When my three-year-old son made his first acquaintance with a giant articulated lorry he immediately came up with the bright suggestion that it would make an ideal birthday present. Bringing a 40-ton vehicle in and out of the house would cause a little congestion in the hall so he agreed that a model of one would, after all, be preferable. This compromise also suited my pocket better for it provided an opportunity to use offcuts that would otherwise be confined to the bonfire.

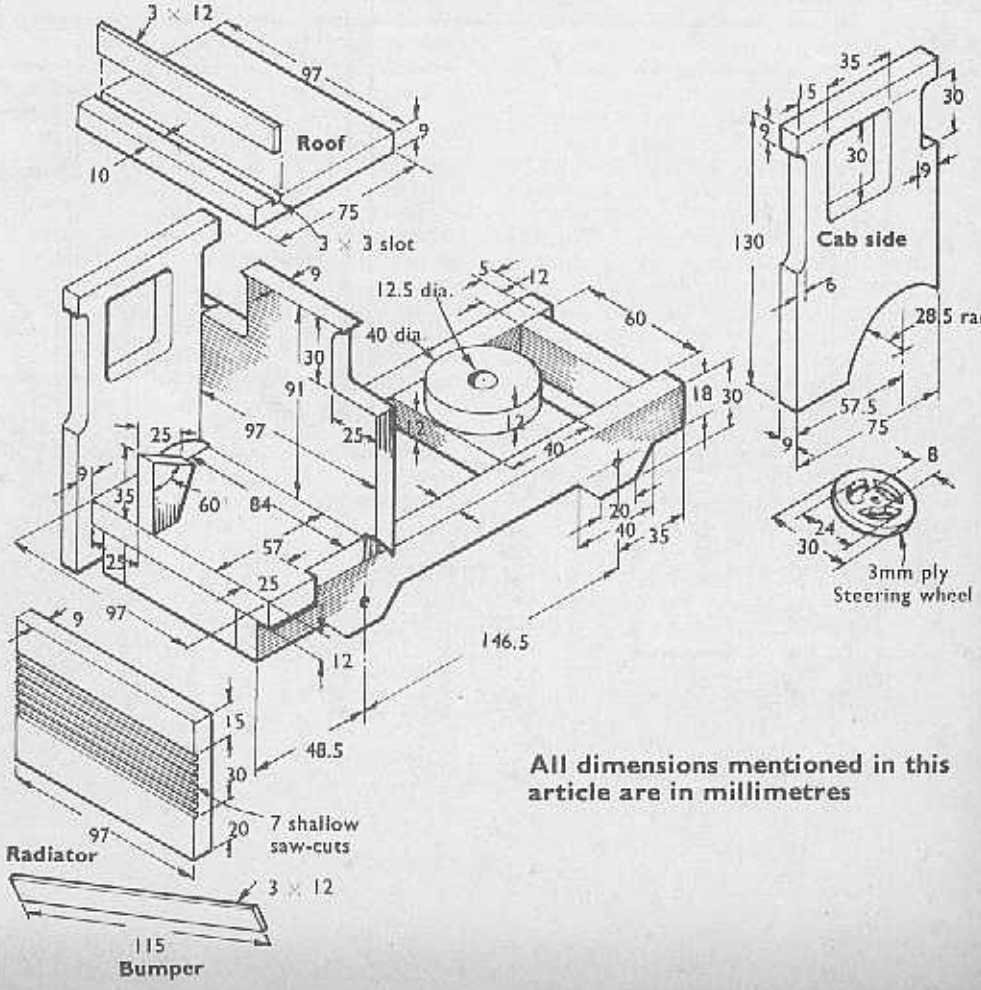
A. W. BOVILL SHOWS YOU HOW TO MAKE TOY

BIG OAKS from little acorns grow, is an adage which has a parallel with children's toys. What began as a simple project has developed into a major occupation. Our current commercial fleet now comprises an articulated lorry, a giant tanker and a mobile breakdown crane. Suggestions for additions come daily.

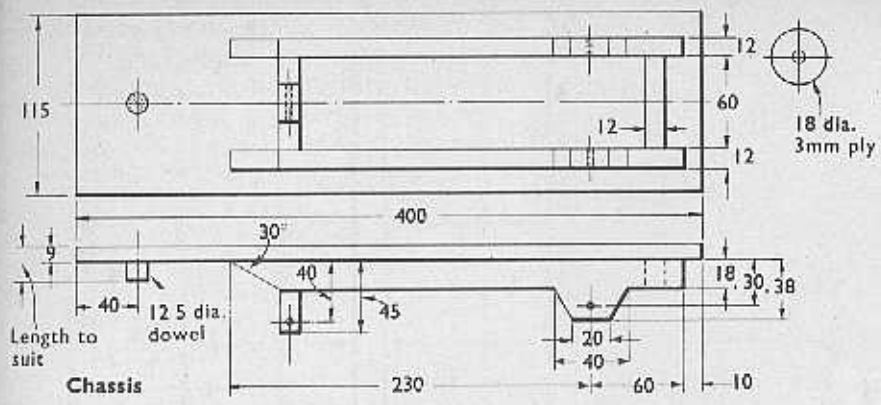
Wheels are sometimes a problem with model cars and lorries but the plastics and tyred ones marketed by firms such as Hobbytrends, Goffton and Fobel (who also supply axle rod and snap-on hubs) are quite suitable.

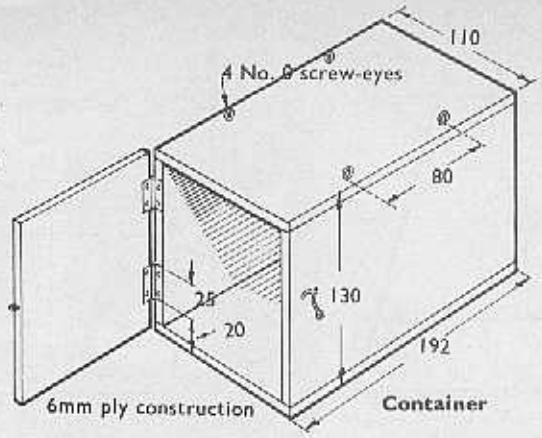
Construction of the pieces was simplified by the use of glued and pinned joints. Where possible, components were cut on a circular saw, but there would be no difficulty, if you made similar toys, in cutting the pieces by hand. I turned up the small wheels and pulleys for the crane on the lathe, but commercial parts can be obtained from hobbies shops.

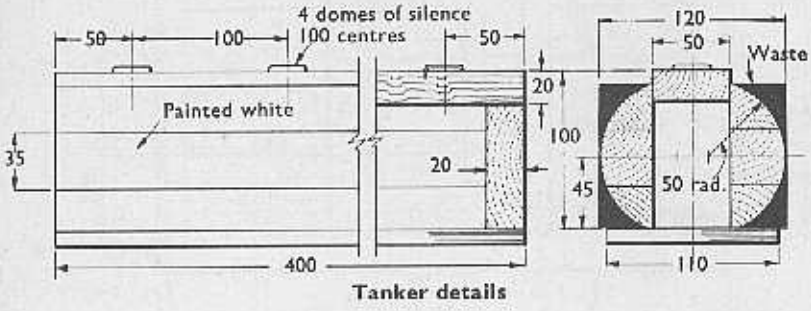
The chassis of the cab unit was made from 12mm ply, the two side frames being pinned together until they were completely finished. The hole through the swivel platform also passes through the piece which supports it so these parts were fixed together and bored as a single item. Care was taken to ensure that the axle holes were square to the chassis sides and that the frame was not in winding.

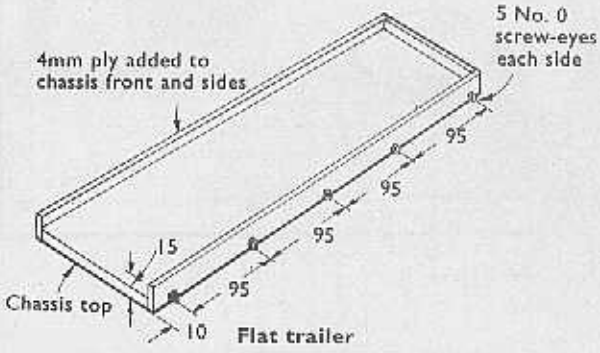


All dimensions mentioned in this article are in millimetres

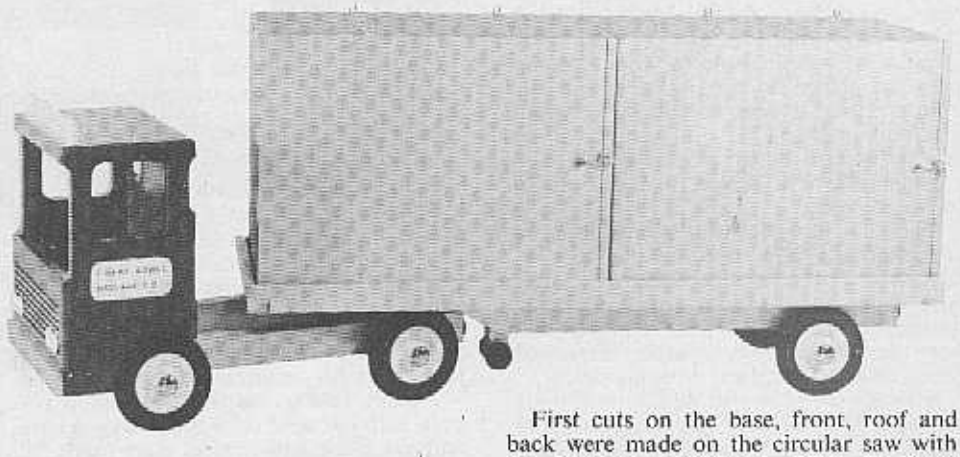






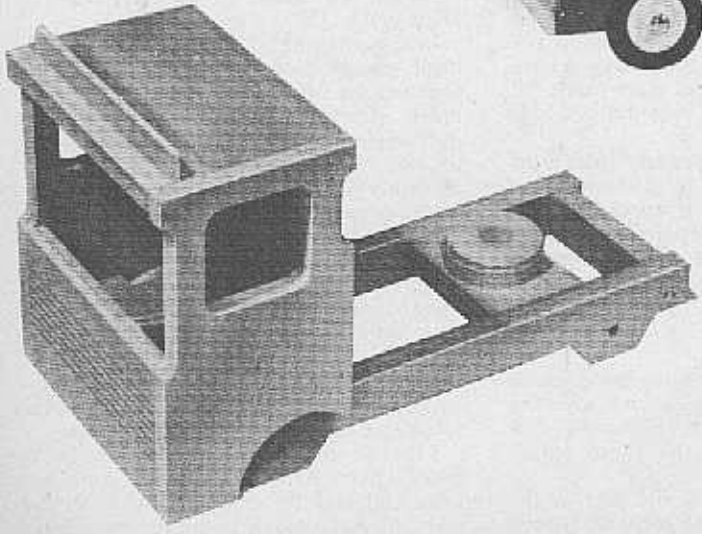


LORRIES AND TRAILERS



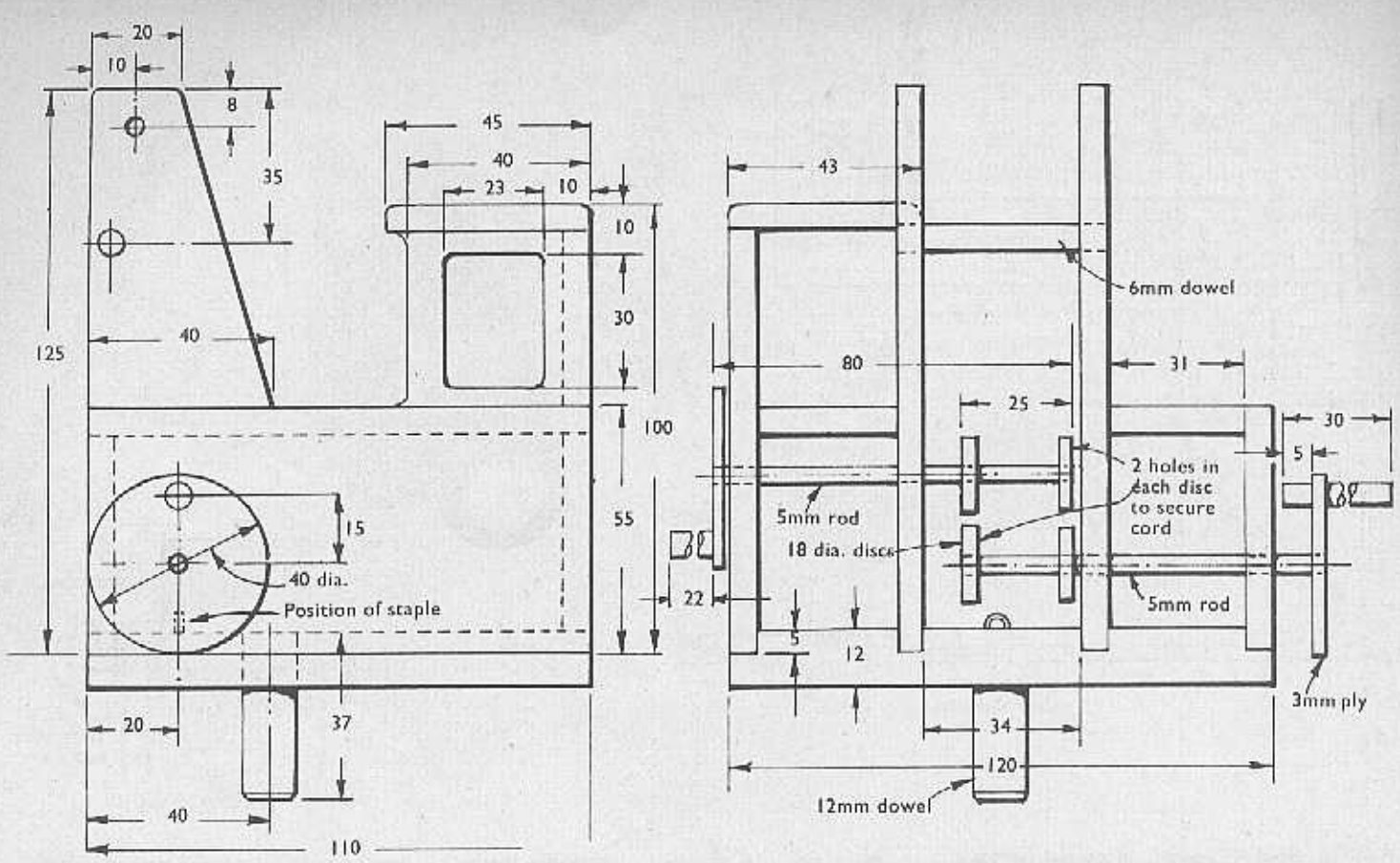
1 (below). Basic construction of the cab unit.

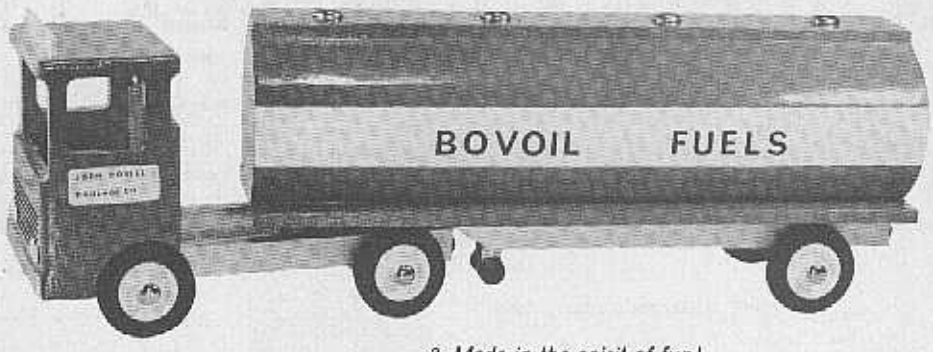
2 (right). Ready for the long haul.



First cuts on the base, front, roof and back were made on the circular saw with the fence set to 97mm. With the fence adjusted to 75mm, the cutting of the roof and sides was completed. Since the base length was less than this by two thicknesses of 9mm ply the fence was left at this setting and with two 9mm spacers alongside it the base was cut to an accurate fit. The rear part of the cab base had to be reduced in width slightly to clear the wheels.

To simulate the design of the cab grille seven shallow grooves were made with the saw across the front piece then this, with the steering wheel support, was fitted. Windows and wheel arches in the cab sides were cut out with a fretsaw, small files being used to obtain a good finish. Wheel clearance was checked when the sides were fixed.





3. Made in the spirit of fun!

The roof was fitted next—after the groove had been made for the name board—then I set about making the back. This required notches for the wheels but I left this operation until the back was properly in place so that the notches would line up with the wheel arches in the cab sides.

In my haste to complete the cab I forgot to install a driver's seat. My omission was quickly spotted by my three-year-old who complained, "You haven't put a chair in for the driver!"

Once the glue had set, pin holes were filled and the lorry was well sanded, the edges being rounded to soften the box-like appearance. To ease the job of painting the panels on the cab sides their outlines were scored with a sharp knife, the scores acting as ditches against creeping paint.

After a coat of primer had been applied the grille grooves were painted black, and when they were dry the raised parts—and also the chassis and bumper—were painted aluminium colour. Bright colours were used for the remainder of the cab, and the lettering was done with transfers, a great variety of which can now be bought at stationery shops. Clear varnish was applied to protect them. All the paints, including the varnish, were Humbrol products, which are lead-free and available in small quantities.

Finishing touches comprised white upholstery nails for front lights and red ones for rear lights, and a steering wheel cut from thin ply and painted black.

Construction of the basic trailer was quite straightforward, as you can see from the drawings which also show how the basic form was converted into a flat trailer by the addition of 3mm ply sides and screw eyes for securing the container load.

I made two containers from 6mm ply, each with a hinged door secured by a hook and eye. Top and bottom were made full width so that the lifting eyes did not have to hold in end grain.

The giant tanker was made from oddments of cedar cut to length and fitted together as shown in the cross sectional view in the drawing. After circles had been scribed at each end most of the waste was removed with 45 degree cuts on the circular saw, then a smoothing plane and glasspaper were used to produce the cylindrical shape.

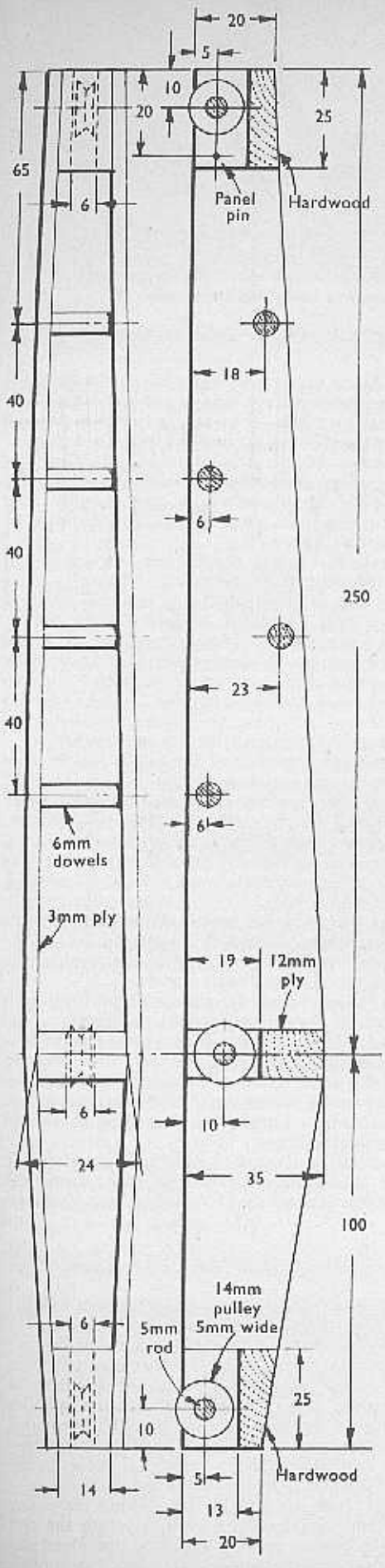
It was quite easy to obtain a good round finish before fitting the top and screwing the "tank" down to a basic trailer—after scribing lines to define the white panels along each side.

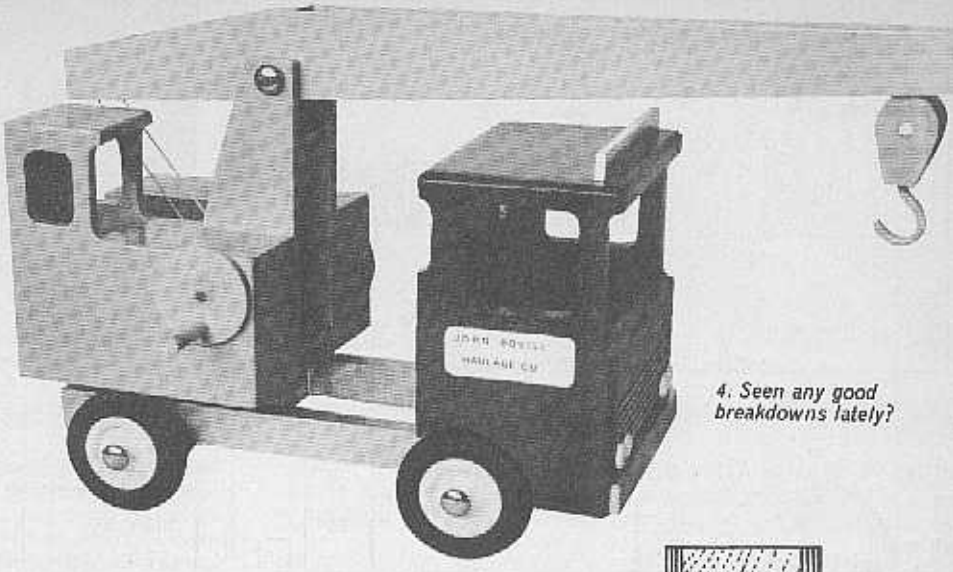
Last item I have made to date is the working mobile crane, the cab and chassis of which are similar to that of the articulated unit.

When shaping the sides of the crane itself paired pieces were cut and bored together to obtain accurate alignment of holes. After all components had been cut out, assembly began by joining the sides to the 31mm horizontal pieces. This assembly was fitted to the base, end parts were cut to fit, then the cabin roof was put on. Some metal scrap was placed at the rear of the crane cabin to act as ballast.

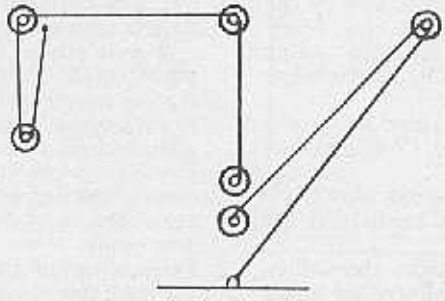
Epoxy resin adhesive was used to fix the handwheels and drums to the spindles and they were arranged so that the spindles could be moved in and out. This provided for a standard way of locking a spindle—by allowing a projecting part of the handle to enter a hole bored in the crane side.

I began the jib by making the pulley blocks from hardwood, tapering the end ones and making sure that the inner one was narrow enough to allow the finished

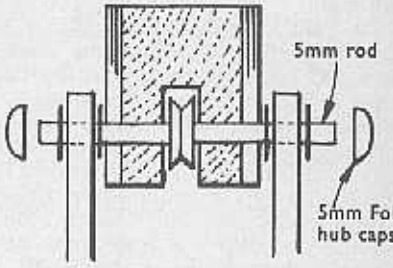




4. Seen any good breakdowns lately?



Rigging details



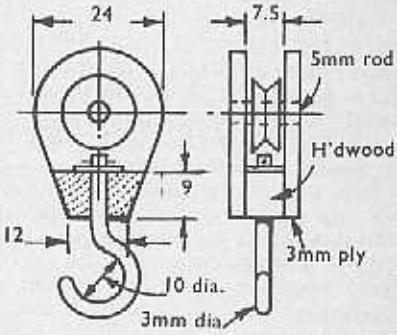
Method of fixing crane jib

jib to fit between its supports.

A panel pin fitted to the front block served as a cord anchorage, but a simple hook could have been used.

Sides of the jib were cut out as a pair, and when they had been cleaned up they were assembled with the blocks in an improvised jig to ensure accuracy. Pulley wheels were fitted in the blocks prior to this operation. Dowel spacers were cut a little oversize and trimmed to fit.

The hook was made from metal rod and was secured in its block by a tiny pin which rests on a small washer. Rigging is shown in the diagram, holes in the drums providing a means of anchoring the cord ends.



Crane hook

Last part to be fitted was the swivel dowel, and before it was glued into the crane section I checked that it was a good moving fit in the chassis platform.