic., Lonergan or Butler of N.S.W., or Pascoe of S.A., and the ultimate winner proved to be Alan King, who just shaded Jim Fullarton, who finished in second place. Arthur Lonergan finished third. (Editor's Note.—Since the Nationals Lonergan turned the tables by winning the Australian Wakefield in face of stiff opposition from Alan King and Jim Fullarton). Unfortunately S.A.'s main hope wrecked his chance by attempting to over-wind his motor, with the usual disastrous results.

Taking into account the lack of thermals, it was shown that the typical Australian Wakefield model rates far below that required for successful competition in the International event which is flown this year in Finland in absolutely "dead air" conditions.

JUNIOR RUBBER

Comparatively few entries were on the field for this event, which has resulted in the Junior class being eliminated from the next years Nationals. However, a young lady showed the other competitors how, as Elaine Miles, N.S.W., gained first place. This has apparently induced some others of the fair sex to come into Nationals competitions, as we understand there will be women contestants from both Queensland and S.A. at the next Nationals.

SAIL PLANES

The open class (F.A.I.) was a triumph for a triple entry, viz., Andy Vidale, Leo Riley and Kevin Green (Butcher), flying an English designed eleven foot wing Thunderking. South Australia gained another Nordic class, Bob Howie gaining top time with an original design. Val Rotchford (who subsequently proved N.S.W. 1951 Champion) also performed well in the plane event. Actual competitors were less in number than expected, and the promised threat from the outside Victorian models did not materialise. No definite design trend could be noticed.

RADIO CONTROL

Ten entries were received for the radio control event, but only five appeared on the field. Of these, the flying of Jack Hearn was obviously the most outstanding, and as this was the first true radio control flight seen by the majority of the modellers, it was particularly impressive. Next year's radio control events should be the outstanding event.

JETEX & UNORTHODOX

These events attracted a large number of entries, but few appeared on the field, and therefore the unorthodox event has been deleted from the Nat. programme; however, the Jetex event will continue.

Jetex was won by Bruce Hearn, of Vic., and the unorthodox event by Wal Reeves, S.A., flying an indoor Helicopter which set an Australian record of 3 mins. 23 seconds.

SUMMARY

Competent interstate observers classified the Adelaide Nationals as the most outstanding yet, and all agree that the presentation dinner was a fitting climax to a memorable event which has helped to raise Aeromodelling to its true level in public opinion.

(Results on next page)

IT'S NEW!

The "PEPPERELL PROPELLER"

Designed by Ira Pepperell, well-known as one of the world's leading speed control line flyers, and manufacturer of the record-holding motor which bears his name.

These props will be welcomed by the experienced flyer who requires an ACCURATE PITCH, WELL CARVED, and finished job from quality timber.

**Insist on PEPPERELL,
THE PROVEN PROPELLER**

Available from the better model supply stores.

Results of 1951 Australian Jubilee National Championships

INDOOR STICK		Power	Results
1. H. Holmshaw (Vic.), Catons 1/32" sq.	14 min. 36 sec.		
2. G. Burford (S.A.), T56 3/32" flat	13 " 20 "		
3. B. Felstead (S.A.), T56 3/32" flat	10 " 26 1/2 "		
INDOOR FUSELAGE			
1. B. Felstead (S.A.), T56 3/32" flat	12 " 36 "		
2. A. King (Vic.), Catons 1/32" sq.	15 "		
SPEED "A" (2.5 c.c. and under)			
1. V. Ratchford (N.S.W.), Elfin 2.49 c.c.	80.36 m.p.h.		
2. G. Ray (Vic.), Sabre 2.5 c.c.	75.00 "		
SPEED "A"			
1. L. Cantwell (N.S.W.), McCoy 19	100.00 "		
2. D. Simpson (N.S.W.), McCoy 19	95.75 "		
SPEED "B"			
1. J. Finneran (N.S.W.), Dooling 29	120.90 "		
2. N. Bell (Vic.), Dooling 29	114.70 "		
3. J. Black (Vic.), ETA 29	113.90 "		
SPEED "C"			
1. H. Henke (Vic.), McCoy 60	117.70 "		
2. M. Shepherd (Vic.), Vampire 60	116.90 "		
3. R. Neville (N.S.W.), Fox 59	113.90 "		
SPEED JET			
1. J. Black (Vic.), Dynajet Red Head	120.70 "		
2. K. Hearn (Vic.), Dynajet	104.60 "		
FREE FLIGHT "A" (Ratio average of three)			
1. E. Pascoe (S.A.), Sabre 2.5 c.c.	14.9 ratio		
2. N. Bell (Vic.), Elfin 2.49 c.c.	8.4 "		
3. M. Robinson (S.A.), Sabre 2.5 c.c.	8.03 "		
FREE FLIGHT "A" and "B" (combined)			
1. A. D. King (Vic.), Dooling 29	14.30 "		
2. M. Borella (N.S.W.), Gee Bee 50	13.90 "		
3. D. McDonald (S.A.), ETA 29	10.60 "		
FREE FLIGHT "C"			
1. G. Cash (Vic.), Tempest 60	5.50 "		
2. N. Evans (S.A.), McCoy 49	4.70 "		
3. G. Wilsdon (S.A.), Tempest 60	2.90 "		
F.A.I. SAILPLANE			
1. K. Green, A. Vidale, L. Rielly (S.A.)	176 sec. ave.		
2. W. Malcolm (N.S.W.)	136 " "		
3. V. Ratchford (N.S.W.)	82 " "		
F.A.I. "A11" NORDIC			
1. R. Howie (S.A.)	106 " "		
2. V. Ratchford (N.S.W.)	82 " "		
3. E. Pascoe (S.A.)	70.6 " "		
GLIDERS			
1. R. Monck (S.A.)	63 sec.		
2. A. Lonergan (N.S.W.)	55.6 "		
3. W. Reeve (S.A.)	52.6 "		
WAKEFIELD (ANTHONY HORDEN)			
1. A. King (Vic.), Dunlop	188.8 ave.		
2. J. Fullarton (Vic.), Dunlop	167.7 "		
3. A. Lonergan (N.S.W.), Dunlop	163.8 "		
JUNIOR RUBBER (under 16)			
1. Eliane Miles (N.S.W.), Dunlop	83.2 ave.		
2. G. Cooper (S.A.), Dunlop	59.2 "		
UNORTHODOX			
1. W. Reeve (S.A.), T56 (Indoor Helicopter)	3 min. 26 sec.		
2. J. Fullarton (Vic.), E.D. Bee (Canard)			
JETEX DURATION			
1. B. Hearn (Vic.), Jetex 100	54.5 sec.		
2. A. Lonergan (N.S.W.), Jetex 50	52.2 "		
SENIOR STUNT			
1. M. Tyrrell (Vic.), Anderson Spitfire	Model Go-Devil		
FLYING SCALE			
1. A. Wild (N.S.W.), Anderson Spitfire	D.H. Chipmunk		
2. M. Robinson (S.A.), K. Kestrels	D. H. Mosquito		
3. M. Tyrrell (Vic.), Orwick 65	Stearman B/P.		
TEAM SPEED "A"			
1. J. Cook (Vic.), Sabre 2.5 c.c.	Own Design		
2. K. Hearn (Vic.), Frog 250	Own Design		
3. C. Clark (Vic.), Frog 250	Own Design		
TEAM SPEED "B" AUSTRALIAN CHAMPIONSHIP			
1. C. Gallagher (Vic.), Frog 500	Own Design		
2. B. Brimblecombe (S.A.), Gee Bee 50	Key (mod.)		
3. R. Ashton (W.A.), Frog 500	Own Design		
TEAM SPEED "C"			
1. M. Tyrrell (Vic.), Anderson Spitfire	Own Design		
TEAM SPEED SPECIAL INVITATION RACE No. 1			
1. K. Green (S.A.), Frog 500	Firecracker		
TEAM SPEED SPECIAL INVITATION RACE No. 2			
1. D. McDonald (S.A.), Gee Bee 50	Key (mod.)		
2. A. Macdonald (N.Z.), D.C. 350	Mercury Mk. I		
TEAM SPEED "B" "ADVERTISER" INTERSTATE RACE			
1. B. Brimblecombe (S.A.), Gee Bee 50	Key (mod.)		

1952 NATIONALS RULES

(The following events and rules are as correct as could be ascertained at the time of writing).

The opportunity to stage the 1952 National Championships was offered to Queensland, but the Q.M.A.A. decided that to give them more time and experience not to accept the contests, but to try and stage them the following year. The Annual General Meeting of the M.A.A. of A. decided that N.S.W. would be the venue if Queensland declined, and so the next "NATS" will be held in Sydney, beginning on 29th December, 1951, and continuing for six days, with one day free of flying.

The following events have been decided upon:—

1. Indoor Stick.
2. Indoor Fuselage.
3. Junior Stunt Controline (up to 18 years).
4. Senior Stunt.
5. Team Speed Class "C".
6. Australian Team Speed Championship Class "B".
7. Speed Controline Class "A1".
8. Speed Class "A11".
9. Speed Class "A".
10. Speed Class "B".
11. Speed Class "C".
12. Speed Class Jet.
13. Free Flight Class "A1".
14. Free Flight Classes "A11," "A," and "B" combined.
15. Free Flight Class "C".
16. Radio Control.
17. Flying Scale Controline.
18. Flying Scale F/F Power.
19. Flying Scale F/F Rubber.
20. Team Speed Classes "A1" and "A11" combined.
21. Towline Sailplane F.A.I.
22. F.A.I. Sailplane A2 Nordic.
23. Hand-launched Glider.
24. Wakefield (Anthony Horden).
25. Open Rubber, 150 sq. in. (weight rule, 3 oz. per 100 sq. in.).
26. Jetex Duration.
27. Interstate Team Speed (Advertiser Trophy. Competed for the highest placegetters from each State in the open class "B" event).
28. P.A.A. Type Payload.

New Motor Classes.—All sizes in cubic centimetres.

"A1" .000 — 1.50; "A11" 1.51 — 2.50; "A" 2.51 — 3.50; "B" 3.51 — 5.00; "C" 5.01 — 11.5.

Rules for all speed flying will be those of the A.M.A. of U.S.A. (Same as last year). The only exception being that heavy stranded controlines be acceptable on class "C" and Jet Speed.

Line Length.—"A1" 35 ft.; "A11" 42 1/2 ft.

Rules for Team Speed also full A.M.A. rules, excepting cut-out need not be fitted, spinners are optional, and the starting time reduced to one minute. (See team speed notes on earlier page). 30 c.c. of fuel must overflow the tank and fuel line.

Rules for Stunt same as last year. Full A.M.A. with same exceptions.

Hand-launched Glider now be the average of the best three of six (6) throws.

QUEENSLAND NEWS (cont.)

room for thousands of spectators. It was here that the M.A.A.Q. held their recent contests covering all types, stunt, team speed, speed, also combat and balloon busting. This is a much better location than Archerfield, but care has to be taken as we have not got permanent permission to use it, and so quite a good deal of policing is necessary to see that the field is not abused.

W.W.W.W. Weekes is again one of the mainstays, and with the assistance of his employers, Pioneer Tours, supplies the P.A. system which enables Art Gorrie and Sam Holmes to keep the spectators informed of the progress of contests. Will Weekes, Frank Powell, Peter Weaver and Jack Richters are the "star" stunters in the Newtown Club. Joe Sims and Murray Weymouth from the Dalby club are also capable of making a stunt job talk well.

Pete Weaver has an impressive line up of control line models at present—or did have when this was written—a Veco 29 powered Chief, a McCoy 29 up front of an original Team Racer, and Frog 500 Squaw, also a scale Curtiss Fighter is hanging on the wall. A Dooling 61 speed job is in course of construction to complete Pete's stable, whilst his wife is busy on a stunter to take a Frog 500.

Don Adams our Radio Control expert has put on some excellent displays with his Rudderbug at recent meets. On one occasion he was unfortunate to fly into a barbed wire fence, but he soon had the model back into the air again.

P.R.O. for the Q.M.A.A. is A. Gorrie, 604 Stanley Street, South Brisbane, who will be pleased to answer any enquiries concerning the activities of the Association.

**Railways in Australia**

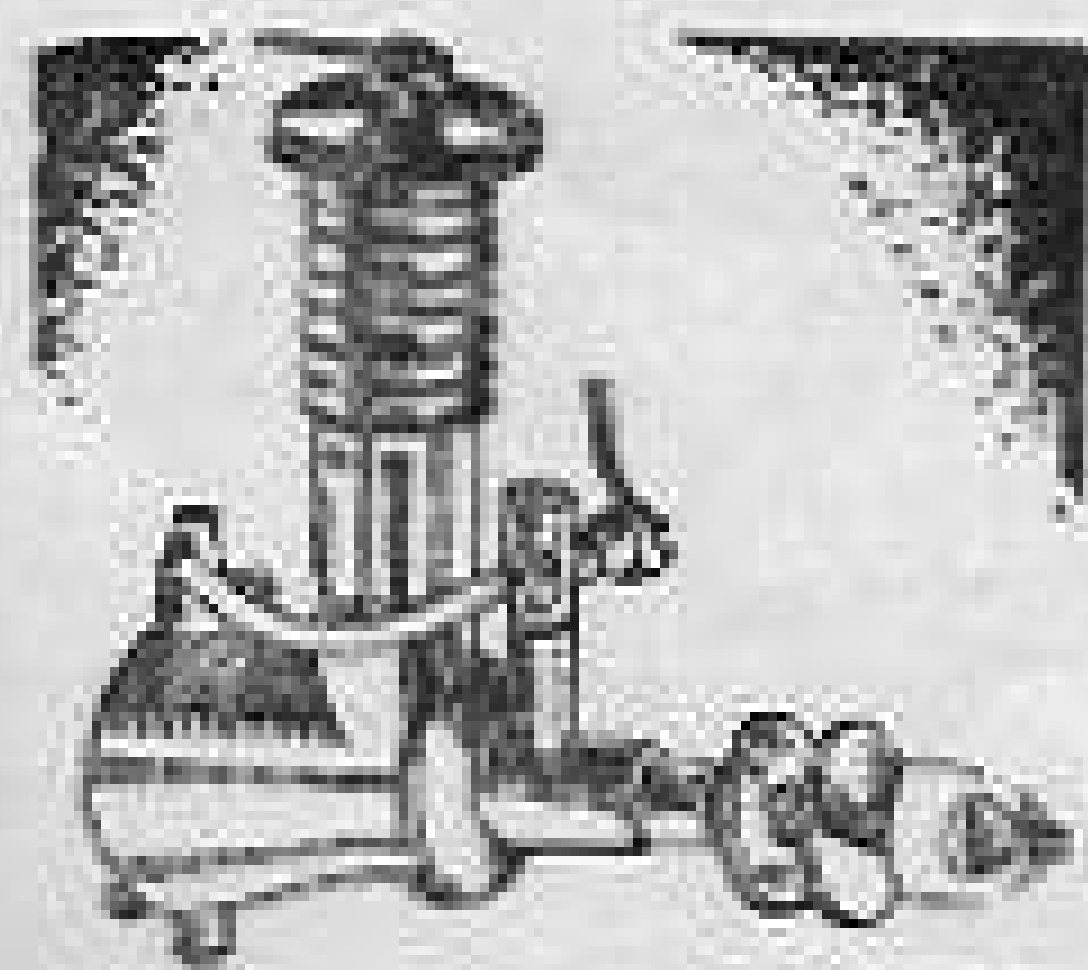
A magazine all about trains, of particular interest to Model Railway enthusiasts. Available Hobby Stores, or from the publishers, Traction Publications, 29 Seymour Grove, Brighton Beach, S.E.5, Victoria.

FOR SALE.—NEW MOTORS. Amco 3.5, £7/10/-; two E.D. MKIV, £6/10/- each; second-hand MK II and Mills 2.4, also props, wheels, spinners, accessories. Send S.A.E. for details to 86 Mildred Terrace, Draper, South Australia.

EXCHANGE.—Once run Frog 160 (1.66 c.c.) and spare gloplug for Frog 100 Diesel. Exchange 1.3 Mills only 20 mins. running, for new Mills .75. Untouched Olde English Galleon Kit, cost 50/-, exchange for model aeroplane kit, or sell for 40/-. B. Potter, Glen Morrison, Walcha, New South Wales.

FOR SALE.—McCoy 55 Sportsman Senior, Elfin 1.49, Mills .75, and ETA 29. All practically new. **CHEAP.** Write E. Nicolle, 36 Coolamin Road, Waratah 2N, New South Wales.

FOR SALE.—McCoy "Sportsman" 9.2 c.c. Gloplug motor, perfect new condition; also brand new Eta "29" Series III. Best offers. R. O'Brien, 87 Denison Street, Hamilton, New South Wales.



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Amco 3.5 c.c. Diesel
E.D. "Bee" 1 c.c. Diesel
E.D. Comp. Sp. 2 c.c. Diesel
E.D. Mark III (Series 2) Diesel
E.D. Mark IV 3.46 c.c. Diesel
ETA "19" (3.25 c.c.) Glo
ETA "29" (5 c.c.) Glo
Elfin 1.49 c.c. Diesel

Elfin 2.49 c.c. Diesel
Frog 100 Diesel
Frog 160 Glo

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Frog 500 Glo
Frog "50" (.49 c.c.) Diesel (soon)
Frog "150" (1.49) Diesel (soon)
Frog "150" (1.49) Glo (soon)
Frog "500" Petrol Ign. (soon).
Kalper .32 c.c. Diesel
Mills .75 c.c. Diesel
Mills 1.3 c.c. Diesel
Mills 2.4 c.c. Diesel
Yulon "49" (8.2 c.c.) Glo

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SUPER CHAMPEEN (cont.)

1 soft block $1\frac{1}{2}$ in. x 11 in. x $1\frac{1}{2}$ in.

1 length $\frac{1}{8}$ in. steel wire for undercarriage.

2 only $\frac{1}{8}$ in. outside diameter steel washers for U/C.

First mark out the sides on the $\frac{1}{8}$ in. sheet as close as possible to the shape shown on plan. The maximum width is a little greater than 3 ins., and therefore the actual shape can not be marked out fully, but this lack of width need cause no worry for when the top and bottom $\frac{1}{8}$ in. sheets and the sides are carved to give the oval cross section the $\frac{1}{8}$ in. side is carved away to an extent where the lack of width does not matter. Mark the top and bottom $\frac{1}{8}$ in. sheet to the shape of the dotted line, as these go inside the $\frac{1}{8}$ in. sides. Cut these four pieces to shape, and sandpaper the edges of the top and bottom so that they will make a good join with the sides. Stud the plan carefully for detail of the motor mount, and cut the necessary parts to shape.

Draw the centre line along each of the sides, and cut out the slot for the tailplane and the wing, both of which are centred on this line. Make a good job of this as it is important that both wing and tailplane are correctly aligned. The motor mount also is along the centre line, and therefore when assembling the fuselage keep these lines on the inside so as the mount can be easily fixed in the correct position. The gussets marked "C" are important for it is on these that the plywood motor mount is fixed. Check the position and shape of the "C" pieces and cut from hard $\frac{1}{8}$ in. sheet.

FUSELAGE ASSEMBLY

Cement the "C" pieces to the $\frac{1}{8}$ in. sheet sides parallel to the centre lines and $\frac{1}{2}$ in. below them, then cement and pin the lower half of the bulkhead "A" in position and the rear of the two fuselage sides together. Next slide the $\frac{1}{8}$ in. bottom sheet into place. Use plenty of cement on this. Note that the front end protrudes over the edge of the sheet side and has to be carved to shape when the cement is dry. The front of the fuselage under the sheet is filled in with a piece of $\frac{1}{8}$ in. medium balsa. When this is dry, then fit the plywood motor mount, using plenty of cement. The remainder of bulkhead "A" can be cemented in and faced with 1/16 in. plywood. Slide the top of fuselage into position, but do not cement it. Hold in place with a few pins through the bulkhead "A" and at the rear. This will allow the fuselage to be carved and sandpapered to an oval cross section as shown on the plan. Only when completely satisfied with the shape and finish of the fuselage go on with the block for the cockpit fairing. Carve this to shape from soft block and hollow out until the wall thickness is about $\frac{1}{8}$ in. Shape until it fits the top of the fuselage and then cement into place. The rudder which is cut from 1/16 in. plywood is cemented into a slot cut in this fairing. Place fuselage aside at this stage and continue with the tailplane.

TAILPLANE

Cut the stabiliser (the front piece) and the two elevators from hard $\frac{1}{8}$ in. balsa sheet, and sandpaper to a streamline section. Form the control horn from 1/16 in. steel wire as shown on plan, and solder to this a $\frac{1}{8}$ in. long piece of $\frac{1}{8}$ in. O.D. brass tubing to act as a bearing for the control rod. Fix the two elevators to the stabiliser with tape hinges in the positions shown, and then mount the control horn so as to hold the two elevators together. Several coats of cement are needed. Fix an overlong control rod into the copper tube by bending it at right angles and soldering a small washer in place. It is necessary to do this now as once the tailplane is in position it is not possible to get at the control horn. A small piece of the rear of the fuselage will have to be cut away so that the tailplane can be mounted in its slot, but once the tailplane is in place the piece of fuselage can be replaced. Give the tailplane fuselage joins several coats of cement inside and out.

WING

The construction is a little more complex than on many of the modern stunts, but the result is worth the little extra effort. Cut the twelve ribs from medium hard quarter-grained 1/16 in. balsa sheet and carefully notch them to take the spars. Strip the two $\frac{1}{8}$ in. x $\frac{1}{8}$ in. mainspars, the $\frac{1}{8}$ in. x 1 in. leading edge, the two pieces of 1/16 in. x 1 in. for the trailing edge, and the rear $\frac{1}{8}$ in. x 5/16 in. spar all from hard, straight-grained wood. The leading edge sheet covering is medium and the $\frac{1}{8}$ in. x 1/16 in. cap strips hard balsa.

Assemble the wing by first marking off the leading edge and the rear spar in 3 inch intervals, slide all the ribs into position on the rear spar, position each rib on the leading edge and slide it into the rib slots. Check to see all is square and then carry on with the trailing edge, tips, leading edge sheet covering and cap strips in that order. Study the plan for method of building in the platform for the control plate. Note that a weight of 2 ounces is mounted in the outside wingtip. This can be reduced if found to be excessive. Sandpaper wing thoroughly until ready for covering, mount control plate and then slide wing into place in fuselage, check for alignment and cement with several coats. Flaps are not fitted until after the wing is mounted in the fuselage.

FLAPS

Cut flaps from medium hard quarter-grained $\frac{1}{8}$ in. balsa sheet, sandpaper to a taper, and mount on the wing in a similar manner to the mounting of the elevators. Check with plan and then form the flap control horn from 1/16 in. steel wire. Two $\frac{1}{8}$ in. lengths of $\frac{1}{8}$ in. brass tubing are soldered to the horn to take the control rods from the elevator and the control plate. The wire control horn has to be threaded from the inside of the fuselage out through the sides, and this requires a little bit of juggling to get away with the smallest hole possible. Cover the ends of each flap with several coats of cement to strengthen the control attachment.

ASSEMBLY

Pin the elevators and flaps at neutral and check the required length for the control rods and bed them at right angles so as to pass through the brass (or copper) tubes on the control horn, allow sufficient space for a washer to be soldered on each rod, and then snip off the excess. Only when absolutely sure that all is correct with the control system, tank, and undercarriage has been fitted, cement the top of the fuselage into place, allow this to dry, then give the entire structure a light sanding and cover completely with silk (rag) tissue.

The fuselage will have to be covered with several pieces of tissue, because of the double curves. Do not try to cover too large an area at the one time. Cut pieces of tissue to the shape of the area to be covered, and dope them onto the wood by brushing the dope through the tissue, then smooth down any wrinkles by rubbing with hand. Cover top and bottom of the tailplane with tissue. Put a few drops of castor oil on each of the hinges before tissue covering so as when dope is applied it will not cause the hinges to become brittle and stiff. Give the entire model three coats of dope before fuelproofing.

When fitting the motor some sidethrust may be set in, but with the weight in the wing tip, motor off-set can be kept to the minimum. Be sure to give the area around the motor mount several coats of cement and then fuelproof thoroughly.

Use a good grade of synthetic enamel or fuelproof colour to finish the model.

The Super Champeen can be powered with any good 3.5 c.c. - 5 c.c. diesel or 5 c.c. glomotor, such as the D.C. 350, E.D. 346, AMCO 35, Yulon 29 or 30, or the Frog 500 gloplug or ignition. Full size plans of the Super Champeen are available. We would be pleased to receive photos and news of any models built from A.M.H. plans.

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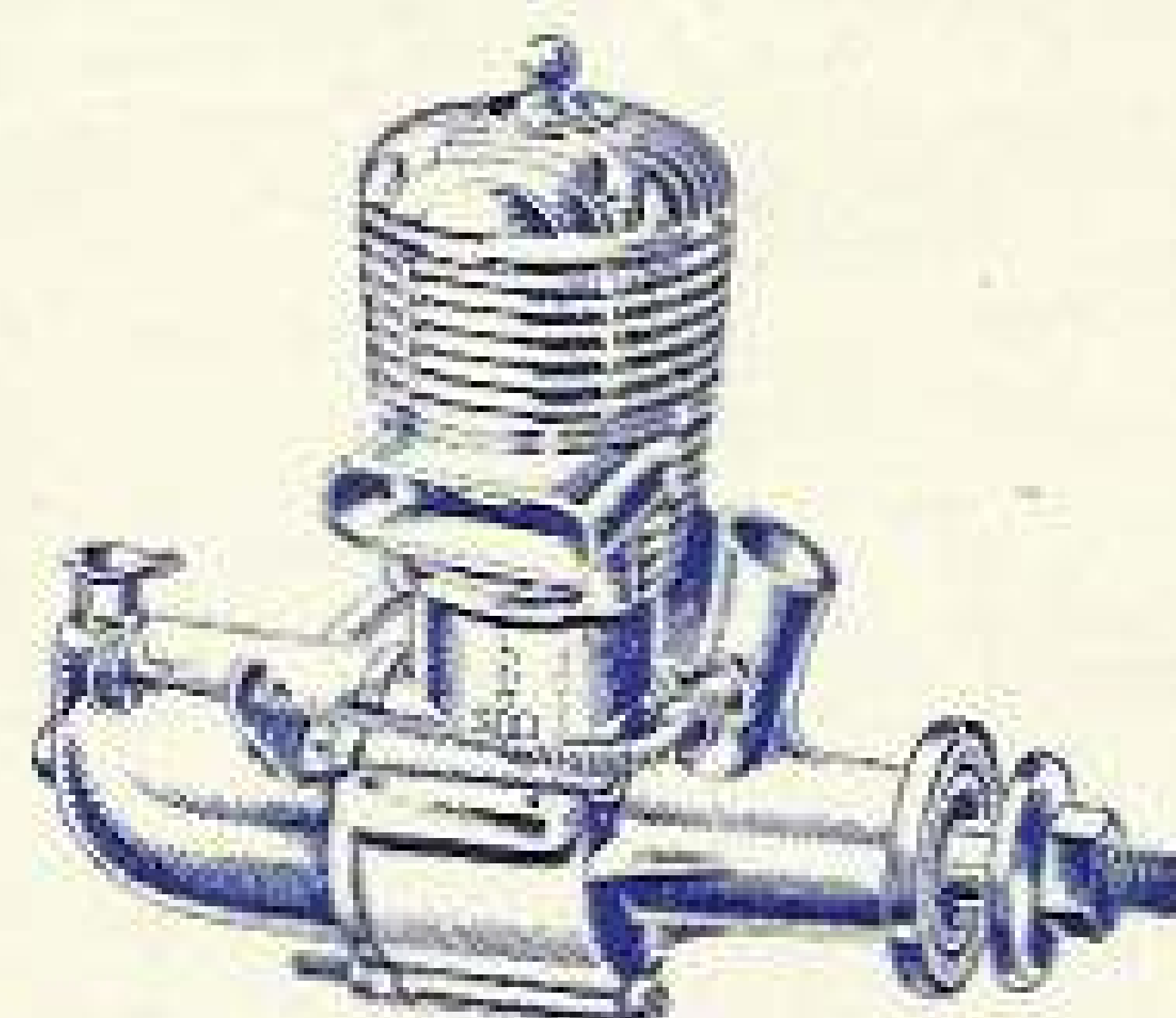
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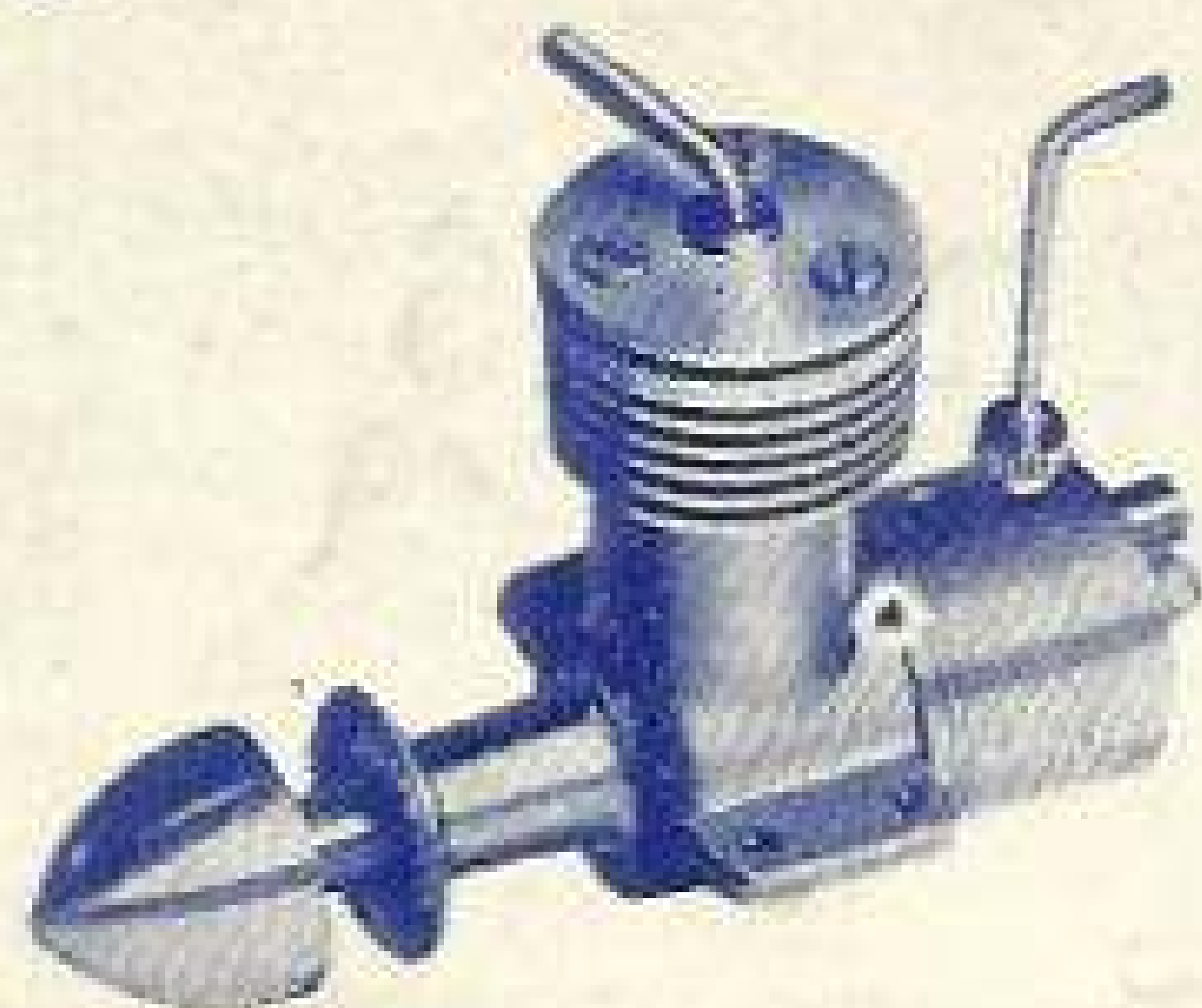
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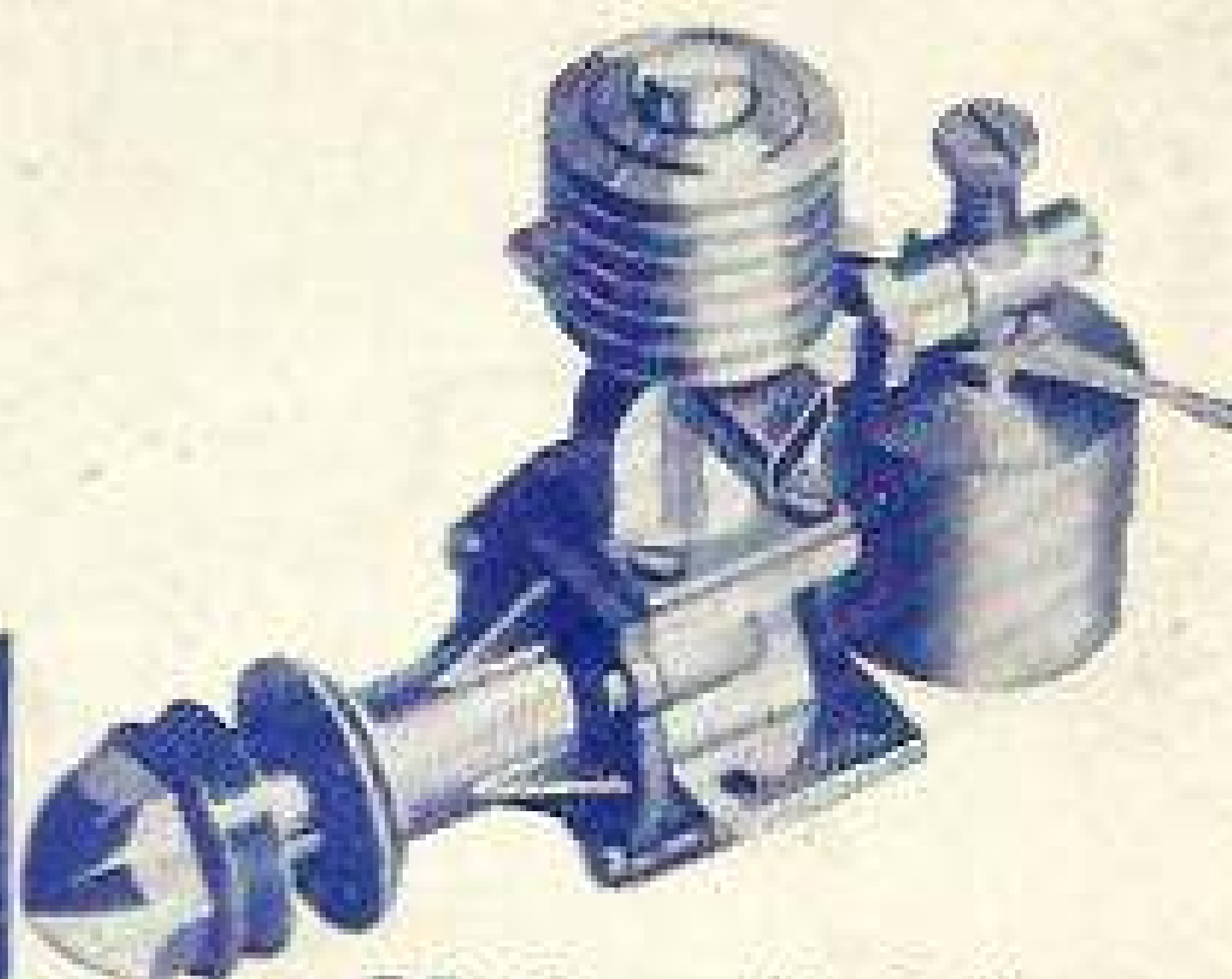
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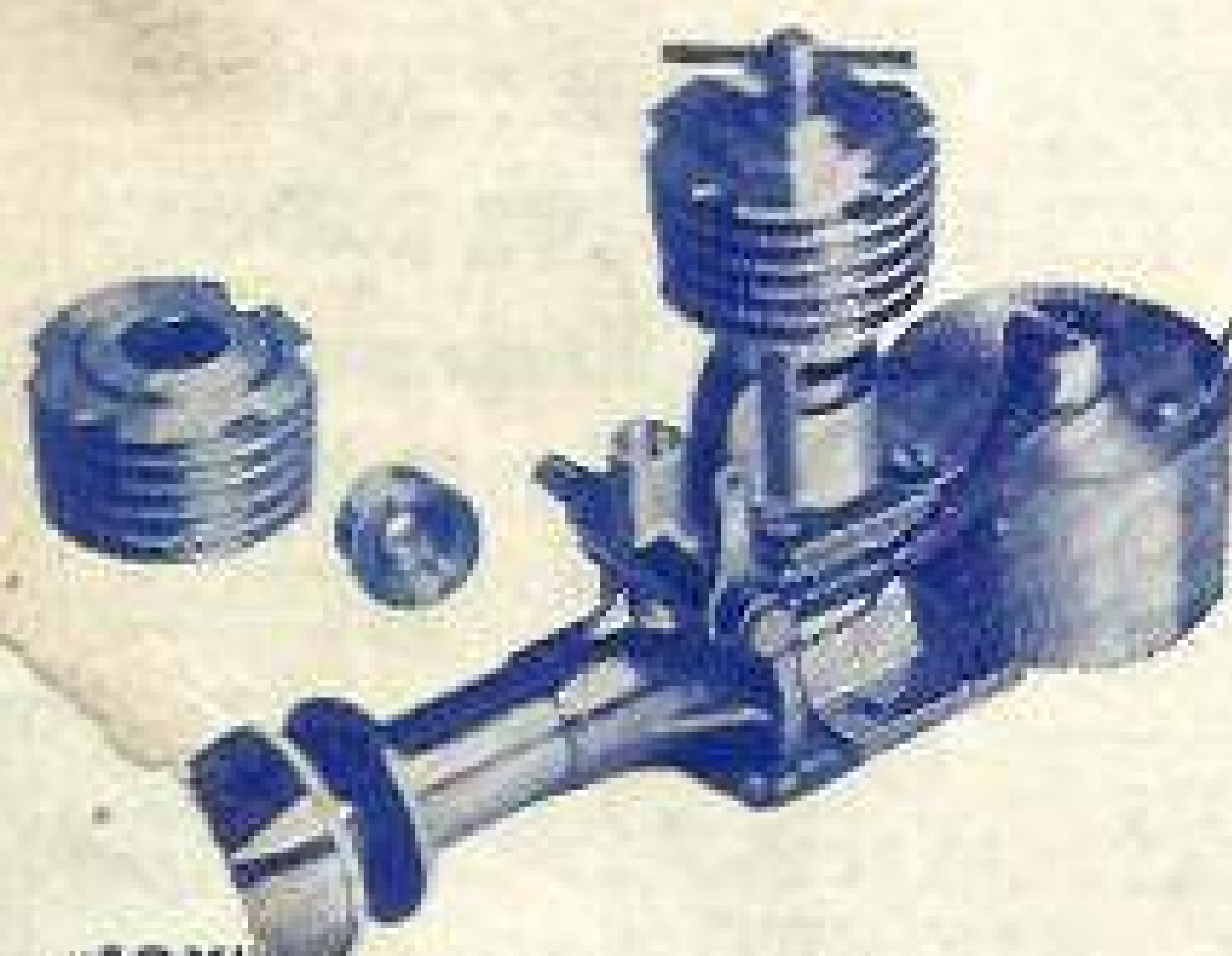
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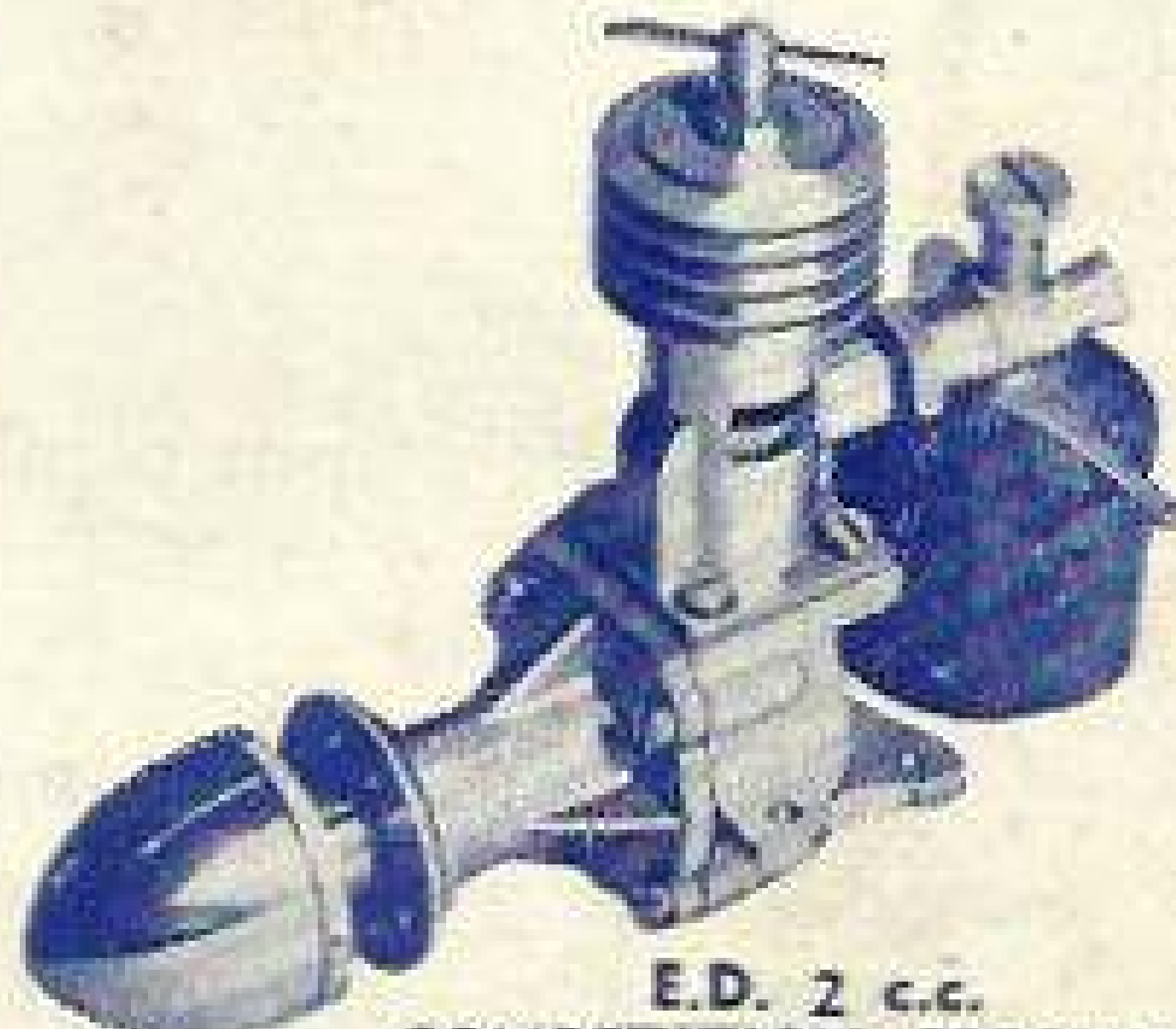
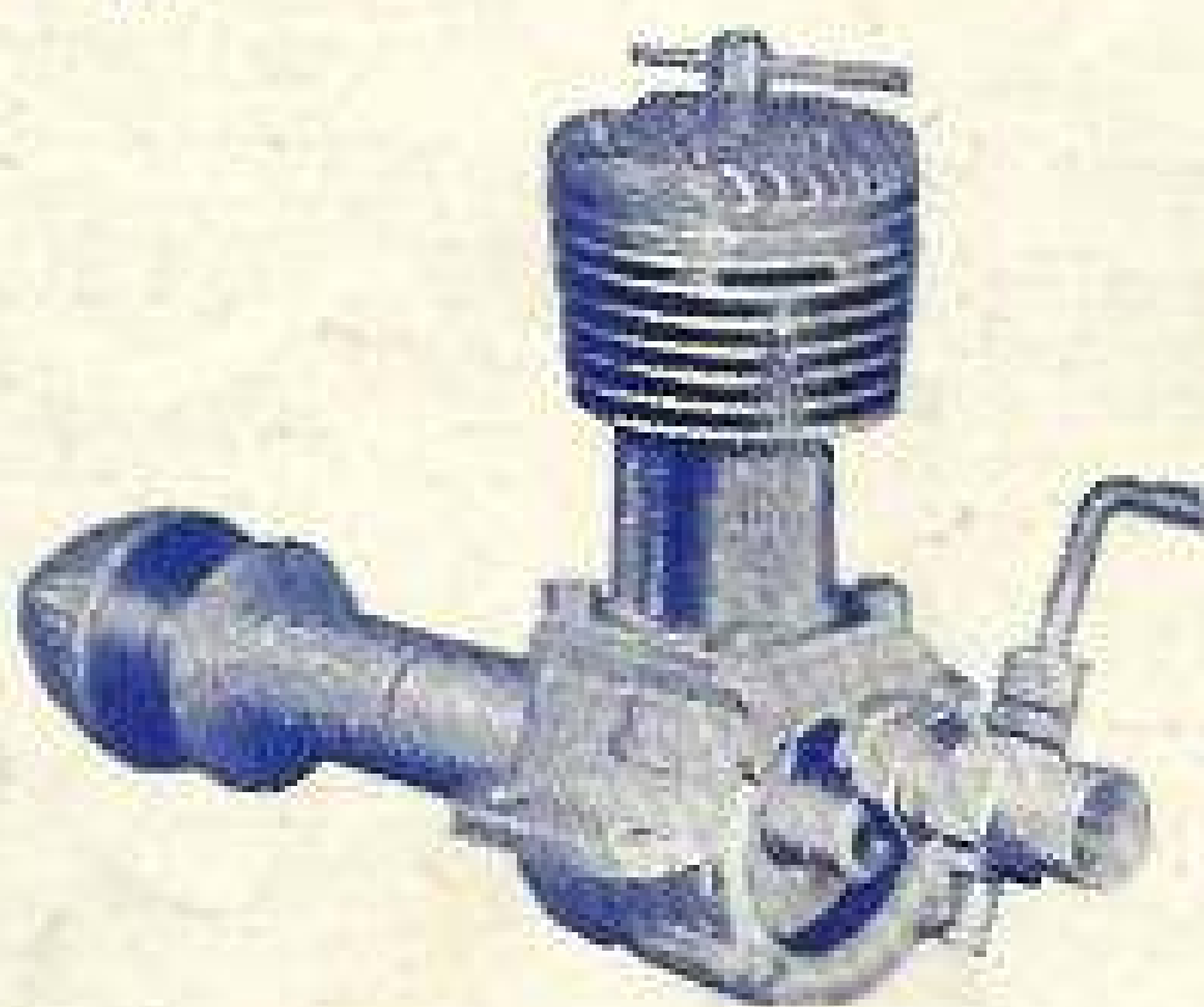
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