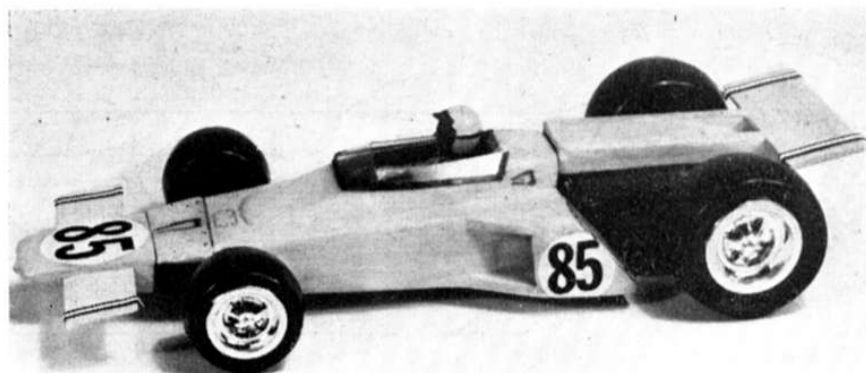


**A "scratch-built"
Indianapolis racer
which will give you
hours of fun**

By Stephen Archibald



McLAREN M16 RUBBER POWERED CAR

THE McLaren M16 is typical of today's design in racing cars. Of course when building it as a working model it has to be greatly simplified, as all the framework, suspension and engine detail would be rather impractical and would be too complicated to explain in an article of this size.

Bodywork construction

The first stage of construction is the main bodywork and radiator assembly, using $\frac{1}{16}$ in. balsa for the top and bottom, and for the radiator sides, and $\frac{1}{8}$ in. for the sides, remembering to cut out the space for the front axle assembly. Next, the nose is built up using three layers of $\frac{1}{8}$ in. balsa in the bread and butter method. This can then be sanded to shape and the front aerofoils made from card, stuck on using epoxy resin. A block of balsa cemented to the back should be carved down to fit in the hole at the front of the previous assembly. The hook was made from a paper clip positioned through the middle of the nose and bent round under at the other end. This stops it slipping out when the rubber band is wound up. The cowl is constructed in the same way, using another three layers of $\frac{1}{8}$ in. balsa. The windscreen is cut from clear acetate. The engine cover is, again, quite straightforward and shouldn't present any problems.

Painting

The bodywork can now be sanded, doped and painted. The choice of colour is of course up to the individual; ours was painted fluorescent orange. The actual M16's that raced at the 1971 Indianapolis 500 miles race were number 66 dark blue, number 85 and 86 orange.

Wheels

What to use as wheels and still keep the cost down presented us with a problem until strolling through Woolworths I discovered some little toy cars that had exactly the right size wheels. The price was a mere 12p. If these particular cars cannot be obtained in your area there are others that have roughly the right sized wheels.

Front axle

The front axle mounting is from a $\frac{3}{8}$ in. wide strip of tinplate, bent round as shown with holes, the correct

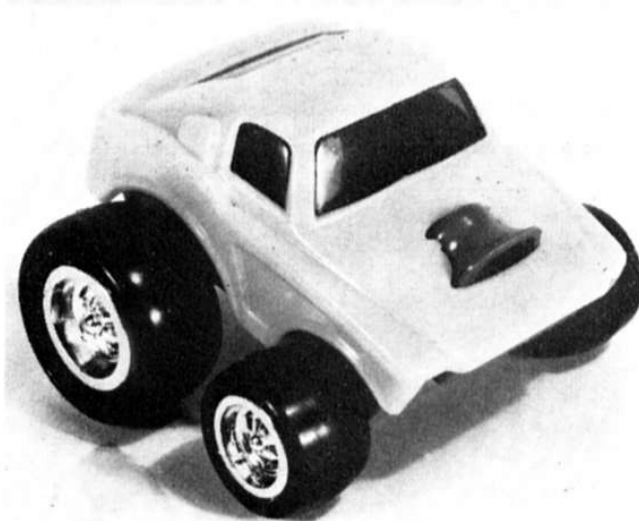
size for the axles, drilled in the uprights. This assembly is then glued with epoxy resin into position.

Rear axle

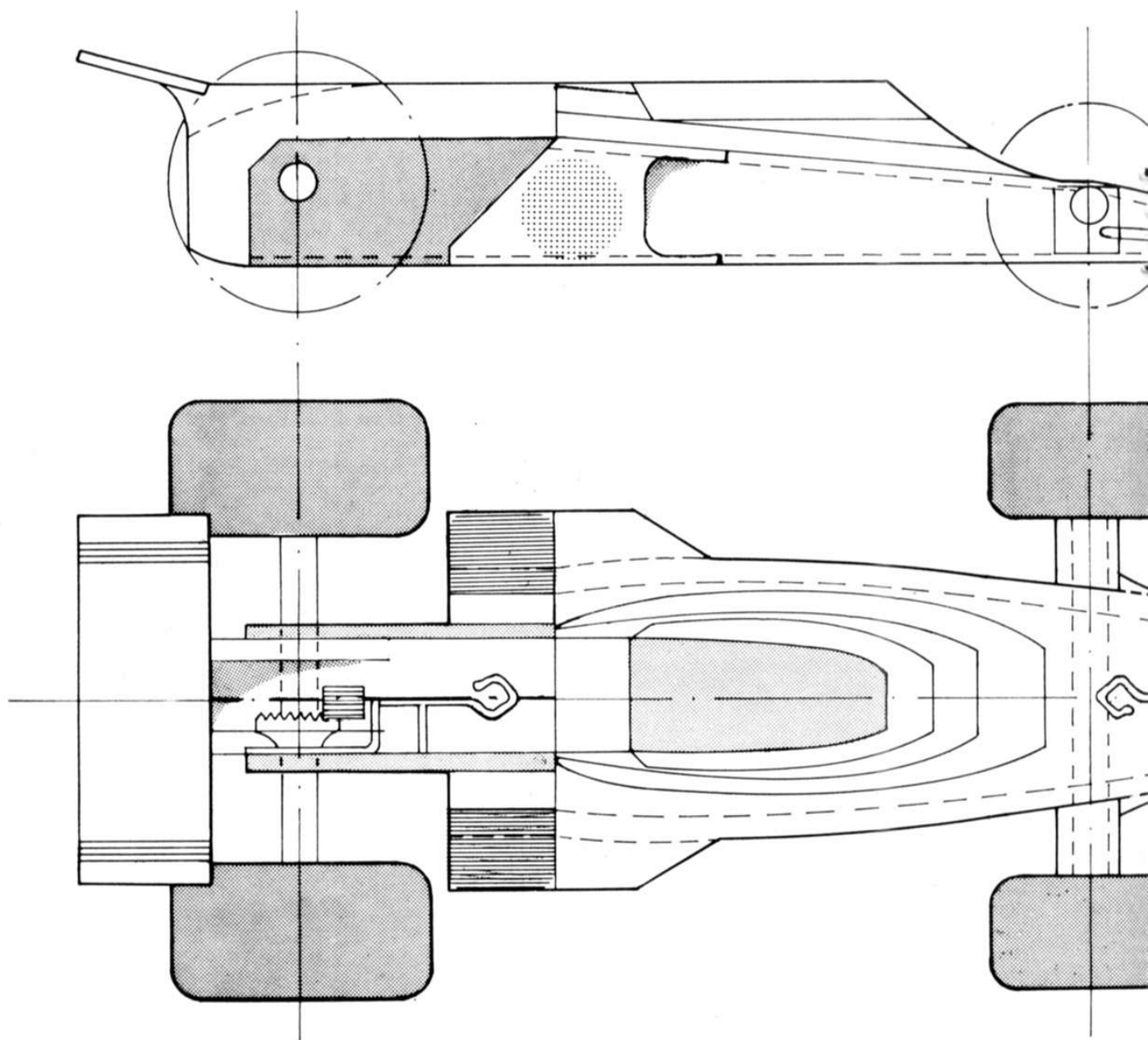
The gearbox is again from tinplate bent along the dotted line to fit in the gearbox housing, which is simply a floor of $\frac{1}{16}$ in. balsa and $\frac{1}{8}$ in. for each side. The contrate gears are from an old slot racing car, but these can be obtained from model shops. The hook is again a straightened out paper clip bent to shape.

Finishing

The radiators can either be cut straight out of the magazine or drawn on to stiff paper or card and stuck either side on each of the side air scoops. If you do use the suggested wheels you will find that a short length cut from an old rubber glove finger and stretched over each rear wheel will stop the wheels from slipping. The size of rubber band used for the main power should be about $\frac{3}{16}$ in. wide and roughly 4 in., or over, in length.



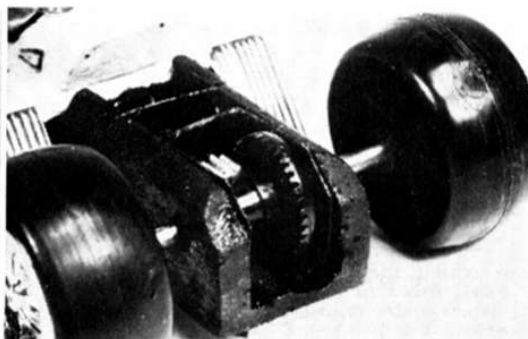
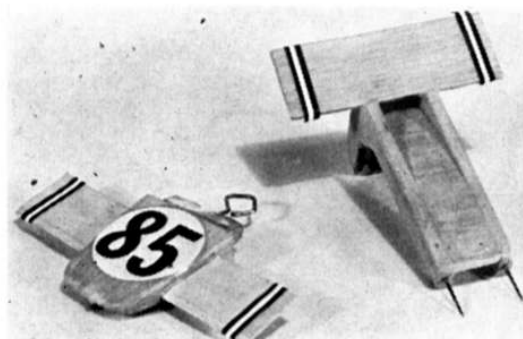
Right, the toy car from which the wheels were taken. Above right, the same wheels fitted to the McLaren. The driver figure is from a 1/24 scale slot racing car, and these should be available from your local model shop.



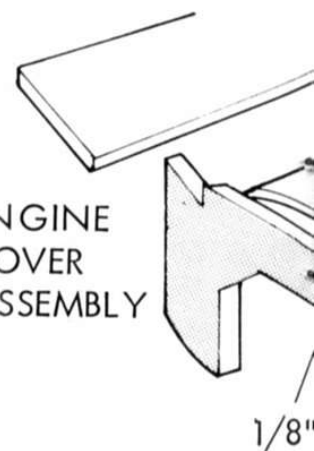
McLAREN M16 "INDIANAPOLIS"

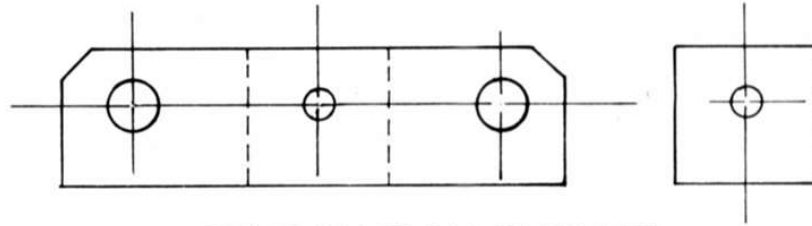
The nose is left unstuck so the rubber band can be changed if a breakage should occur. The engine cover can be secured by two pins fixed to it.

The smaller the gear used on the axle, the faster and longer it will run.



ENGINE
COVER
ASSEMBLY





GEARBOX FROM TINPLATE

RADIATORS

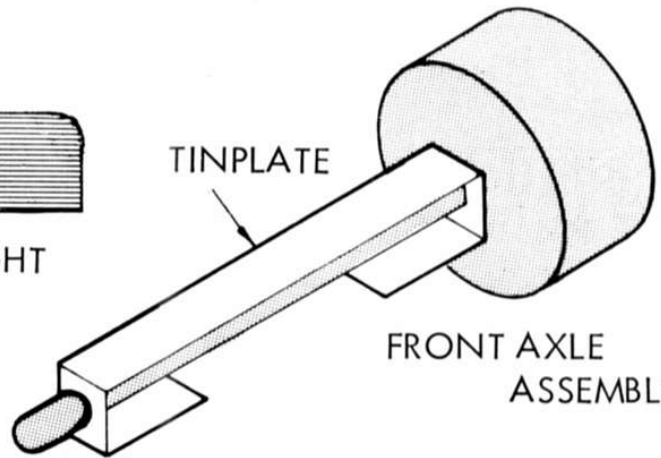
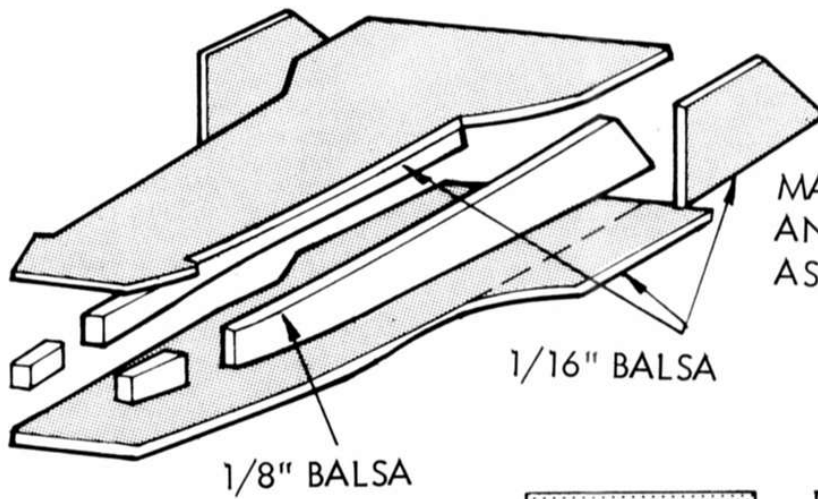


LEFT



RIGHT

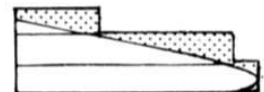
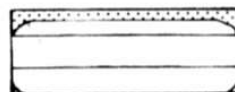
TINPLATE

FRONT AXLE
ASSEMBLYMAIN BODYWORK
AND RADIATOR
ASSEMBLY

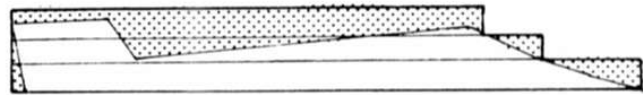
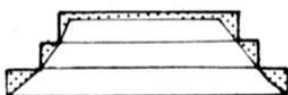
1/16" Balsa

1/16" Balsa

1/8" Balsa



CONSTRUCTION OF NOSE



CONSTRUCTION OF COWLING

1/16" Balsa