DRIVE-IN TOY GAR

WITH a request for a toy – in this case, a garage – my thoughts immediately go back to my own childhood in order to conjure up the essentials needed for maximum play appeal. First of all, access to the interior is necessary, which means large windows and doors. 'Open air' parking on the roof helps in this respect. Something unusual would please, for example, slopes and corners to drive up and around and a flight of steps as in a multi-storey car-park. Then, of course, it must have an office somewhere and space for this was provided under the end slope. With a wide range of accessories available from, for example, W. Hobby Ltd., such as petrol pumps and stick-on posters etc., realism is quite easy to achieve in the finishing process. If as is quite probable, the toy is to be 'handed-on' some day, it must be strong enough to survive.

Making a start

I began by drawing my usual rough sketch of the design and decided upon the overall dimensions. From this, I found that I would need approximately 16 ft^2 of 3/16in. (5 mm) plywood. To strengthen the assembly, I needed about 22 ft of 7/8 by 1/2in. (22 by 13mm) softwood strip. This was actually 3/4 by 1/2in. (19 by 13mm) when checked and the latter dimensions are used throughout. Other sizes of strip can be used, but of course allowances will have to be made.

Base

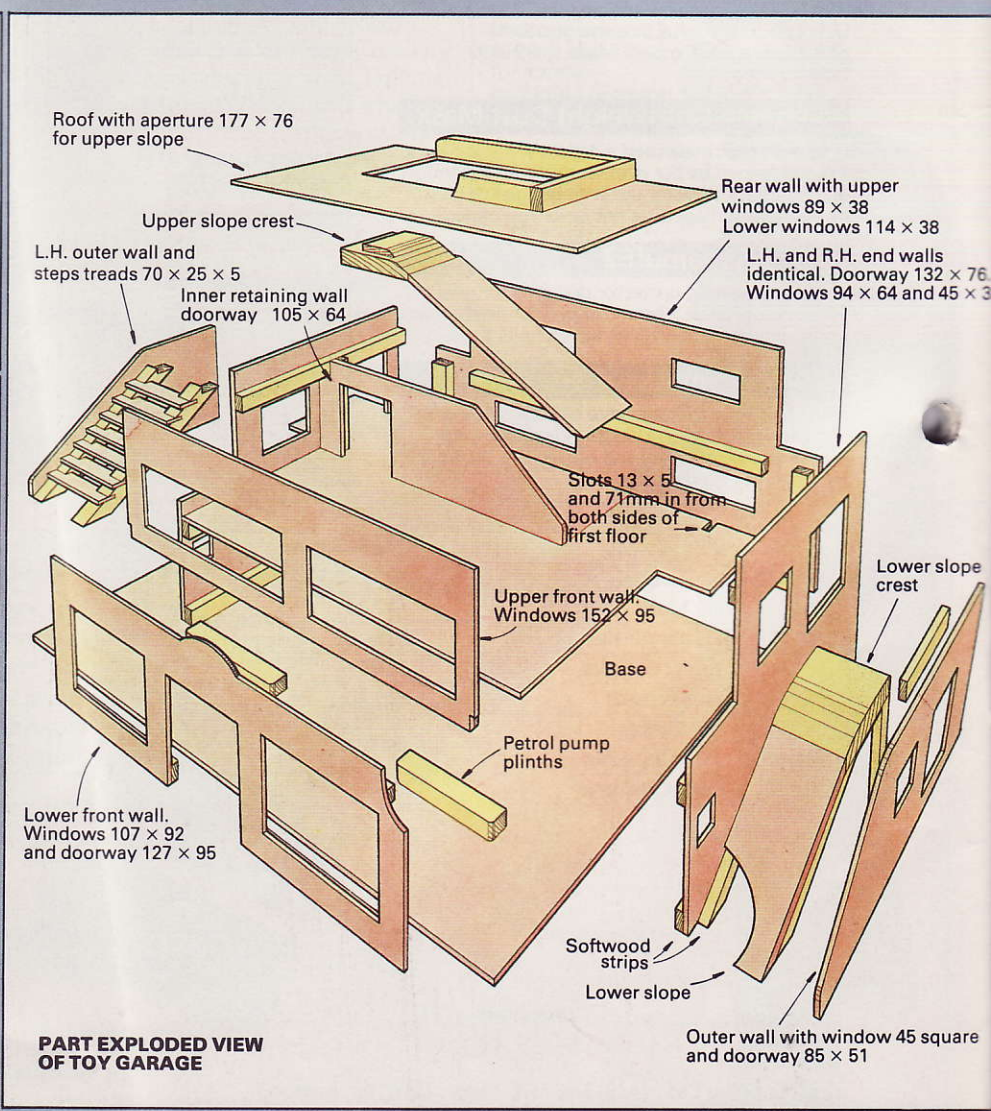
Cut first, the base was left slightly oversize to enable it to be finished exactly to fit the completed top structure when screwed to it from below.

End walls

The two end walls were marked out and cut to size, but at this stage, the small lower window positions were left until the slope and flight of steps could be tried in place. Lengths of 3/4 by 1/2in. softwood strip, glued and screwed to the inner side of each wall provided support for the first floor and roof, as well as strength.

Floor and roof

The straightforward task of cutting



PART EXPLODED VIEW OF TOY GARAGE

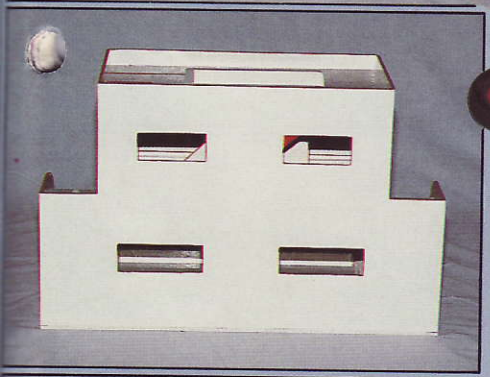
these two pieces to size followed, and by tilting the floor, the end walls could be located in the slots provided for them at the rear. A length of ¾ by ½in. softwood was glued and screwed under the roof at the front and rear to strengthen it.

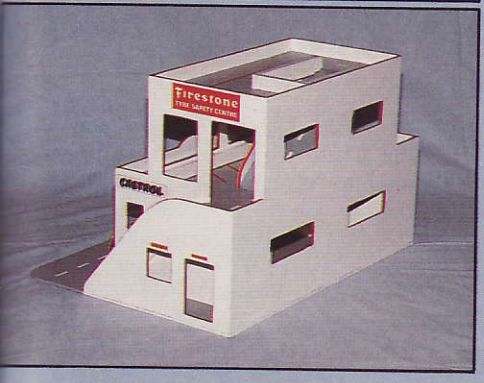
Lower slope

With the walls and floor loosely assembled, I could now determine the slope details. Having decided that the top of the slope should be rounded-off for better effect, a suitable softwood offcut was cut to size and planed through with the grain until it provided a smooth continuation between the top of the slope and the floor level. The supports for the straight piece of the slope could now be determined by placing a length of softwood strip on the end wall and by marking it where it met the prepared piece at the top and the base at the bottom, allowing for the 3/16in thickness of the plywood slope of course. The brow of the slope and one of the supports were glued and screwed to the wall from inside and a plywood slope planed to fit the angles at top and bottom

designed and made by **BILL JOHNSON**

AGE





Rear wall

The rear wall was marked out and cut next, to over lap the floor at each end by 3/16in, in order to accommodate the thickness of the outer walls of the slope and steps. I decided to leave the position of the rear windows until the roof slope location was known exactly. A ¾ by ½in. support for the floor as well as one at the base were added.

Stairway

Two lengths of ¾ by ½in softwood were cut to fit against and under the edge of the floor and angled to fit the base. With the aid of an adjustable bevel, seven slots to take the 3/16in plywood treads, were marked out then cut. When satisfied that the assembly was aligned correctly, it was glued.

Outer walls

Now that the positions of the slope and steps were known, it was quite easy to mark out the two outer walls and cut them to shape. The flight of steps was then glued and screwed to its wall and the remaining slope support and a short floor support added to the outer wall of the slope.

Lower front wall

With the garage beginning to take shape, it was time to add the lower front wall and with an idea running through my mind for incorporating a clock in the centre, I carefully left a circular extension above the doorway. Lengths of ¾ by ½in were then glued

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and screwed inside; the top length to support the first floor and two short lengths at the base, rounded off at the doorway for safety and appearance.

Upper slope

Again I decided that the slope should not have a sharp edge where it met at the roof. By drawing on paper the actual slope and curve required to run on to the roof, the necessary thickness was obtained for an offcut to be used to form the brow of the slope. A 1 by 3/16in strip, of a length equal to the width of the hole previously cut in the roof, was then glued on top at one end of the offcut. The brow of the slope was now formed by planing through and when complete, it was glued and screwed in position at the end of the hole and beneath the roof. With the 3/16in plywood slope planed to the required angles at each end, it was necessary to cut the top right hand corner to fit the roof support before it would locate correctly between floor and brow. Two lengths of 3/4 by 1/2in softwood provide support for the slope.

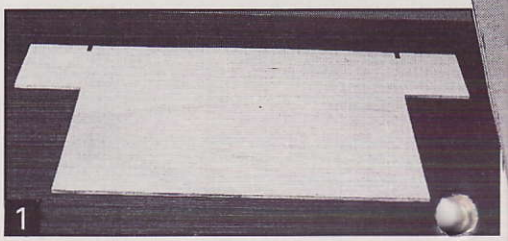
Inner retaining wall

An inner retaining wall to hold the slope support and to provide an 'exit' doorway to the flight of steps, was now designed and cut to shape. A vertical strip of 3/4 by 1/2in softwood was fixed to the outer end of the wall to secure it, with the top corner cut out to accommodate the end wall roof support. The three walls enclosing the slope opening in the roof were added next, with the exposed corners being nicely rounded off.

Upper front

It remained now for the first floor frontage piece to be cut out with large windows to provide access. A length of 3/4 by 1/2in softwood was cut to fit inside at the bottom to provide anchorage. With the two bottom corners cut out to accommodate the low wall at either end, the garage construction was approaching the finishing stage. The location of the small windows in the end walls, the rear windows and the office door and window could now be determined with the two slopes and the flight of steps in place. Incidentally, when cutting out windows and doors, I cut right to the line as accurately as possible which means that they can be finished off by sanding only.

Completed components of the garage were now carefully pinned together and placed on the base correctly to enable holes to be marked to secure the base to it. The holes were drilled and countersunk, together with the other screw holes required to complete the fitting together of the whole structure. Each component was now taken off for the interior surfaces to be painted and parking bay lines etc., to be added.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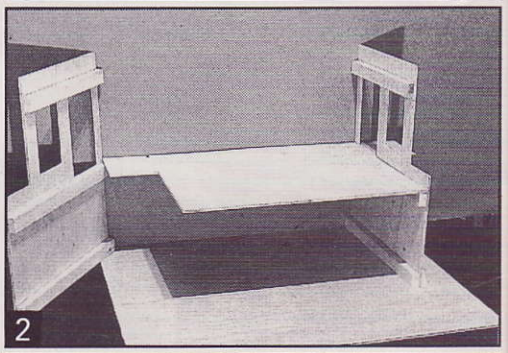
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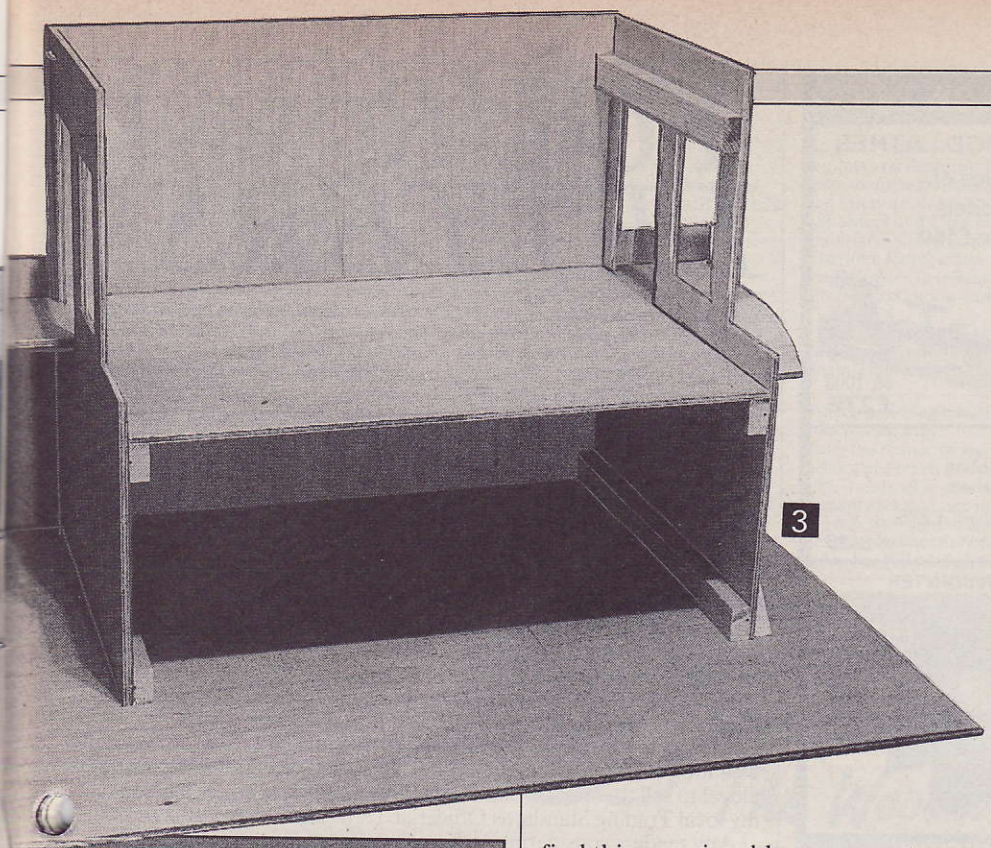
1. First floor cut to shape. Two slots are for location of end walls.
2. A little tilting and twisting will locate the floor through the doorways.
3. Rear wall positioned and lower slope crest added.
4. Construction of flight of steps on outer wall.
5. Lower front wall in place.
6. Upper front wall positioned and the remaining items ready for fixing.

CUTTING LIST
(no allowance for waste)

Base	1 off	534 by 406 by 5mm	(21 by 16 by 3/16in.)	ply
End walls	2 off	330 by 262 by 5mm	(13 by 10 5/16 by 3/16in.)	ply
First floor	1 off	524 by 268 by 5mm	(20 5/8 by 10 9/16 by 3/16in.)	ply
Roof	1 off	371 by 203 by 5mm	(14 5/8 by 8 by 3/16in.)	ply
Rear wall	1 off	534 by 330 by 5mm	(21 by 13 by 3/16in.)	ply
LH outer wall	1 off	225 by 182 by 5mm	(8 7/8 by 7 3/16 by 3/16in.)	ply
RH outer wall	1 off	271 by 182 by 5mm	(10 11/16 by 7 3/16 by 3/16in.)	ply
Inner retaining wall	1 off	285 by 151 by 5mm	(11 1/4 by 5 5/16 by 3/16in.)	ply
Lower front	1 off	381 by 190 by 5mm	(15 by 7 1/2 by 3/16in.)	ply
Upper front	1 off	381 by 173 by 5mm	(15 by 6 3/16 by 3/16in.)	ply
Treads for steps	7 off	70 by 25 by 5mm	(2 3/4 by 1 by 3/16in.)	ply
Upper slope crest	1 off	89 by 77 by 22mm	(3 1/2 by 3 by 7/8in.)	softwood
Lower slope crest	1 off	71 by 70 by 35mm	(2 13/16 by 2 3/4 by 1 3/8in.)	softwood
Petrol pump plinths	2 off	137 by 25 by 19mm	(5 3/8 by 1 by 3/4in.)	softwood

Other materials required
3/4, 5/8 and 1/2in. screws, 3/4in. panel pins, glue, 3/4 by 1/2in. softwood strip, child-safe paint, wood adhesive and filler.



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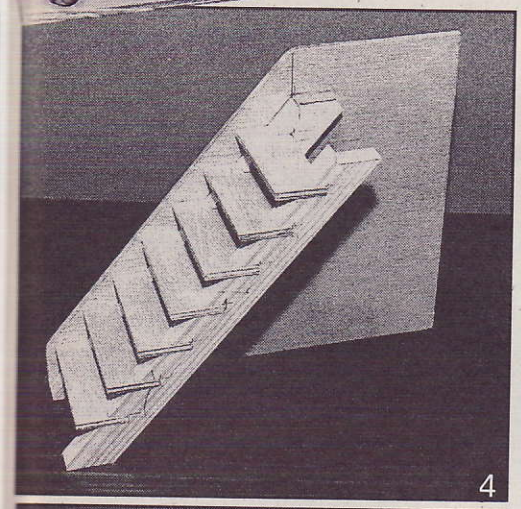

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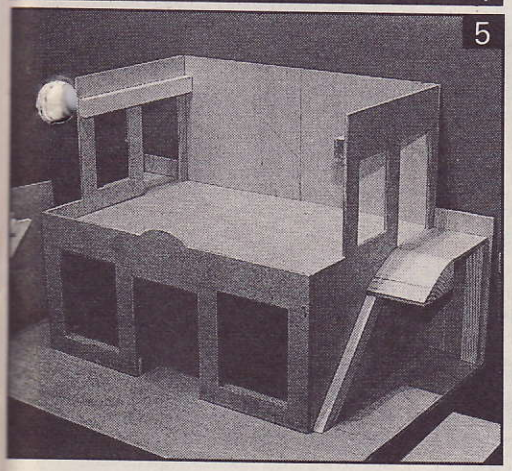

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Painting

After filling where needed and careful rubbing down, a coat of wood primer was applied to all interior surfaces, followed by a coat of 'child-safe' ie leadless gloss, well rubbed down before a final coat. Sellotape was used to mask out the parking lines.

The main task remaining – and I find this an enjoyable one – was to glue and screw the whole thing together, followed by making sure that all sharp edges and corners were rubbed off on the exterior. With this done, and all screw holes filled and sanded down, the exterior paint job could be started. Again a coat of primer and two coats of gloss were applied with careful rubbing down between coats.

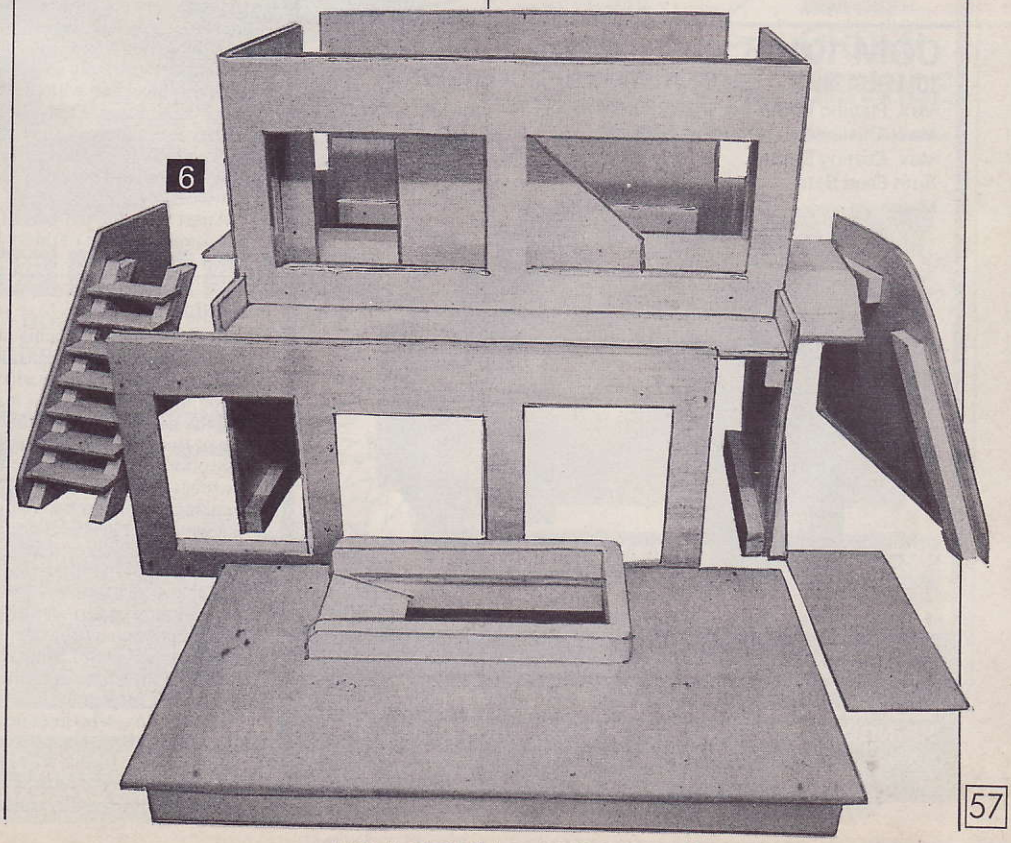
Petrol pumps

To complete the effect, I decided that the windows and doors should be picked out with red paint, and the petrol pumps, which had now arrived by post, be provided with a plinth to increase their height. Araldite, by the way, was the adhesive used to fix the pumps to the bases. All that remained to be done now was to position the structure on the garage base, mark carefully around with a craft knife, and finish the base to fit. With the base firmly glued and screwed, the edges were painted to match the structure and the pump bases were glued and screwed on from below.

Clock

I had given my wife a special 'brief' by this time. She had been 'instructed' to keep a 'look-out' for a large toy watch, while shopping and she came back with what proved to be ideal for the front of the garage. It was a large cheap plastic wrist-watch from which I soon removed the strap and its holders. A plywood disc was given the necessary hole to take the back of the watch and then painted red and the watch glued in. The disc was glued and pinned in place to look quite effective.

The posters were soon carefully applied and the garage stood complete. By this time of course, my five-year old grand daughter Emma was insisting that garages were not just for little boys to play with, so she was allowed to perform her own 'opening ceremony' for my photographic record, prior to the garage being delivered to its rightful owner.



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