

WHEELS MODELS

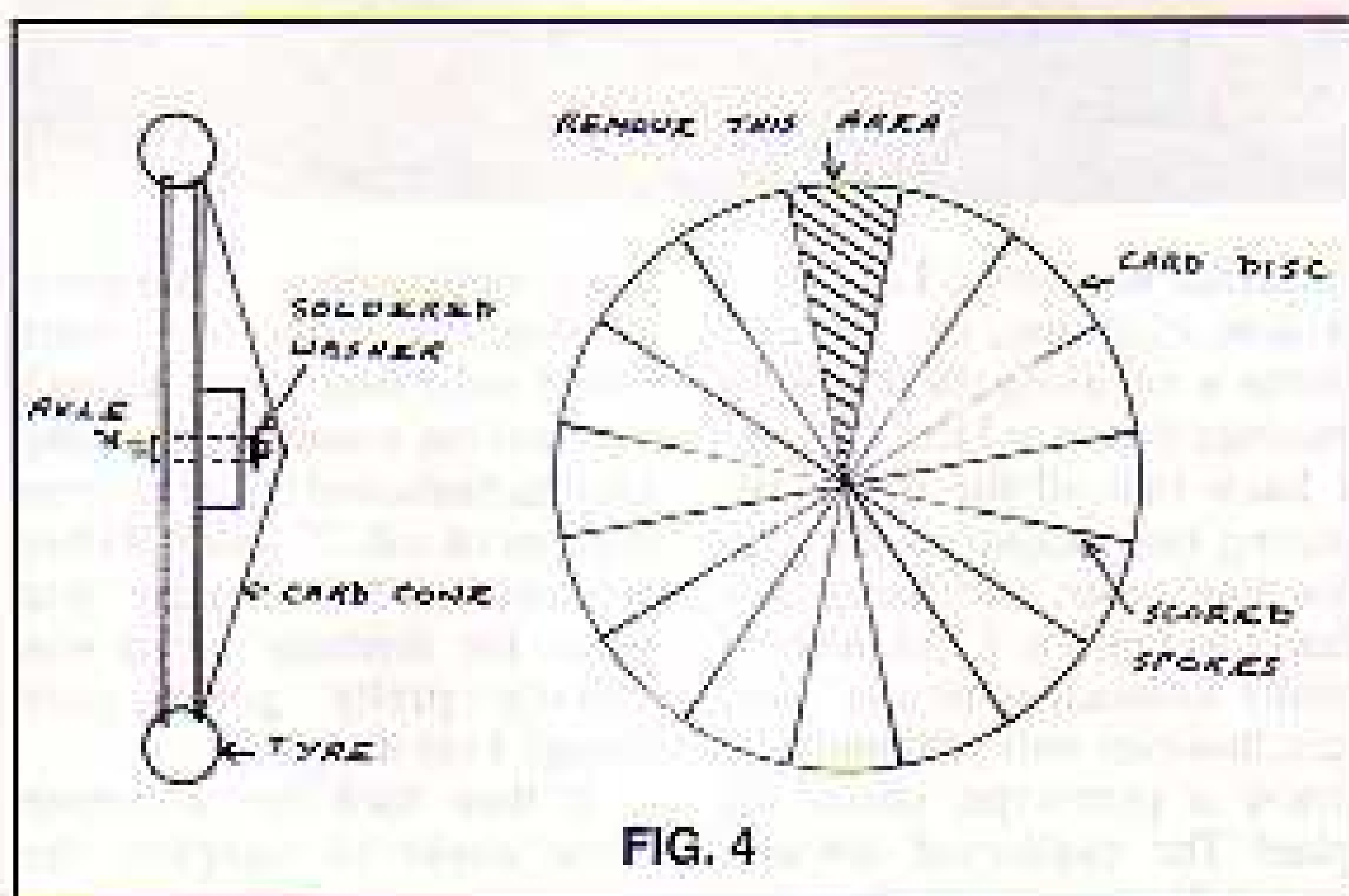
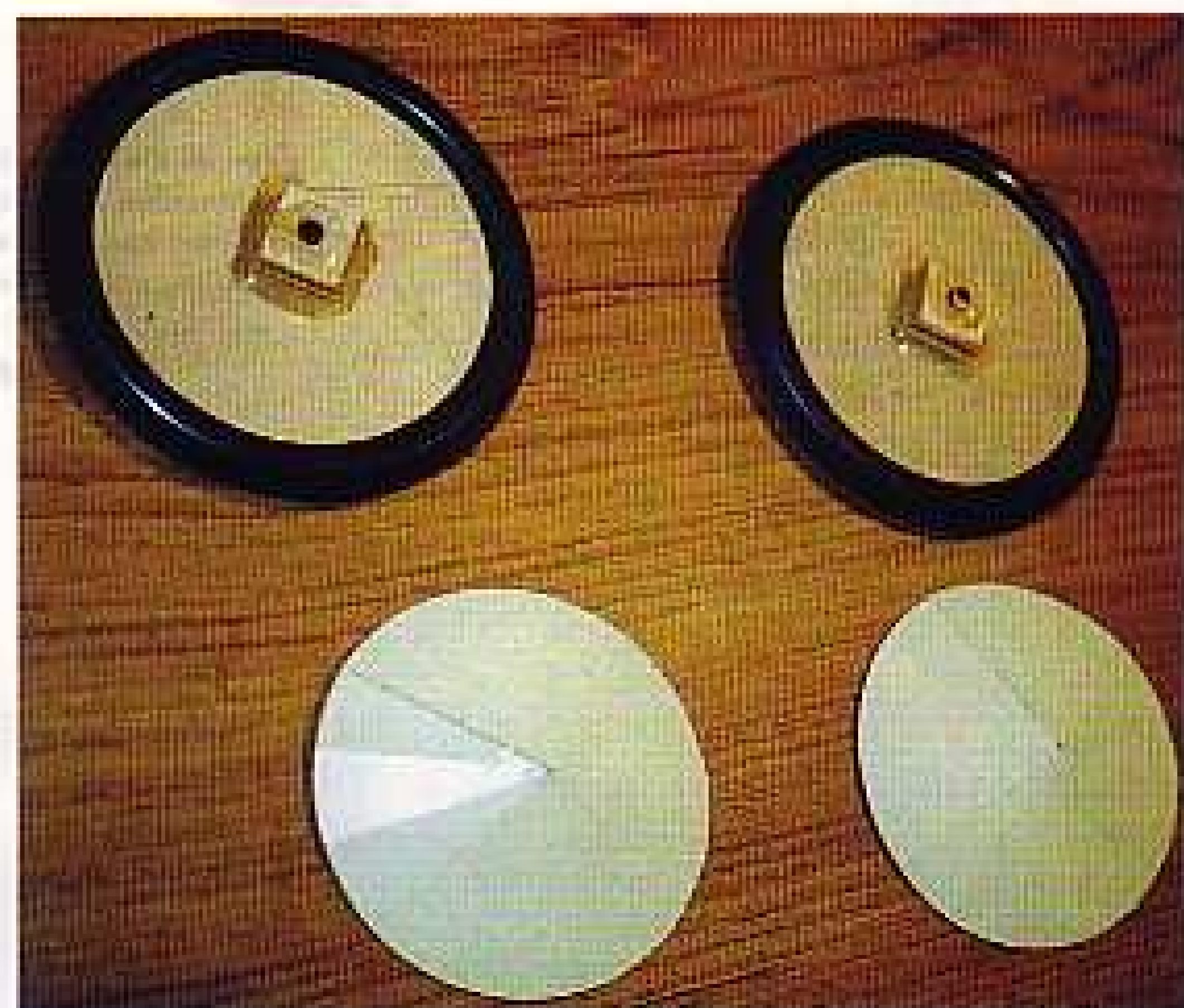


FIG. 4



it's a good idea to buy your tyres first and then make the wheels to suit.

The wheels should now be fitted to the axles and restrained by a soldered washer. Cut off the excess axle material as close to the washer as is practical, so that the end of the axle wire will not foul the outer cover.

This brings us to the final part of the wheel - the outer, spoke cover. For my models, I cut a disc of postcard type material and score across it on

ABOVE: the wheels, with tyres in place, ready for the addition of the side cones to replicate the wheel spokes with canvas covers.

RIGHT & ABOVE RIGHT: two examples of finished dummy WWI type wheels. Simulated access hole heightens realism.

the inside with a ball point pen to simulate the spokes. I use 16 spokes on my models, which looks about right. It also means that, if you cut out a wedge between two spokes, it will result in the correct cone shape to clear the axle. (Fig 4).

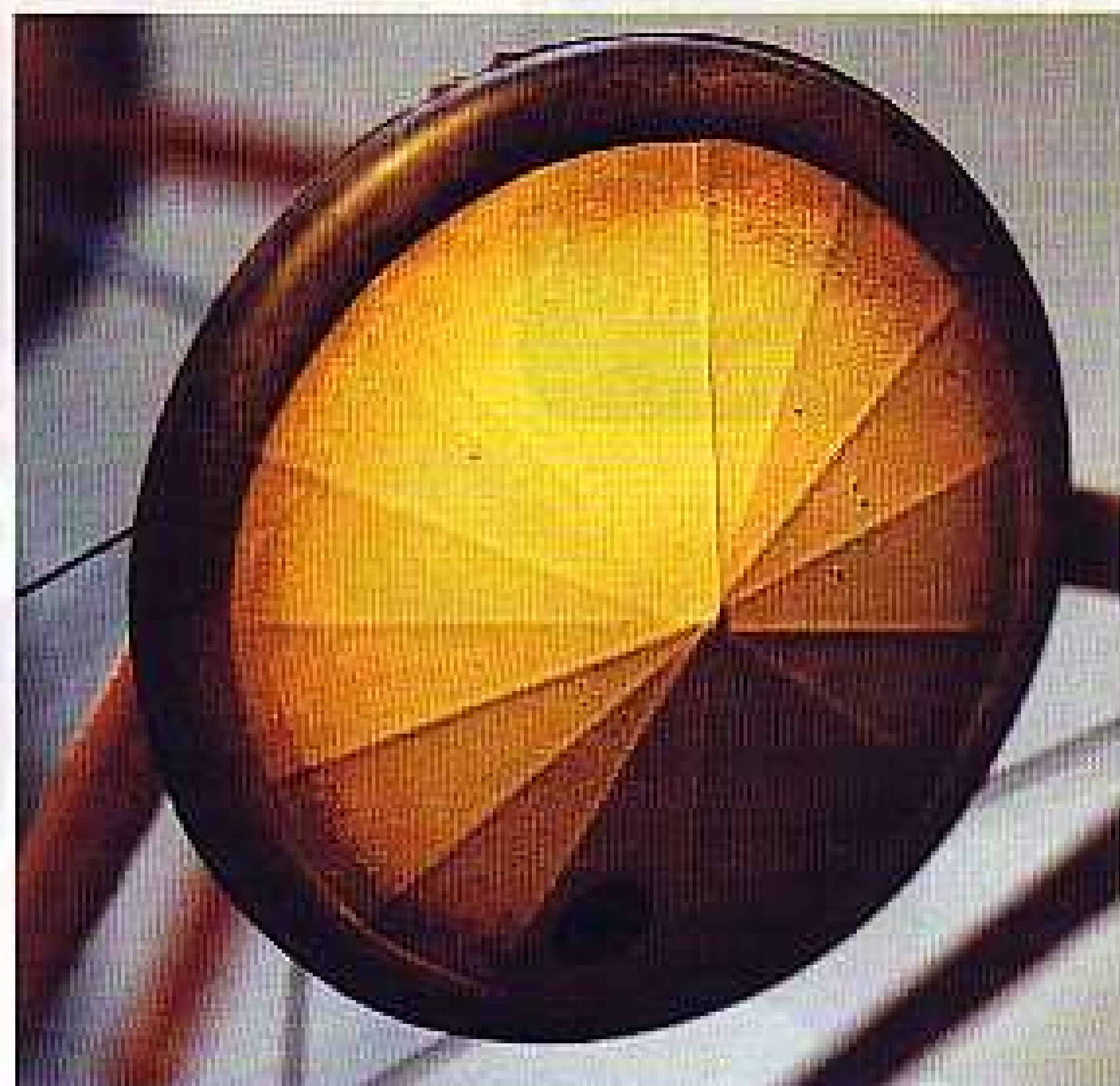
To complete the cone, crease it along each score line with the pen lines on the inside face and bring the ends together. I use a piece of masking tape on the inside to secure them and then run some cyano into the joint.

Some trial and error will probably be required to determine the correct diameter of the card discs, but then, you'll

be able to make as many as you like. A compass cutter is an extremely useful tool for disc cutting, be it for ply, balsa or card.

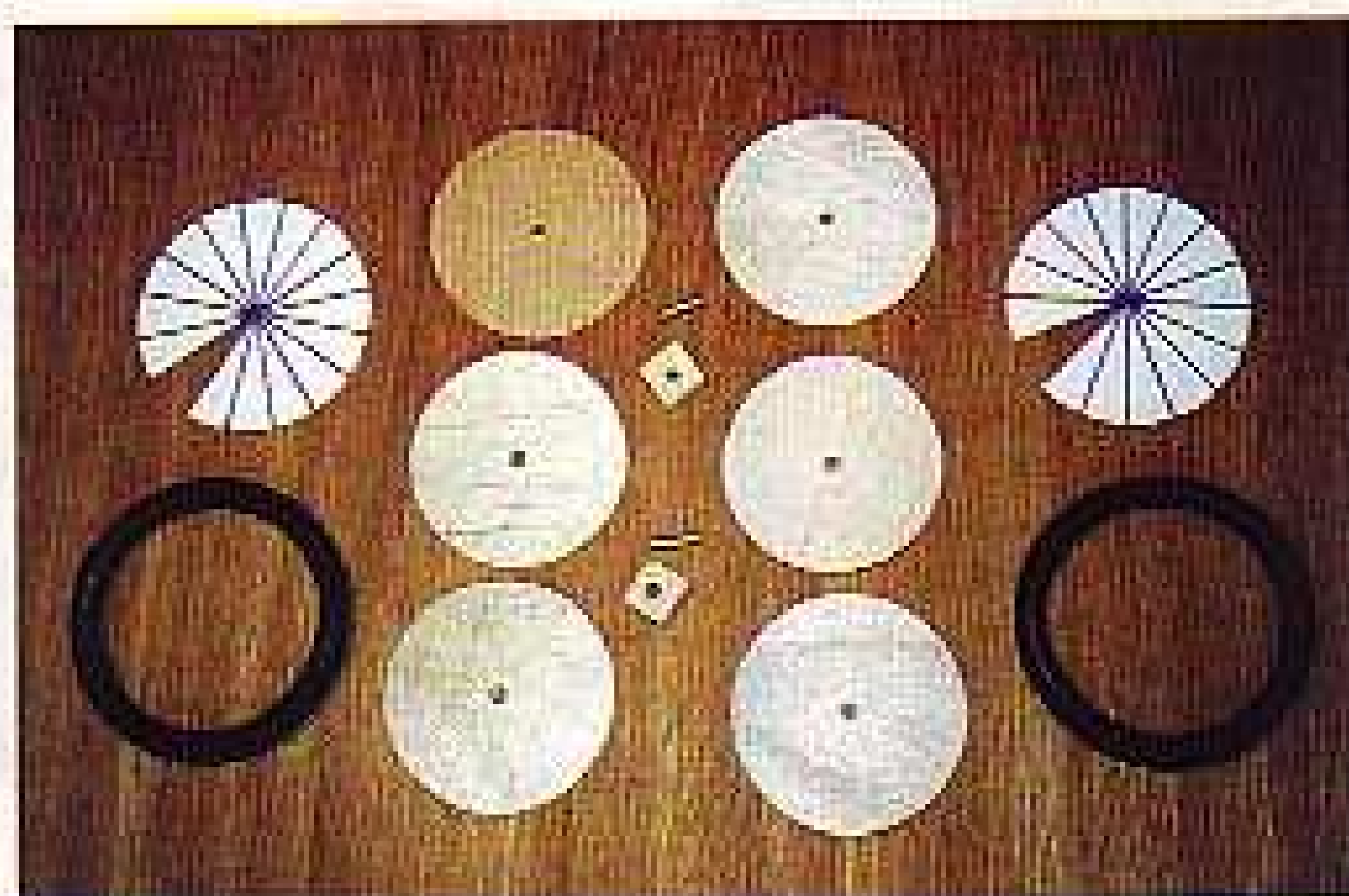
All that now remains is to position the card cone onto the outer of the wheel and fit it in place. The cones may be made to look a little more scale-like by the addition of a valve cut-out and a small piece of tube glued on, to simulate the end of the axle.

This simple and satisfying operation will result in a very acceptable pair of wheels that weigh less than half as much as commercial items and only cost about £1.00 a pair.

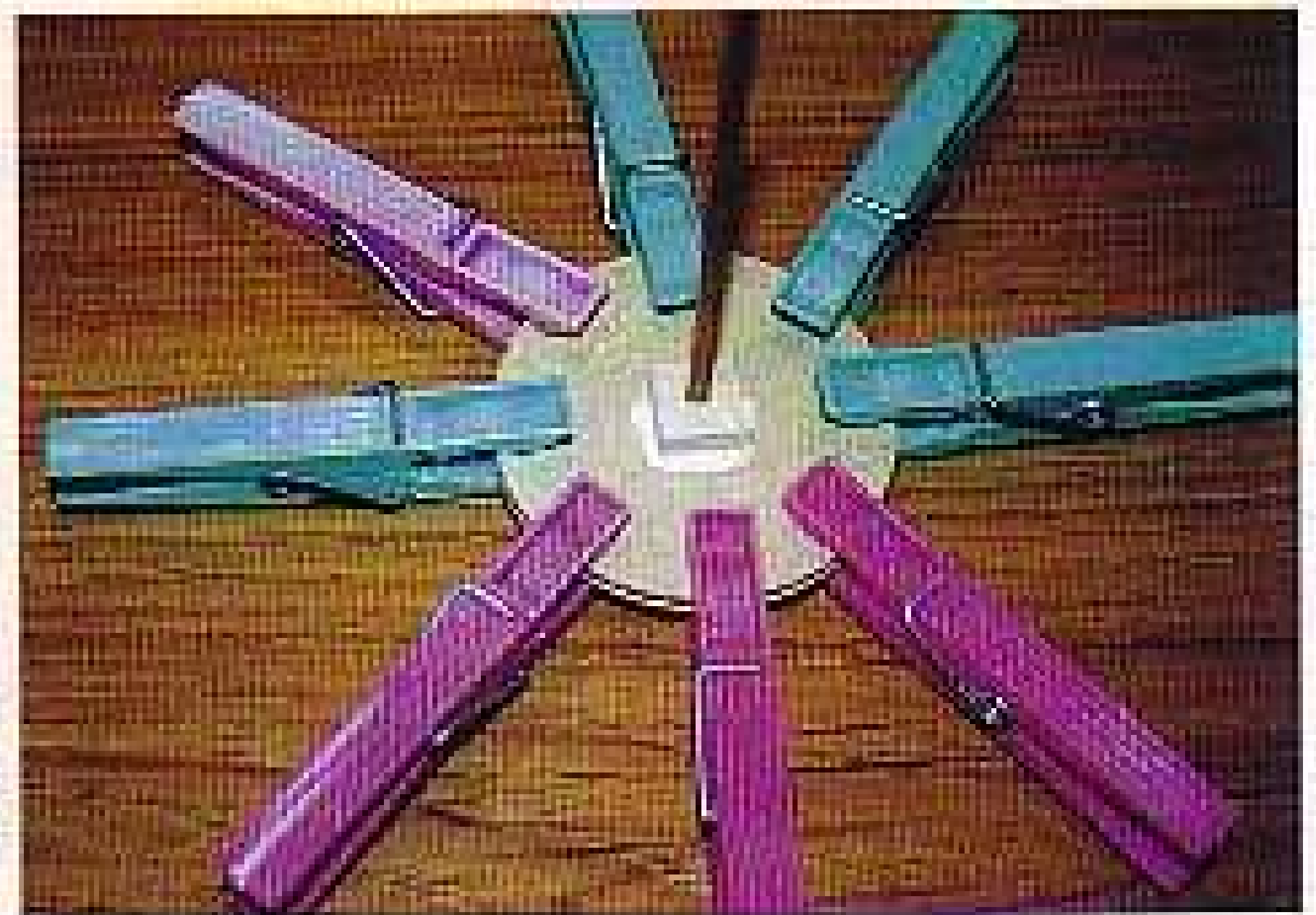


LIGHTWEIGHT WHEELS FOR SMALL SCALE

PETER RAKE describes how he makes light and inexpensive wheels for his WW1 type models



LEFT: a complete set of components for a pair of wheels. Not a bad idea to make up a "kit" like this, before final assembly.



RIGHT: the ply and balsa hub, pegged and left to set.

This article was prompted by letters from readers requesting more information in support of some of my planes. I feel it is only fair to admit that there is nothing new or innovative involved, all of the techniques employed are frequently used for many of the older, free flight scale models. However, since not everyone came into the hobby via that route, the ideas may well be new to you.

It often surprises me to realise that many modellers are completely mystified by things that are 'old hat' to those who have been in the hobby for several years. We seem to take certain techniques for granted, without appreciating that it may be many years since an idea was last published and that whole generations of modellers are unaware of it.

So, by way of trying to make up for that, here is how I go about producing scale-like wheels for my small electric powered WW1 scale models. I do hasten to add that the wheels are only scale-like, not 100% accurate. But since my models tend to fall into the

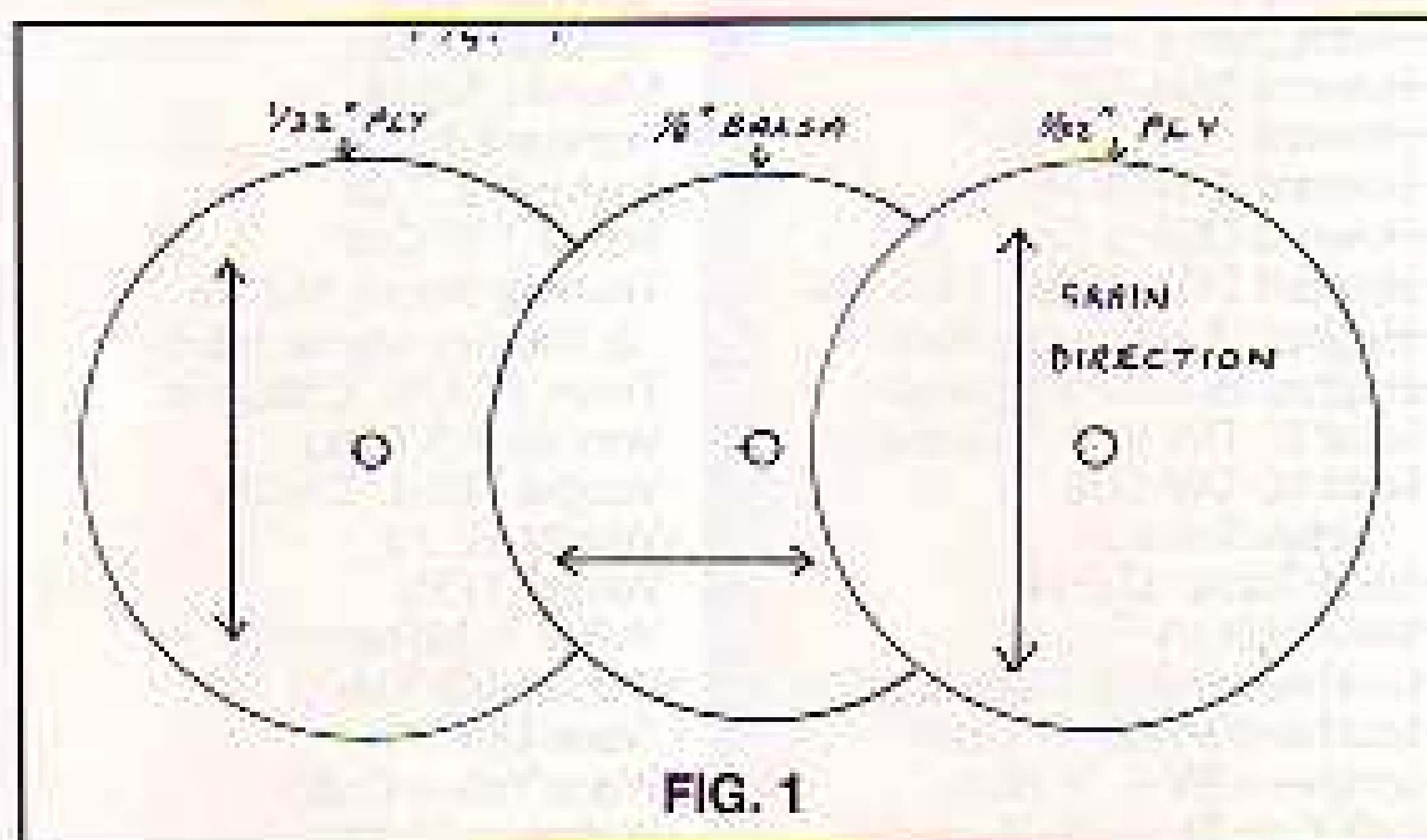


FIG. 1

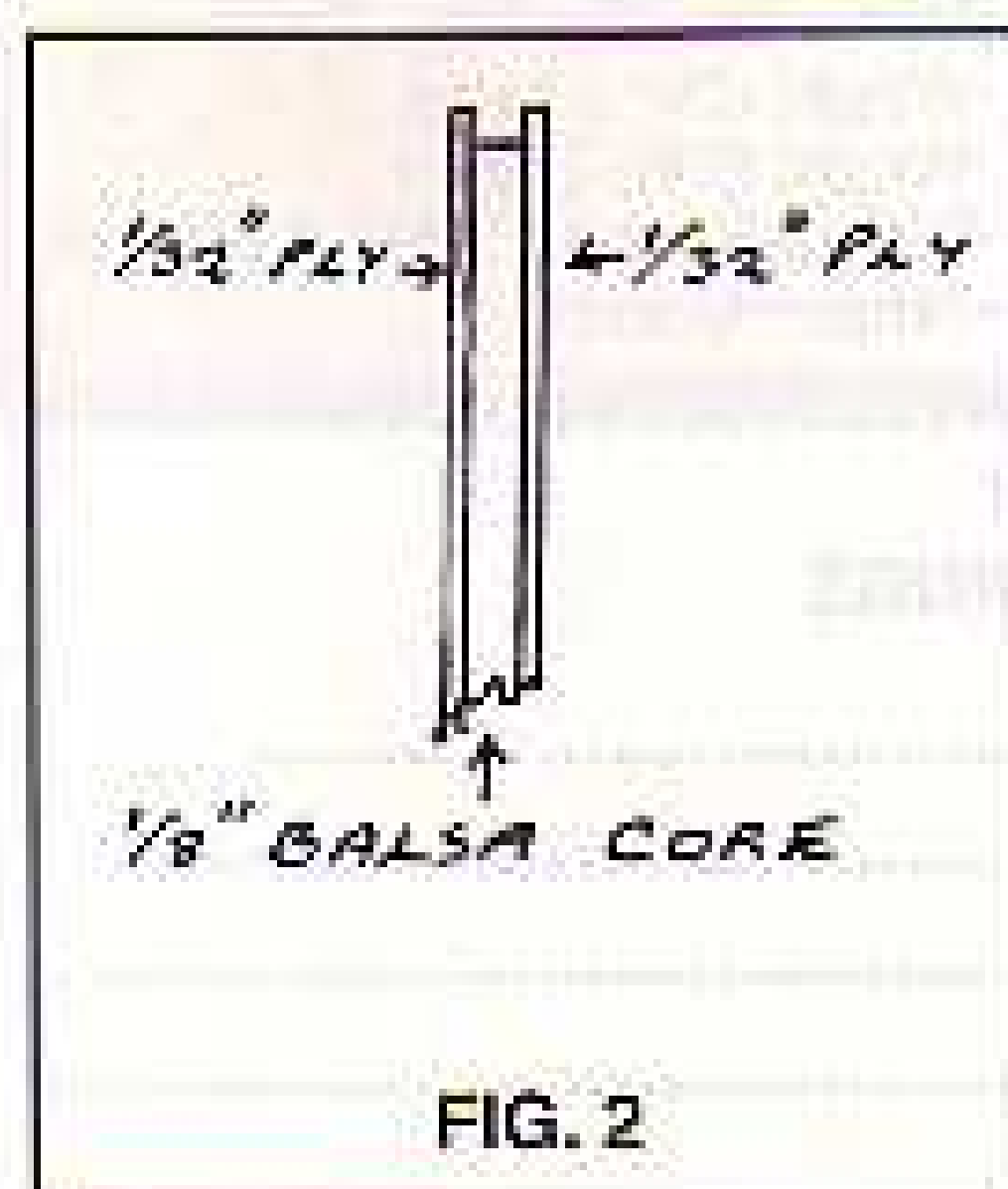


FIG. 2

practical, sport-scale category, this is not a problem.

Begin the construction of each wheel by cutting out two $\frac{1}{32}$ " ply discs to slightly more than the size of the wheel less its

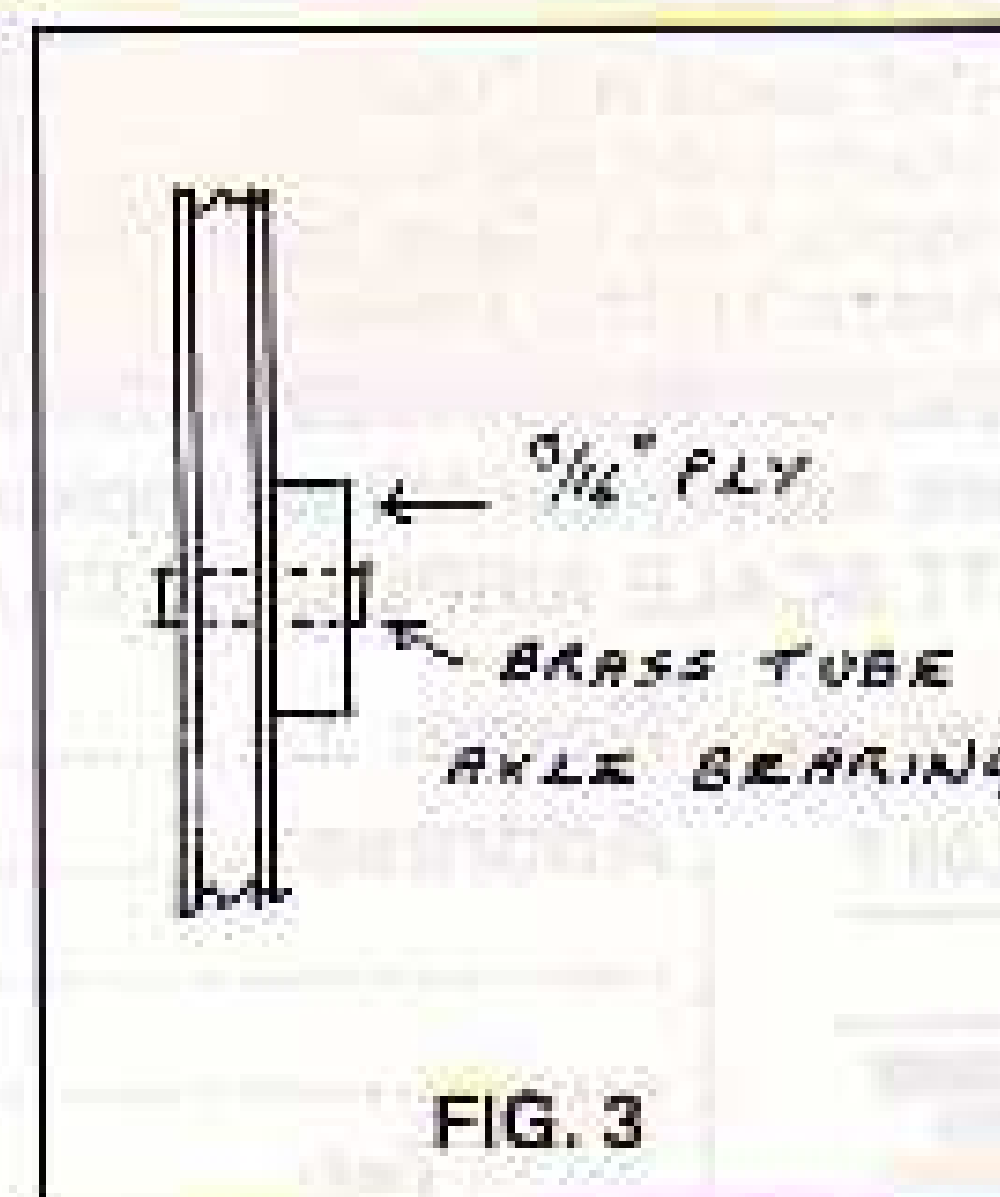


FIG. 3

tyre. Now, cut a disc of $\frac{1}{8}$ " balsa which is $\frac{1}{16}$ " less diameter than the ply discs. This will form the core of the wheel and should be securely glued between the ply discs with its grain at

ninety degrees to that of the ply. (see Fig.1).

If each disc is accurately drilled through its centre, they may be assembled onto a piece of brass tube which will assist with accurate alignment. Make sure that you use the same size brass tube that you will be using as an axle bearing, or you could end up with slop problems later on. As can be seen from Fig.2, this assembly provides a rim for the tyre to seat into.

Onto this assembly we then epoxy glue a drilled rectangle of $\frac{1}{16}$ " plywood to provide a more firm and stable mounting for the axle tube. I would NOT recommend using cyano for this job, since it dries too brittle and is likely to fracture. I'll leave you to work out how I discovered that!

Epoxy a short length of brass tube onto the centre of the hub so that it protrudes about $\frac{1}{8}$ " either side and we now have the hardest part finished. (Fig 3).

The tyre is probably the easiest part of the entire operation. For the $\frac{1}{10}$ th scale models I favour, a Hoover Junior drive belt is just the right size. Stretch the tyre onto the rim and glue it onto the groove using either cyan or R/C Modellers Glue. So