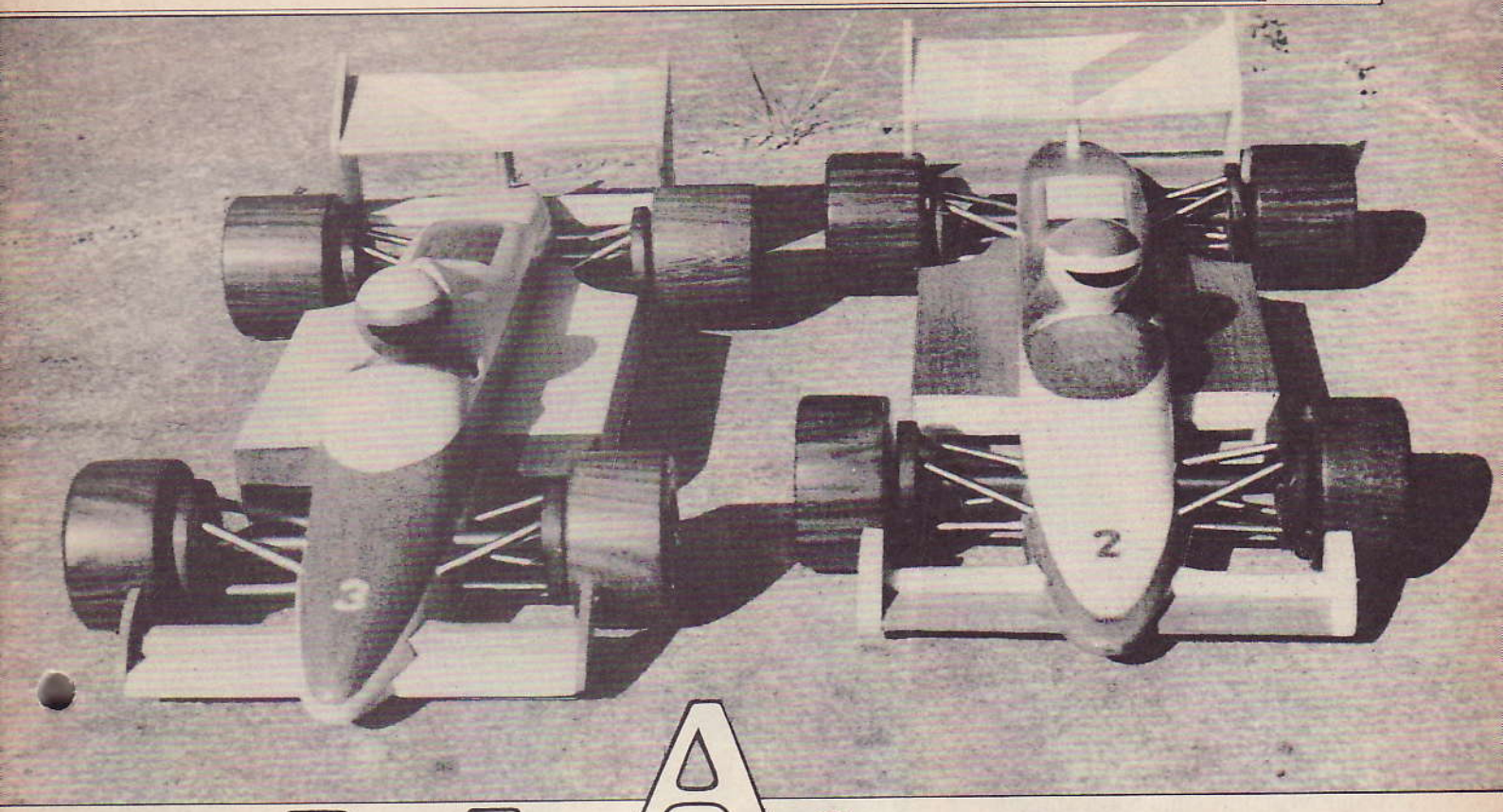


# A Winning Formula

*Designed by Dr. Peter Ramsden, this nifty pair of racers were in the final of the Practical Woodworking Design a Toy Competition which got off to a racing start at Wembley in March. The Competition was sponsored by Stanley Tools and as we can see from the workmanship, these entrants were definitely formula one*

BASED on the modern Formula One car the juxtapositon of contrasting wood recurs throughout the design, accentuating the details and distinguishing one car from its counterpart.

For the car bodies, two pieces of mahogany and lime measuring 2 by 2½ by 13in. are faced up true and temporarily fixed side by side, using either panel pins or a glue and paper sandwich. Turning the resultant block on its side, a strip curving slightly at both ends, is cut out with the bandsaw. The pieces are then separated and after swapping over the strips reassembled and glued and clamped.

The axle holes are 3/16in. diameter and must be drilled before the bodies are cut to shape, first in side section and then in plan on the bandsaw.

Similarly, the cockpits should be formed (using a 1½in. diameter. sawtooth drill bit), before the car bodies are further shaped and smoothed with spokeshave and sandpaper.

**Spoilers**

Having attained a semblance of aerodynamic efficiency, the cars must be fitted out with spoilers, both front and rear again using a combination of the two woods.

The front spoilers are assembled and the leading edges chamfered slightly. When the rounded fins have been secured they can be fitted into halving joints cut into the underside of the car bodies. The rear spoilers are inserted into horizontal slots just below the contrasting stripes and made fast with dowels and glue.

The air intakes are carved from the solid and butted against the side pieces which are attached to the car bodies using dowels and glue.

The engine access panels are also made from contrasting timbers and are fixed in shallow rebates behind the cockpits.

Now for the clever bit: the suspension unit employed in modern racing cars is replicated by projecting four 1⅛in. diameter steel rods at varying angles from the car body to a wooden disc through which the 3/16in. diameter axle passes. Since this requires the accurate drilling of angled

CONTINUED

# A Winning Formula

CONTINUED

holes in both the wooden disc and the car body, drill guides must be used, in this case two Meccano wheels of the type that can be held in place with grub screws.

Their positioning is important. They are separated on the axle by the wooden disc and a spacer which determines the distance between the car wheel and body. The Meccano wheel against the wooden disc is then turned so that a radial axis bisecting two holes is directly above the axle and opposite a hole in the wheel adjacent to the car body.

With everything made secure, the holes can be drilled and the steel rods temporarily fitted so that they can be cut to length. They are then withdrawn and having dismantled the guides reassembled using two-part epoxy.

With the prototypes taking shape, finding suitable drivers becomes a pressing need. To create a true harmony between man and machine, our Alain Prost and Nigel Mansell must be made from the same two woods used in the manufacture of the cars.

Having glued the mahogany and lime together it is a simple turning operation using the contrast between the two woods to effect the likeness of helmets.

The visors are wedges of ebony glued in place when nearly down to size to become flush when the drivers are turned to their finished shape.

**Rosewood wheels**

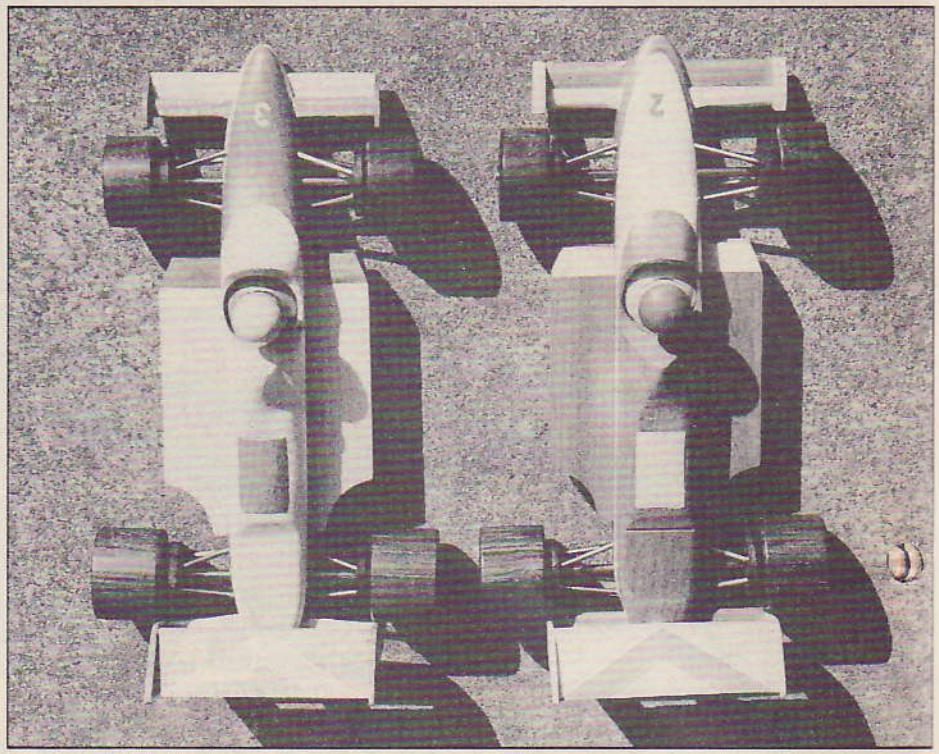
The wheels are turned from rosewood, chosen more for its looks than its road-holding ability and they are fixed to the axles with epoxy allowing the axle to protrude so that spring hub caps can be fitted. Steel washers should be fitted between the wheels and the wooden discs.

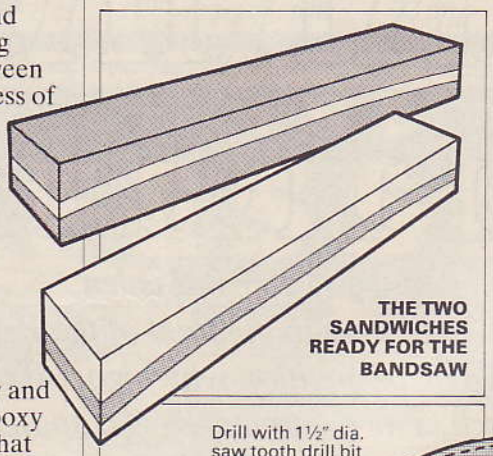
The numbers and 'V' shaped emblems on the rear spoilers are fabricated from contrasting veneers and carefully let in flush with their surroundings.

Finally before taking the cars on a trial lap, they should be finished off with sanding sealer (which can be used during assembly to prevent the lime marking), wirewool and two coats of Danish oil.

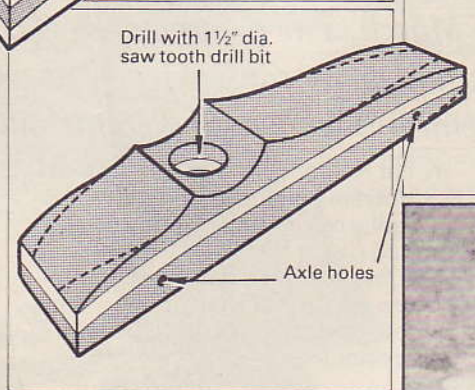
Happy driving.

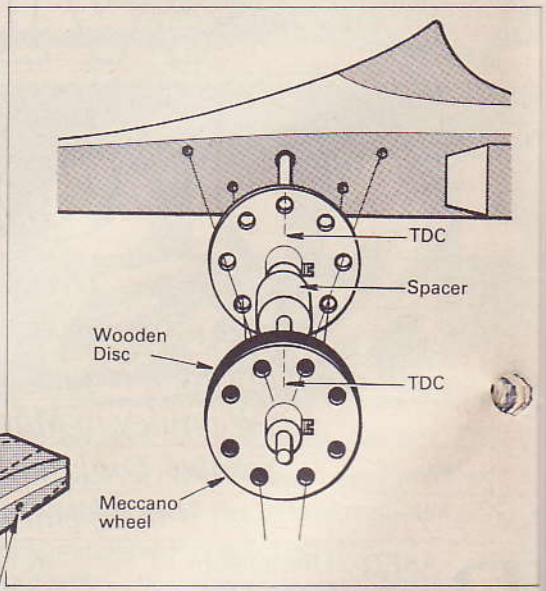
The steel rod for axles and suspension and spring hub caps are available from *W. Hobby Ltd., Knights Hill Square, London SE27 OHH.*

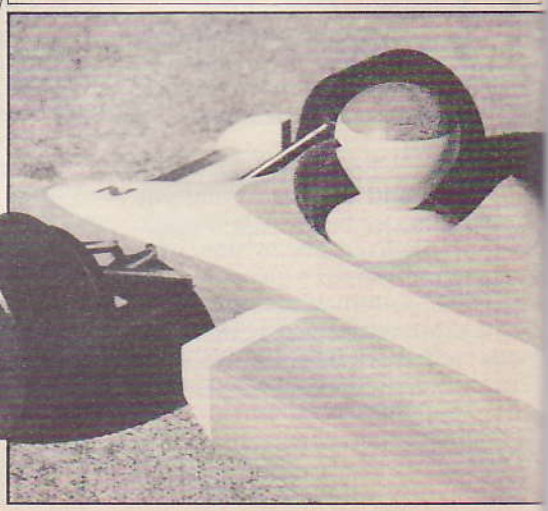




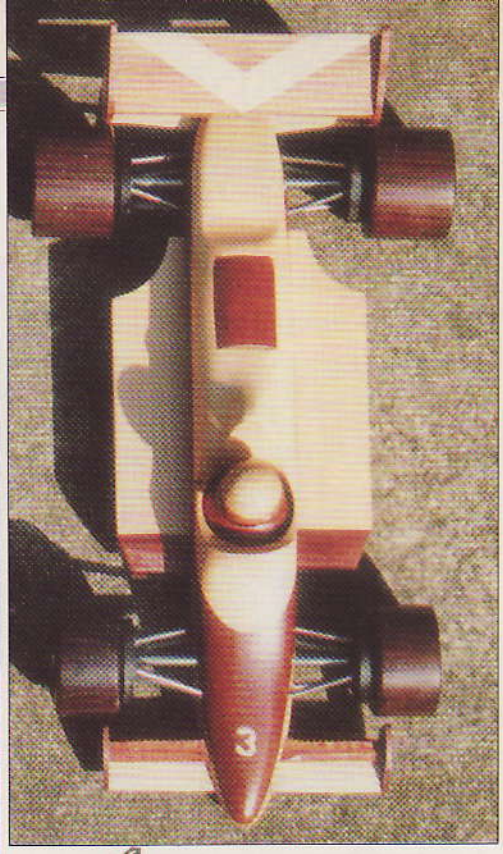
**THE TWO SANDWICHES READY FOR THE BANDSAW**

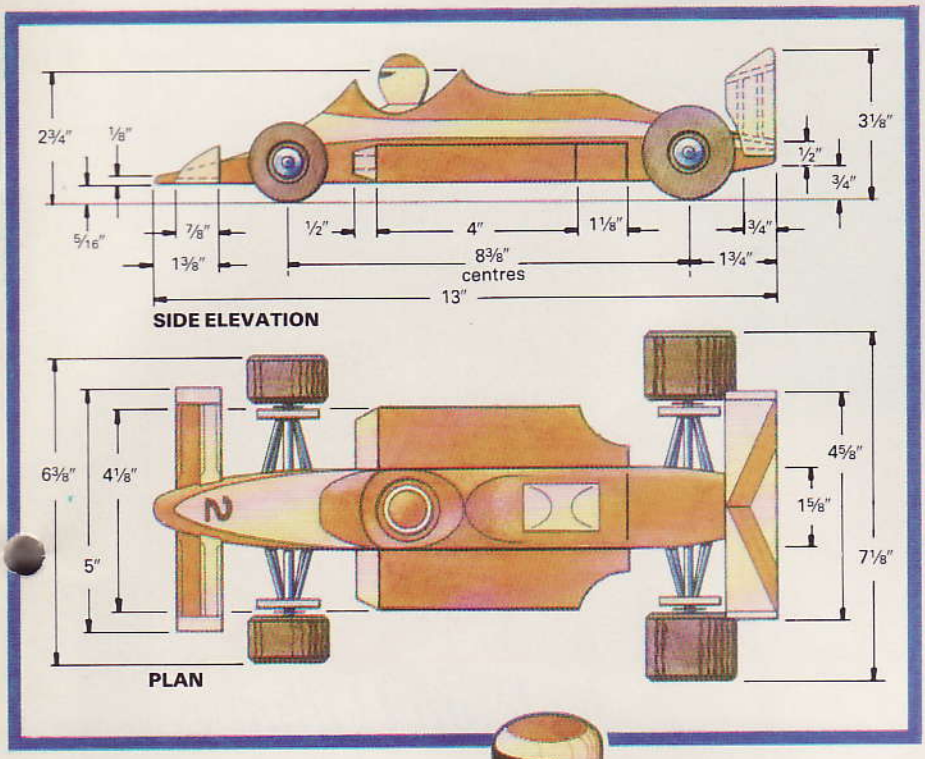


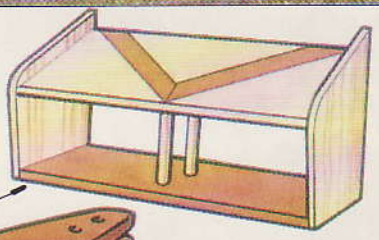



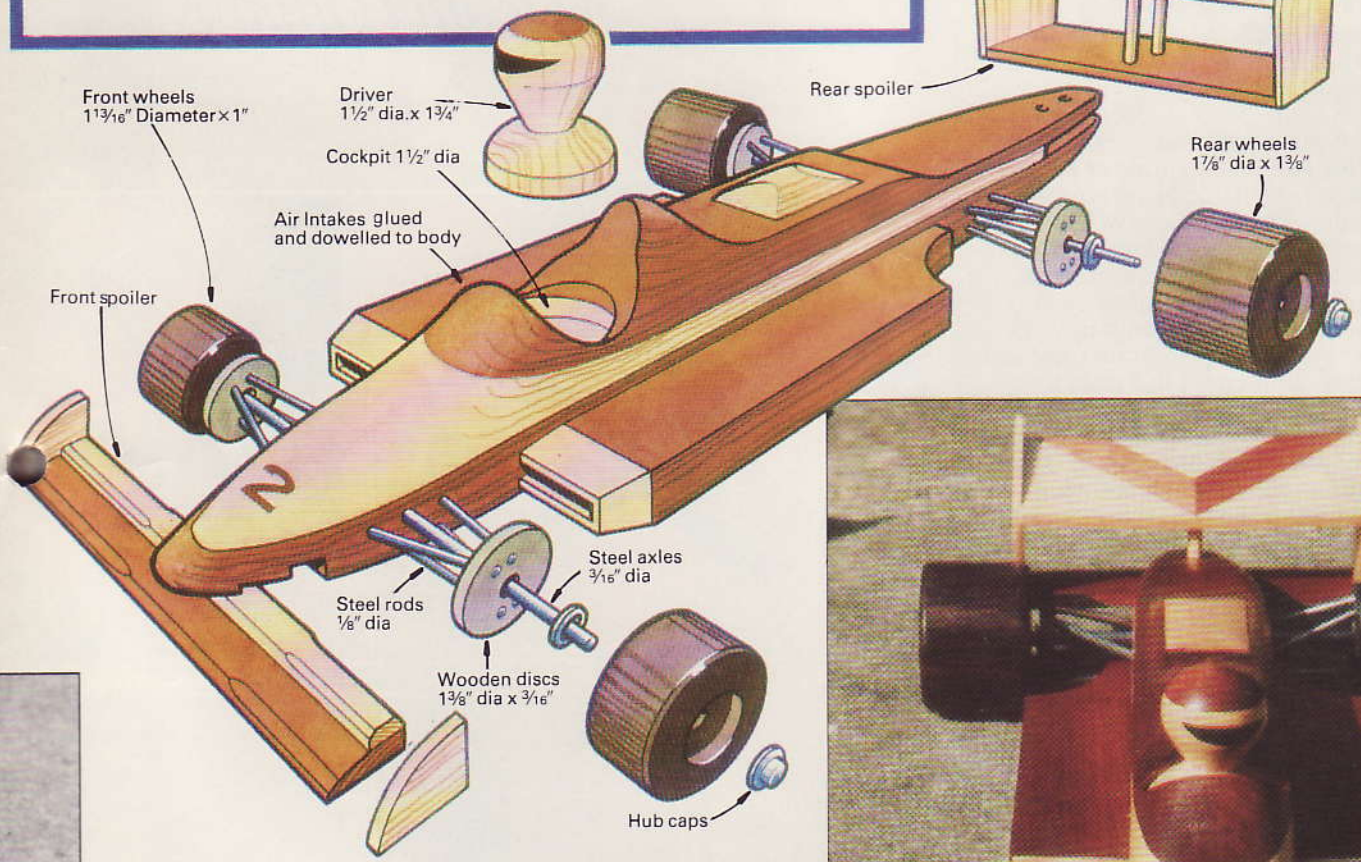



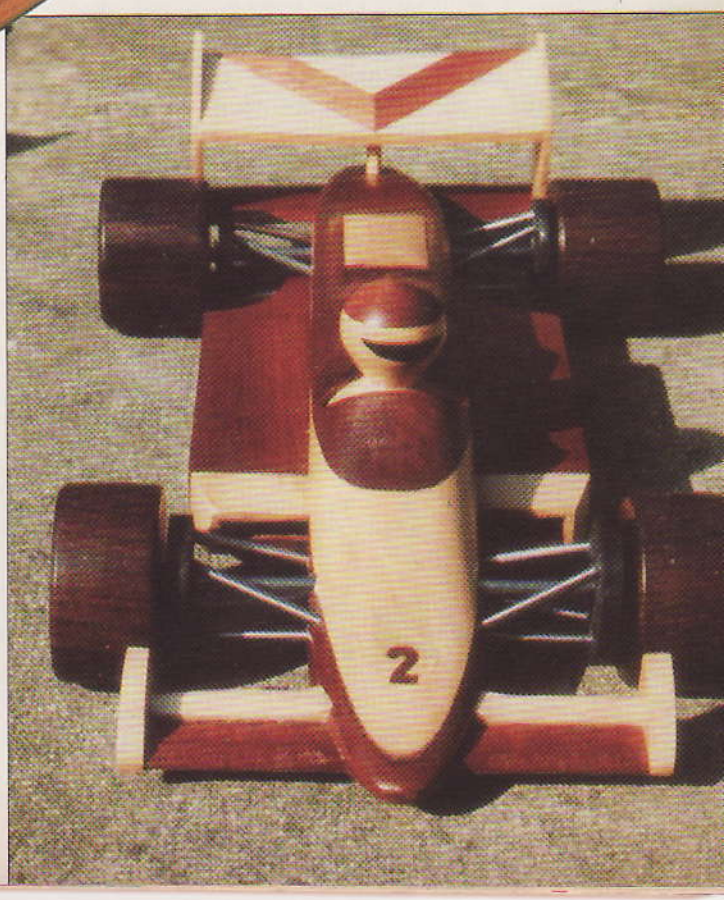
*The dark rosewood wheels give a realistic simulation of wide racing tyres*







DESIGN A TOY
Practical WOOD WORKING
STANLEY
1990
COMPETITION

# Your Letters

## Drop us a line

Very often the articles in the magazine strike a chord with readers. Maybe you feel that we've got it wrong or that not enough has been said about a particular aspect or subject. It may be that you know a better way of doing something or feel that a different approach would be better. Whatever your comments, write to us and let us know, addressing your correspondence to:
***Letters,***
***Practical Woodworking,***
***King's Reach Tower,***
***Stamford Street,***
***London SE1 9LS.***
*We pay £20 for the most interesting letter and £10 for all others published.*

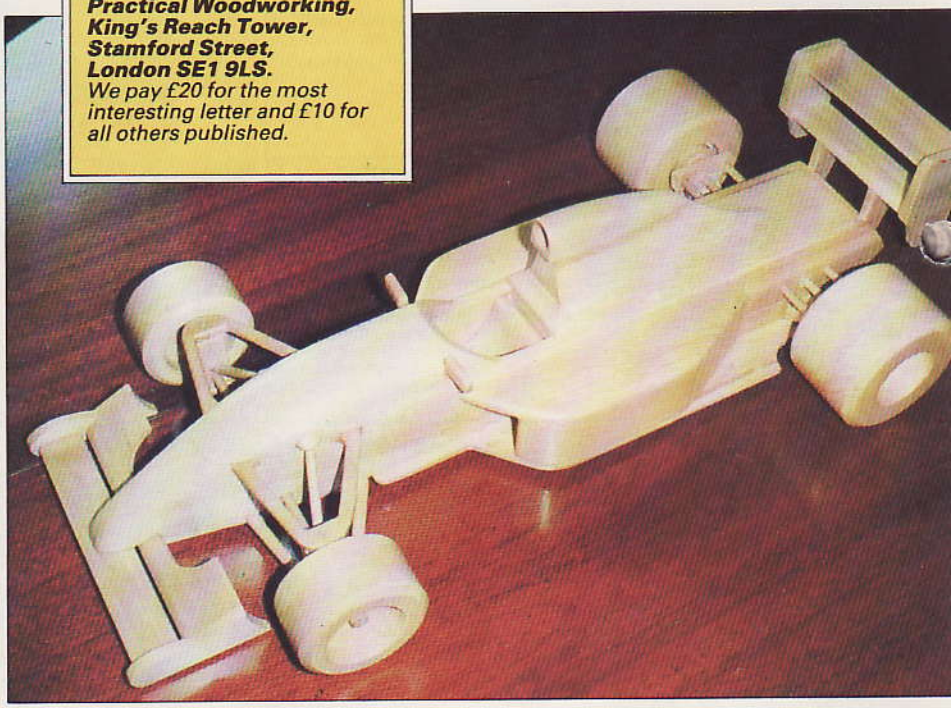
## Wider horizon for competitors

**OBVIOUSLY you have many overseas readers, some of whom, like me, would enter the various competitions published in the magazine if they were not excluded by the rule restricting the catchment area for entries. Is the time ripe for widening your horizons?**

**My wife is an avid follower of Formula One racing and a particular fan of Nigel Mansell, so I simply had to make the Williams Renault featured in your Grand Prix competition.**

**I used lime wood which is reasonably abundant in this area, from a tree which I had cut and seasoned. As a novice woodworker, I found it a fascinating project, cutting and shaping and joining the component parts, so much so that I now intend to make a larger scale model.**

***J. E. Bailey (Quillan, France)***



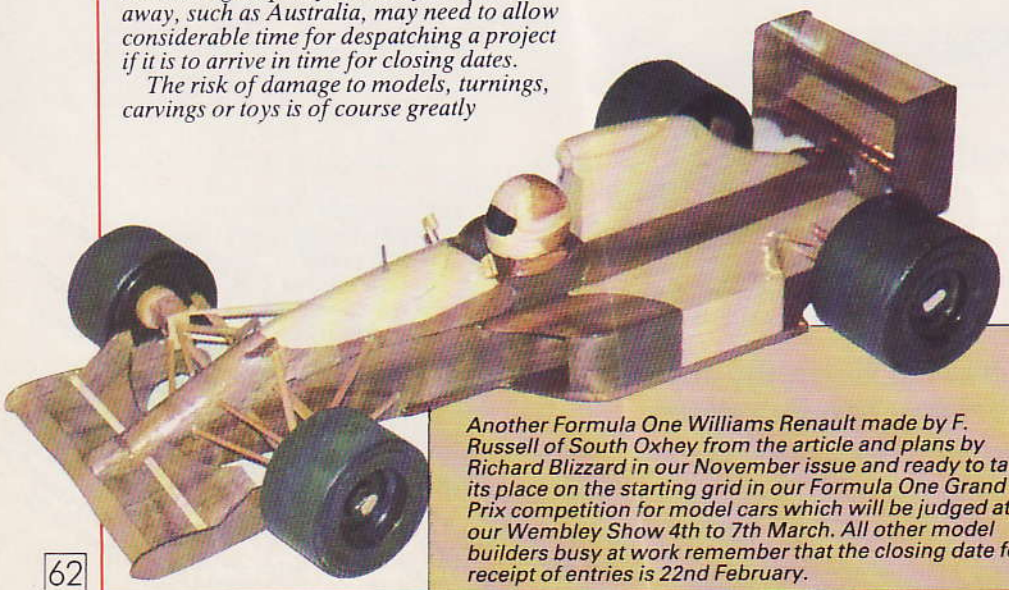
*WE will try to take your comments on board and see how in future we can extend our competitions to cover enthusiasts such as yourself.*

*There are however a number of problems in doing this particularly where finished projects are required to be submitted for judging.*

*To start with for some readers there is a time lapse before they actually receive the magazine and thus there is limited time for the making. Equally readers from further away, such as Australia, may need to allow considerable time for despatching a project if it is to arrive in time for closing dates.*

*The risk of damage to models, turnings, carvings or toys is of course greatly increased with the greater distance that they have to be sent and this is not something that we can take responsibility for. Similar problems apply to the returning of entries and indeed the extra costs of despatching prizes and ensuring their safe arrival.*

*The only way round this for such competitions is if overseas enthusiasts can submit entries through a proxy address of family or friends living within the catchment area making arrangements with them to do so. Entries and potential prizes would then be sent to that address.*



*Another Formula One Williams Renault made by F. Russell of South Oxhey from the article and plans by Richard Blizzard in our November issue and ready to take its place on the starting grid in our Formula One Grand Prix competition for model cars which will be judged at our Wembley Show 4th to 7th March. All other model builders busy at work remember that the closing date for receipt of entries is 22nd February.*

# Grand Prix

## Nigel Mansell's Williams Renault Formula One racing car competition


*Sponsored by Evo-Stik, this Formula One event proved a great attraction to modelmaking enthusiasts and there were 27 cars lined up on our starter's grid when the competition was judged at the Wembley Exhibition. Here Richard Blizzard who started the event by making his own version of Nigel Mansell's Williams Renault car (November issue) and was one of the judges, gives his impressions of the assembled high performance cars all built to exacting standards of craftsmanship.*

### EVO-STIK GRAND PRIX RACING CAR COMPETITION RESULTS

**First prize £600**
F.J. Price (*Southampton*)

**Second prize £400**
A.L. Pretswell (*Roslin*)

**Third prize £300**
R.A. Sturman (*Attleborough*)

**Fourth prize £200**
D. Hind (*Liverpool*)

**Runner-up prizes**
**Evo-Stik products to the value of £25**

T.Berry (*Lerwick*)
W. E. Blackman (*Gravesend*)
W. Burston (*Liverpool*)
P. Farr (*Milton*)
L. D. Forward (*Torpoint*)
F. Galley (*Downham Market*)
R. G. Grace (*Bristol*)
C. Greenaway (*Bournemouth*)
C. Hassall (*Bury St Edmunds*)
C. Hobson (*Colne*)
H. Kay (*Southport*)
D. Kettle (*Dereham*)
S. King (*Lake*)
D. A. Neill (*Ludlow*)
D. A. Powers (*Barford*)
R. Ramshaw (*Newtown Abbey*)
D. J. Rees (*Ammanford*)
F. Russell (*South Oxhey*)
J. D. Swinnery (*Helston*)
G. L. Todd (*Erith*)
J. Williams (*Newtown*)
W. Williams (*Caernarfon*)
A. Yates (*Norwich*)

IT has always been my belief that the modern car does not lend itself to modelling in wood in the same way as do cars of say, 60 years ago. For example it is far easier for me to visualise the crafting of a 1930 Blower Bentley than the slim streamlined shapes of today's Formula One machines. I was therefore a shade doubtful when this project was suggested to me by the Editor, but as usual he was proved right, and the cars that were displayed at Wembley were simply beautiful.

On these occasions I am always relieved to have the assistance of the other judges as the job is extremely difficult. However, we were all looking for craftsmanship, technical expertise, interpretation and finish.

The judges have one unwritten rule and that is we all do our initial inspections independently and, after the first round, we compare notes. At this stage it is far from clear who is likely to be a winner, but it does give us the opportunity to put the cars into groups. In the last six competitions I have always found that entries break down into groups, and from these, after much further discussion and argument, emerges the winning order.

I should like to mention the real sense of anguish that we all felt at the number of models that were broken. I know it is no compensation to those who had a model broken, but while I was on the stand, members of the public all wished to express their distress at the damage that had occurred in transit to many of the cars.

At the outset, we the judges decided that no car would lose marks due to such breakage. Each judge was more than competent to visualize what the car had looked like when it left its workshop, and as many of 'you know one of the 'crashed' cars came second in the competition. My only regret is that we did not have the opportunity to see the cars before they were broken.

### Craftsmanship

It is good to see that we can still produce some fine pieces of craftsmanship. I do believe that there is nowhere in the world that can produce better. I particularly loved the use of different timbers.

### Technical expertise

Rack and pinion steering, independently sprung wheels, movable wishbones suspension, full engine details, and properly shaped front air foils. Nearly every car had wheels that spun beautifully on their axles, no slop, just beautifully balanced. Yes, they would have all passed the MOT.

### Interpretation

The judges spent quite a time looking at and studying photographs to determine which cars came closest to the correct shapes. The greatest divergence came in interpreting the shape and proportion of the car's 'nose' and this was often a deciding factor in where the model was eventually placed.

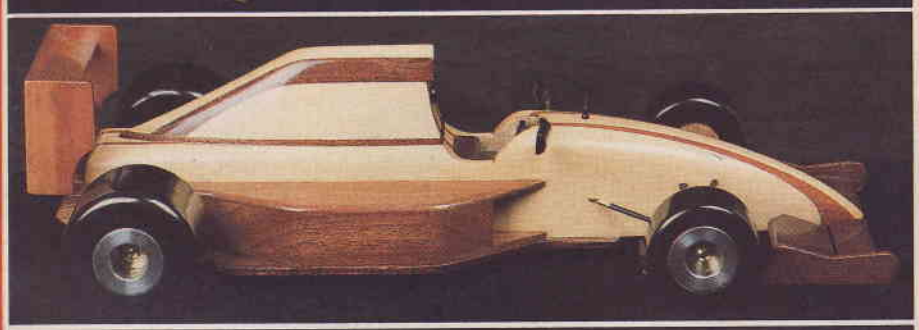
### Finish

This has improved over the years and these entries showed conclusively that this art is now well understood.

Perhaps I am biased, but in my opinion all the cars entered were not only beautifully made but all looked better than the real thing!

Congratulations everybody.

*Richard Blizzard*

**Top:** *Second prize winner from A.L. Pretswell.*
**Middle:** *Third prize winner from R.A. Sturman.*
**Bottom:** *Fourth prize winner from David Hind.*

*Coming in at the finish, the car from F.J. Price was given the chequered flag and first prize by the trio of judges Peter Grimsdale, Richard Blizzard and Gordon Warr. This superbly modelled car is shown below.*