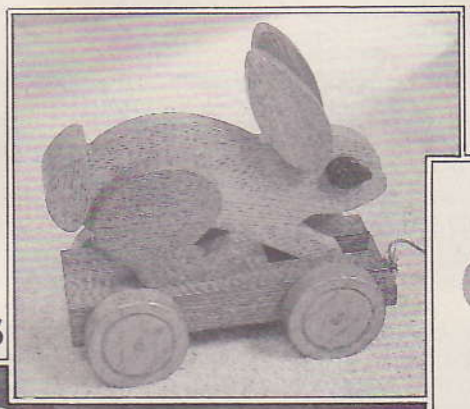
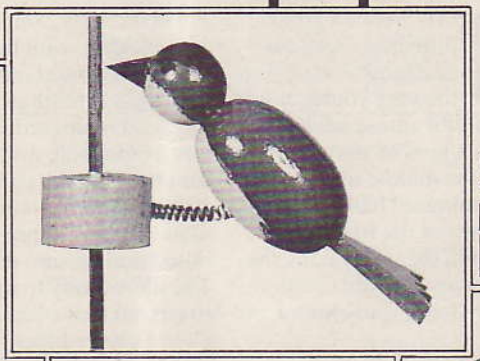
TOYS For Christmas

SEVEN SIMPLE DESIGNS TO MAKE

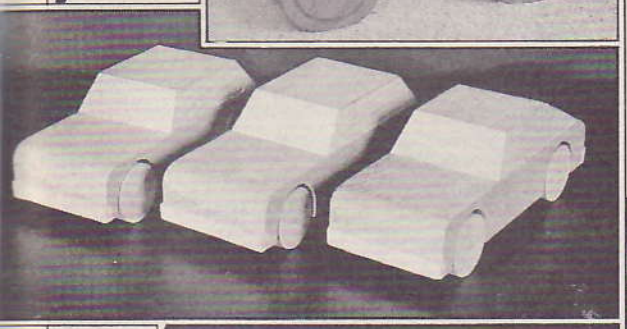


Pull-along rabbit

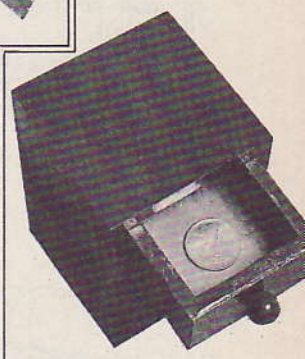
Woodpecker up a post

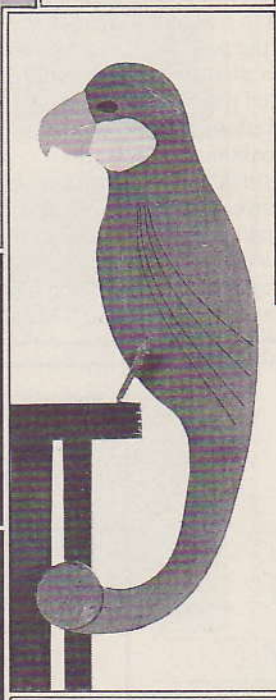


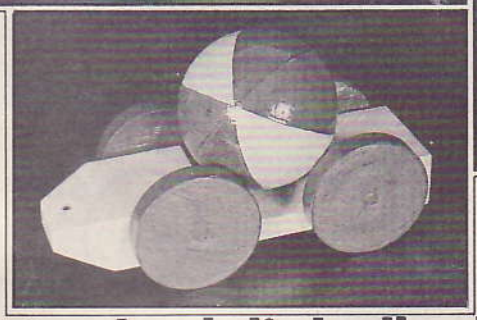
Toy cars



Secret money box







Balancing parrot

Commando climber

Psychedelic ball roller

CHRISTMAS just wouldn't be Christmas without toys for the children, and there are no better toys than simple toys made in wood. They have a texture, feel and durability which far outweigh their modern-day plastic equivalents which never seem to last two minutes. What is more the toy that is made by Dad of Grandad or some other close member of the family or friend especially for one of the kids will be all the more appreciated, played with and treasured.

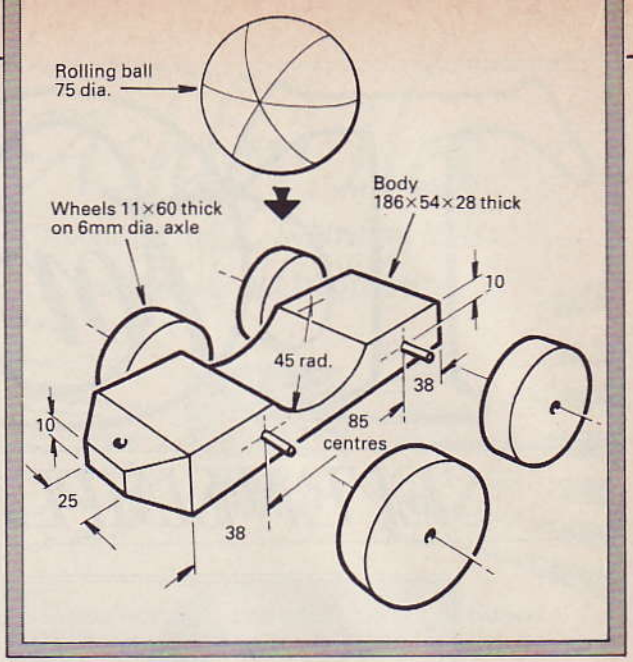
In this special toy feature which has been sponsored by Cuprinol, makers of various wood finishing products including the Enhance range of acrylic varnishes, we have seven designs from David Bryant and Richard Blizzard. They are all simple toys to construct and will make ideal stocking fillers which will give hours of pleasure on Christmas morning and for a long time afterwards.

The toys can be made in different woods, and can be finished with stains, paints or varnishes. However, do ensure that the finish you use is, like Cuprinol's Enhance, non-toxic and safe for use on children's toys especially with smaller children who occasionally put them in their mouth to suck or chew.

TOYS For Christmas

PSYCHEDELIC BALL ROLLER

Here's a treat for the tiny tots with its brightly changing colours dazzling the eye as it's tugged along the carpet



NOW here's a great little pull-along toy designed to appeal to the very young, but it will no doubt amuse adults as well. It's a kind of simple toy truck in the middle of which sits a multi-coloured ball balancing on the rims of the four wheels. As you pull the truck along the ball revolves, and the colours move psychedelically round and round.

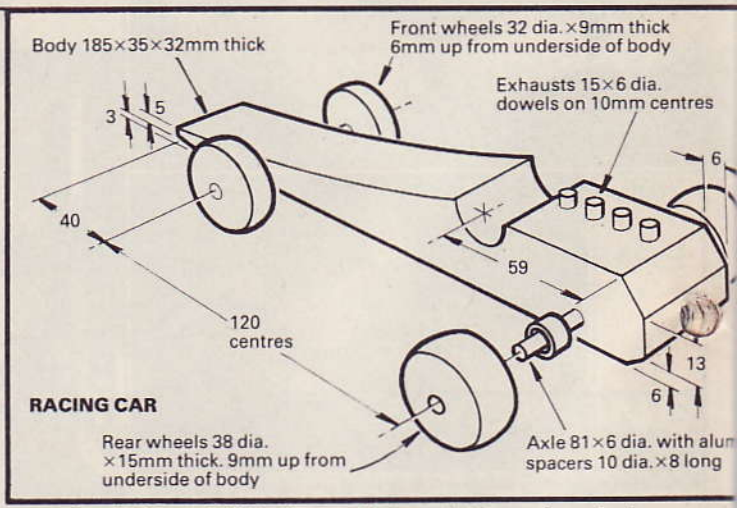
The base is made from a piece of beech 54 by 28mm and 185mm long, with the centre section hollowed out to a radius slightly greater than the ball. One end is tapered in slightly and a 6mm hole drilled through for attaching the pull-along string. The wheels are 60mm diameter and 11mm thick and fit onto 6mm or ¼in. dowel axles. The easiest way to make these is to cut out four blanks with 6mm (¼in.) centre holes, and mount these in a pack on a mandrel on the lathe. They can then be trimmed down to 60mm diameter and cleaned up. The axle holes in the body should be marginally over-size so that the wheels spin freely. The ball is nominally 75mm diameter, and whilst it is possible to buy one, with care you can turn one up on a lathe quite easily. I found it useful to make a semi-circular cardboard templet to the outside form of the ball. As the ball takes shape you can move this template around from side to side checking the form ,

Finish

I chose sharply contrasting colours for the truck, yellow for the base and red for the wheels. The ball also had a base colour of yellow, but with alternating segments of red and blue. Suspend the ball by a thin nail to make the painting of this easier. Finally attach the pull-along string and you're away!

TOY CARS

Cars above all are the classic wooden toys. They are very simple to make and come in easily recognisable shapes for kids to identify. Here's a small selection to be going on with.



YOU know there is nothing to beat a wooden toy car for its appeal to young children especially boys, and even more so if they know that Father Christmas has made it for them! Here then is a super selection, sturdily built and simple to make and ideally suited for the five to ten year olds, although I know from experience that even older children enjoy them too.

I designed mine from car types which young children could instantly recognise and easily identify with. The types include a saloon, hatchback, estate car, sports car, coupé, and a Mini. There are several other simple variants such as a police patrol car, a Dormobile, a pick-up truck and a racing car. Finally I've thrown in a trailer. What more could you want?

Most of the cars use a simple two-slab construction, the body being 32mm thick and the top 22mm thick. The wheel size generally used is 32mm diameter except for the racer and the trailer which are slightly different. About the only fussy part requiring just a little care is the preparation of the wheel arches, and for this I use a hole saw. The way I usually do this operation is first to drill both axle holes right through the body of the car, taking care to align them correctly. It is much easier to do this before the top is glued onto the body. The hole size is either ¼in. or 6mm diameter. These holes are then used as pilots to guide the hole saw in from either side to cut the four wheel arches. Surplus body material is then removed.

There are two options for the axles either hardwood dowels with the wheels glued on, or steel rod with external knock-on spring caps. My own preference is to use dowels because I feel it gives a more natural appearance. Before gluing on the wheels make sure the axles spin freely in the body holes. I usually counterdrill these slightly larger to eliminate problems here.

With regard to finishing them this really is a personal matter. I prefer a natural or stain finish and varnish to keep out the dirt. However I have seen some really excellent painted examples, made by 12 to 14 year old boys working from these drawings.

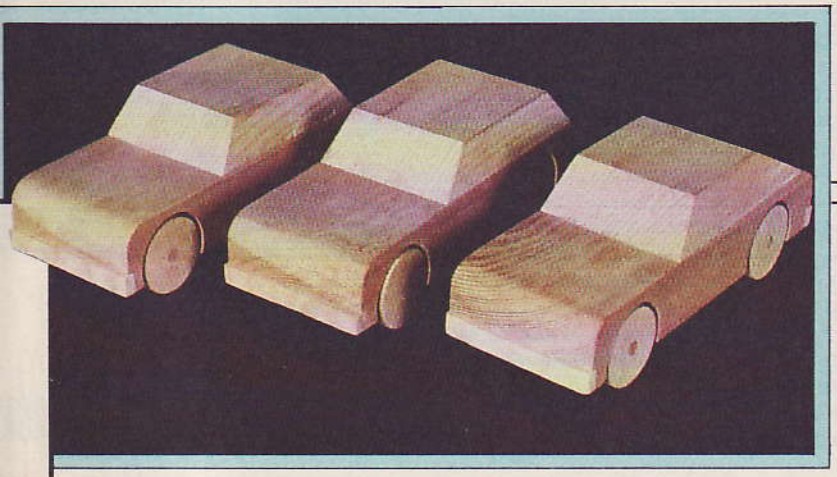
Finally, with regard to the choice of hardwood I would recommend beech as a good strong utilitarian wood.

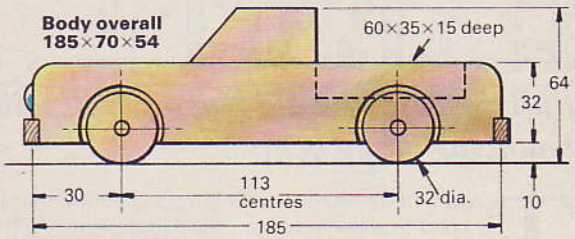
SPECIAL TOY FEATURE

Practical WOODWORKING

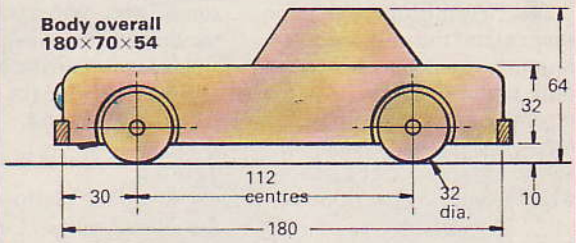
CUPRINOL

DESIGNS BY DAVID BRYANT & RICHARD BLIZZARD

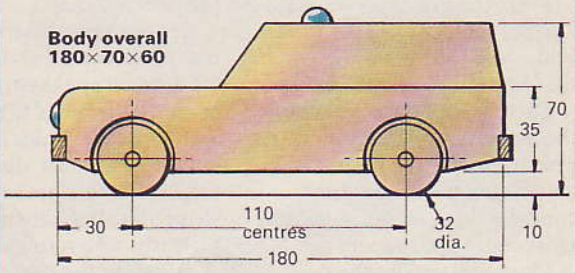




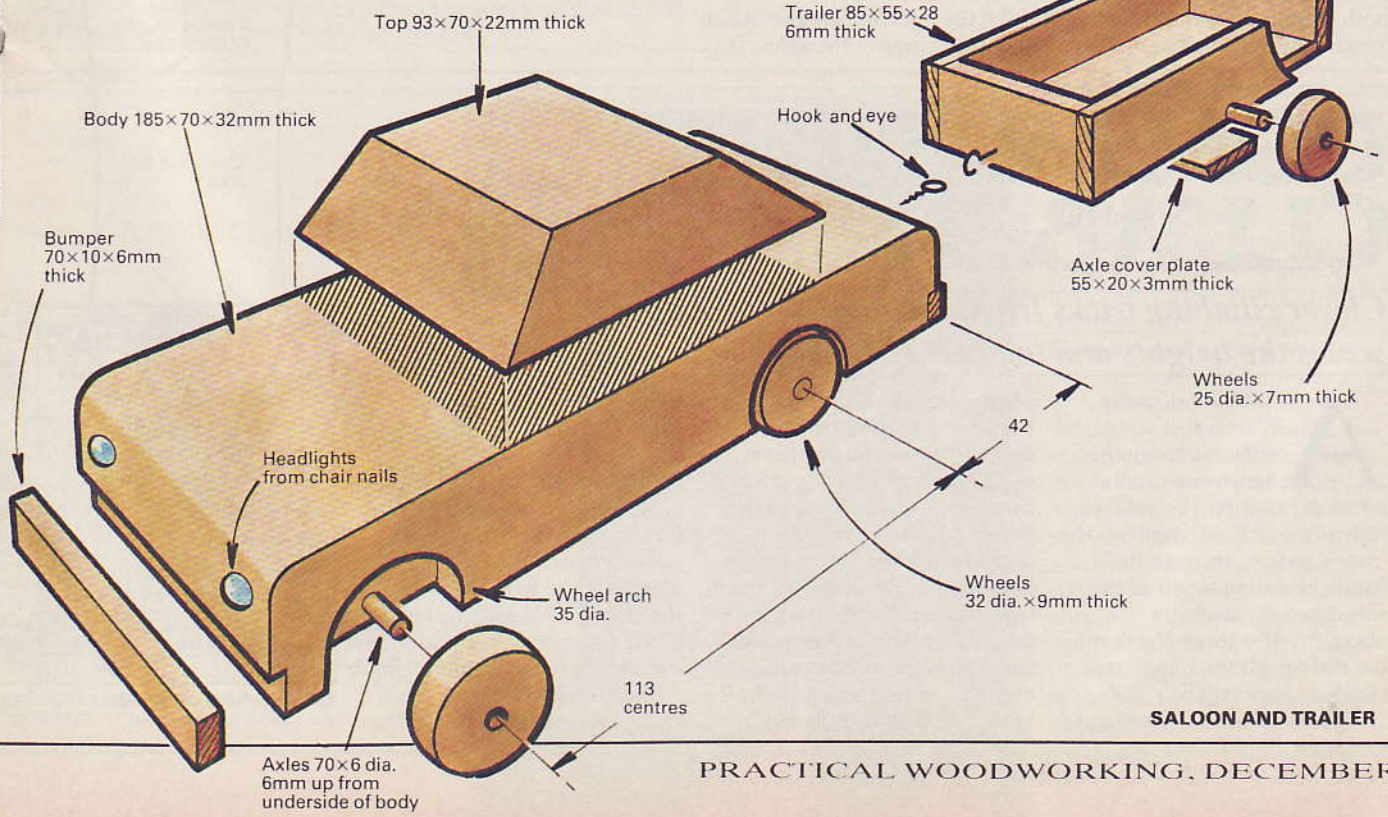
PICK-UP TRUCK



SPORTS CAR



POLICE PATROL CAR



SALOON AND TRAILER

TOYS For Christmas

PULL-ALONG RABBIT

Pull the cord and old Hoppity will follow bouncing along behind

THIS pull-along rabbit is a good first toy to try as it only requires basic cutting out of wooden shapes, and the only tools you require are a coping saw, hand drill, tenon saw and screwdriver. It has a simple mechanism to make him hop and this is activated by a cam which rotates on the front axle.

Rabbit

From the grid given, mark out a paper template for the rabbit's body, and then use it to pencil the shape onto the wood.

Drill the hole that will hold the legs in place and provide the pivot point for the body. Now cut around the shape with a coping saw and remove the saw marks with glasspaper.

Mark and cut out the two halves of the tail, the ears and the eyes. Glue these into place on the body.

Cut out the legs, but before final shaping tape them both together with masking tape and drill the pivot hole through both. Cut the dowel rod, onto which they must be fixed, to length and make sure it does not bind in the body. If it does, glasspaper it and rub it with candle wax. When you are sure the body will move up and down freely, assemble the rod, body and legs and glue the legs onto the ends of the rod.

Trolley

Cut out the platform on which the animal will sit. Cut a long slot in the front to accommodate the wooden cam.

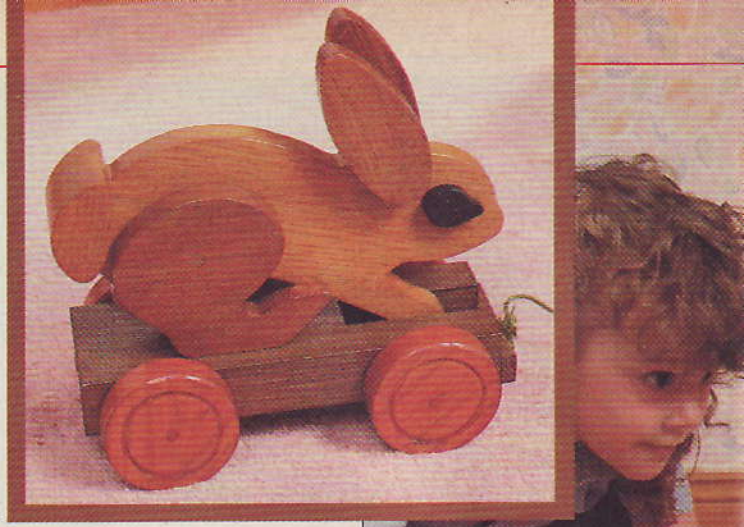
Cut out the two strips of wood that hold the wheels to the platform. Tape them together and drill the holes to take the axle rods. The holes in the front in particular must allow the axle to turn freely. Separate the two strips and attach them to the platform with screws.

Mark out the cam onto a piece of wood and cut out the shape. Very carefully, glasspaper away all rough surfaces. This is very important as a part of the animal's body will be in direct contact with the cam at all times.

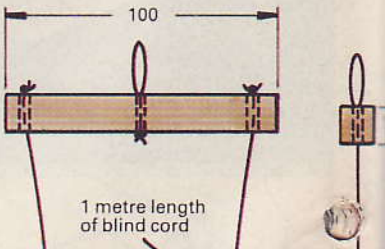
Fit the back wheels and attach the spring caps to the axles. If this is the first time you have used spring caps then you will need to know that you have to file a chamfer onto the axle ends to allow the spring caps to fit.

The front axle and wheels are the same in size but they function entirely differently. This is because the cam is also fixed to the axle and turns as the wheels turn, making the animal resting on top move up and down. The simplest way to achieve this is to clean both the axle and the inside of the wheels with methylated spirit to remove all traces of grease. Now thread the axle through the wheels, trolley and cam and, using epoxy resin glue, glue the cam to the axle (being careful to position it correctly in the middle of the slot). Then glue the wheels to the ends of the axle, and fit spring caps. The front wheels will now turn the cam around and activate the animal, while the back wheels just turn freely on the axle rod.

Finally, glue the rabbit onto the trolley.



This hoppity bunny was made as a slight variation with turned wooden wheels and dowel axles.



COMMANDO CLIMBER

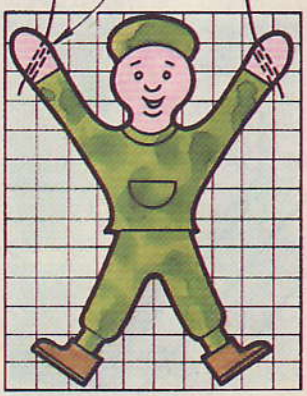
Clever climbing tricks from the commando climber as he scales the heights and then abseils back to base

A GOOD stocking filler is the commando climber which you can have hours of fun with. It's a clever little toy which will climb up the 'ropes' passing through the hands, and then abseil all the way down again. As an alternative for those North of the Border I offer a Scotsman climber in kilt regalia.

To make the body you need a 140mm length of 105 by 12mm hardwood, such as beech. The shape is shown, and a 10mm square background is given to help you transfer the pattern to the wood. Use either a fretsaw or a piercing saw to cut out the body shape. The holes for the two string cords need to be at roughly the angle shown. The string should pass through easily though it must not be too slack a fit. Naturally a commando needs to be finished in full Marine colours.

Stringing up

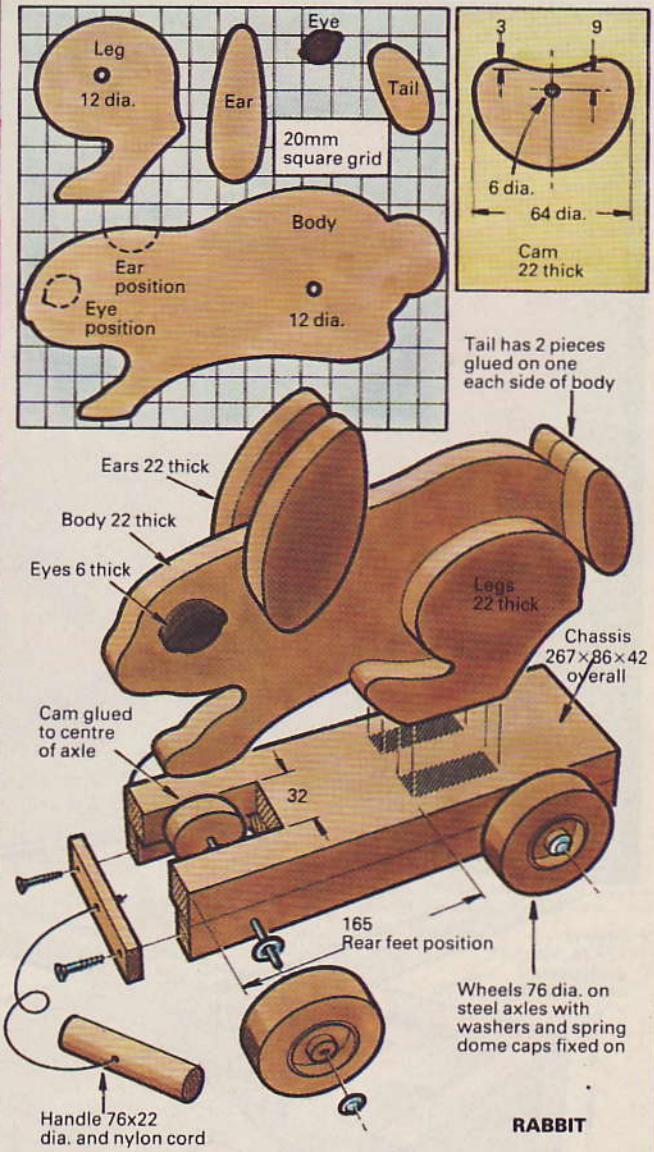
Now for the stringing up. First, attach two string cords about a metre or so long to a 12mm square bar. Thread these through the holes in the hands of the commando and terminate each string with a light pull knob at the bottom. Secondly, fix a string loop to the centre of the



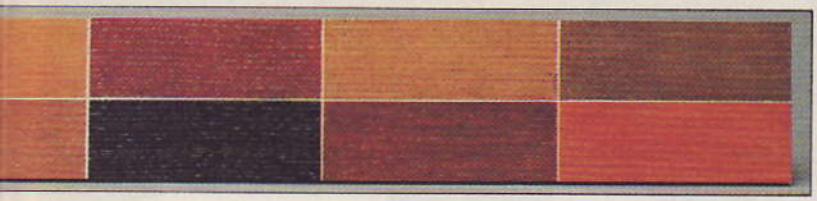
COMMANDO CLIMBER on 10mm square grid

SIDE V

SPECIAL TOY FEATURE
Practical WOODWORKING
CUPRINOL
DESIGNS BY DAVID BRYANT & RICHARD BLIZZARD



RABBIT



Cuprinol Acrylic Varnishes

STAINS have many advantages over paint when used on wooden toys as they provide a safe finish with bright colours with the added advantage of letting the natural wood grain show through. The pull-along rabbit was finished with coloured acrylic varnishes from the Cuprinol Enhance range: Red Mahogany for the wheels; American Walnut for the carriage; Rich Teak for the legs; Mellow Pine for the body; Black Ash for the eyes. The extent of the Enhance range is also shown above (from left to right, top row first): for comparison unfinished ash; Mellow Pine; Maple; English Oak; American Walnut; Clear; Rich Teak; Brown Ash; Brown Mahogany; Red Mahogany.

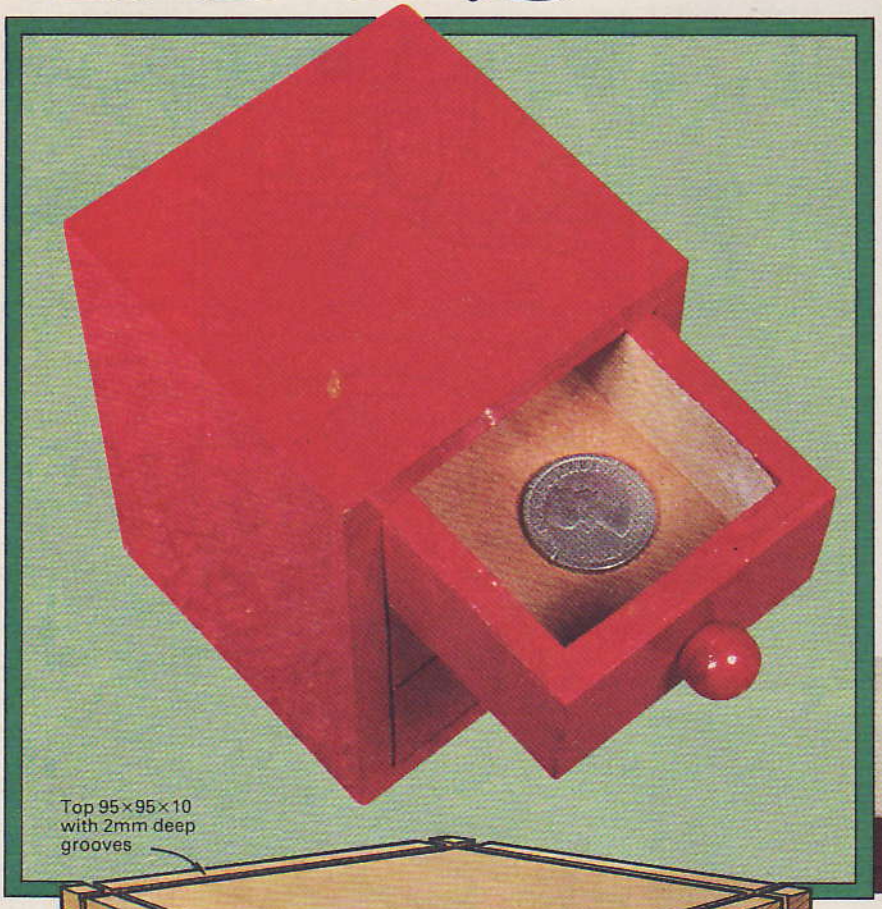
SCOTSMAN CLIMBER ALTERNATIVE

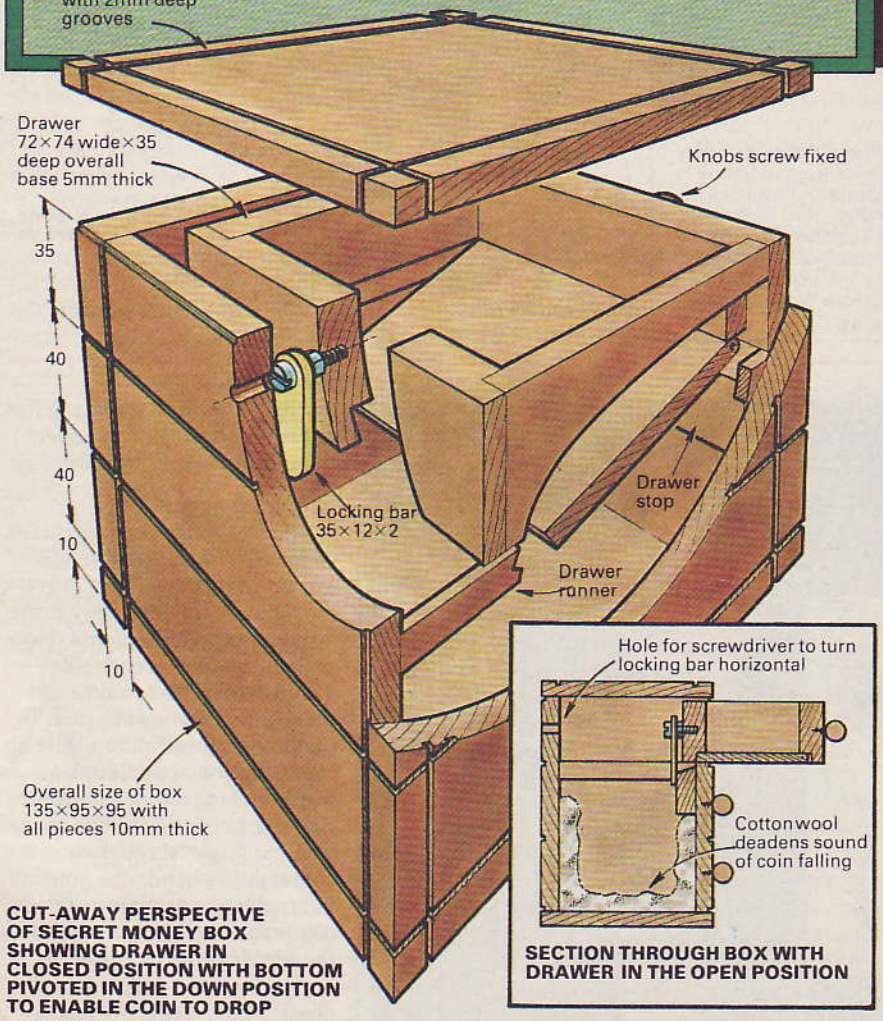
top bar. This is used to hang the bar from a hook or convenient fixture somewhere high up.

Climbing action

The method of operation is as follows. With the commando low down on the strings, grip the light pull knobs firmly at the bottom one in either hand. Now pull alternately on each side. This will make the commando tilt slightly from side to side. In the process it will slide a little up the string you are pulling on, whilst locking on the opposite side due to the kink in the string where it passes through the commando's hands. As you pull alternately on each side the commando will steadily climb to the top. If you now let go on both sides the commando will abseil all the way down again.

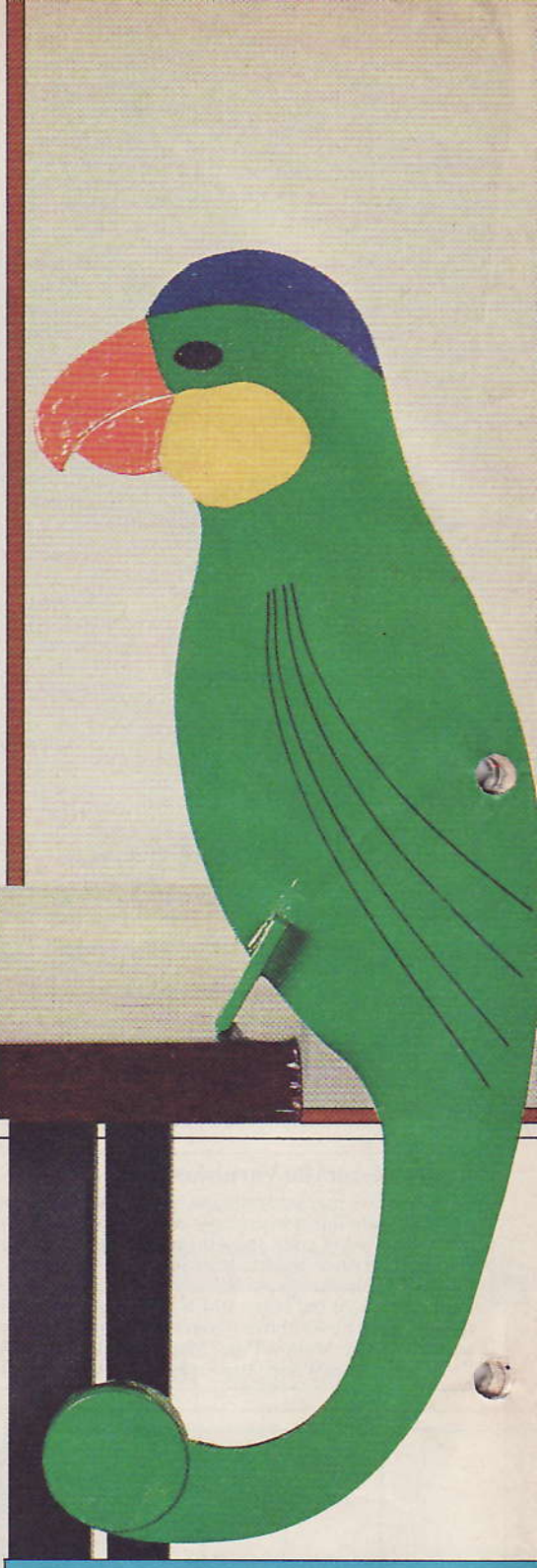
TOYS For Christmas

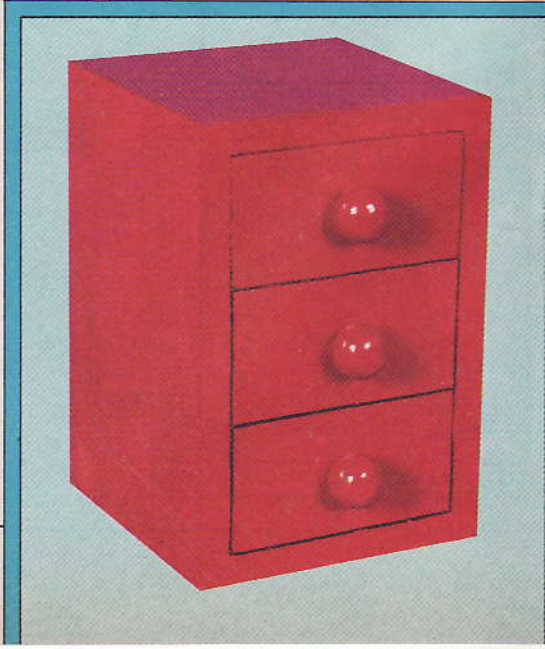




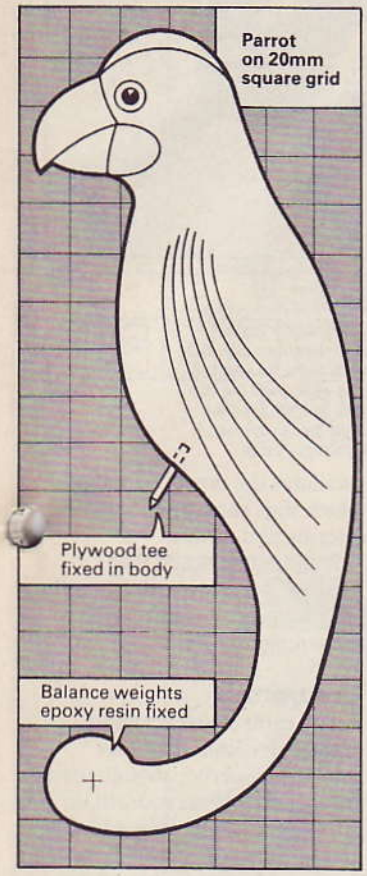
CUT-AWAY PERSPECTIVE OF SECRET MONEY BOX SHOWING DRAWER IN CLOSED POSITION WITH BOTTOM PIVOTED IN THE DOWN POSITION TO ENABLE COIN TO DROP

SECTION THROUGH BOX WITH DRAWER IN THE OPEN POSITION





SPECIAL TOY FEATURE
Practical WOODWORKING
CUPRINOL
DESIGNS BY DAVID BRYANT & RICHARD BUZZARD



BALANCING PARROT

Colour and movement are sure favourites with children and what better way to catch a kiddy's eye than with this delightful rocking parrot.

BALANCE toys are always popular, and the parrot perched on a ledge is an old favourite. All you need to make this green liveried Amazon parrot is a small piece of 4mm or 6mm thick plywood for the body and feet, a good artist to draw and paint the parrot shape, and a suitable weight to get it to balance correctly.

Pattern

The parrot pattern is set out on a squared background to make it easy for you to transfer the shape to the plywood. Being an engineer I'm afraid my artistic talents are not the world's best so forgive me if the realism leaves something to be desired.

To minimise edge splintering cut the shape out using a fretsaw with a fine blade. I found a piercing saw gave the best result requiring the minimum of cleaning up afterwards. A drum sander is useful too for cleaning up the concave shapes.

Although in reality a parrot's tail feathers are relatively straight, in the model they need to curl well under in order to get the balance correct. Metal washers glued on with epoxy resin glue make suitable weights to balance the parrot. The feet on which the parrot balances consist of a piece of 4mm thick 35mm square plywood set transversely across the body and glued into place. You may need to experiment a bit with the angle of the footbar into the body, and also the amount of counterbalance weight needed to set the parrot swinging correctly.

Painting

With regard to painting, the Amazon parrot is a large green bird with a pale blue forehead and yellow cheeks, but two other breeds you might consider are the African grey which has red feathers in its tail, and the cockatoo. The latter is a white bird with a crest rather like a cockerel, only yellow.

SECRET MONEY BOX

Small secrets and harmless tricks are part of the fun of childhood. Learning to save and to value money is also a useful lesson for later life.

BESIDES spending money on toys, children like to be encouraged to save a little too, and where better than a moneybox to put away small amounts. Better still is a 'secret moneybox'.

This one has three drawers or so it would appear. You open the top drawer, put the money in, close the drawer, and on opening it again *hey presto* – the coins have disappeared. It's a toy which never fails to amuse, and it should encourage children to save as well!

Although it has an outward appearance of a simple box with three drawers, the drawing reveals its secret. As you can see, it only has one drawer – the other two just being false fronts. Also the drawer which opens has a false bottom, which is horizontal when withdrawn but drops downwards when it is pushed in. Any money put into the drawer thus falls to the bottom of the box when the drawer is closed. It's a fascinating little toy to make but one which needs just a little patience to get a smooth drawer motion without any jarring.

Construction

The construction is basically a box made from 10mm thick plywood, preferably birch multiply rather then stoutheart although the latter will do. In preparing the sides, top, bottom, front and back from a sheet of plywood, it is important to cut these accurately to size. You can rebate the components if you wish but I found it adequate to glue the assembly together without this. Because it is a closed box and difficult to access afterwards, it is suggested that the two 10 by 3mm drawer runners are glued onto the sides before assembly. The drawer stop can also be added at this stage, but more about this later.

Drawer

The drawer is made from plywood remnants, and the false bottom fits into a rebate on all edges, pivoting from the front and being pinned from either side. Do take the trouble to make it accurately for it will work that much better when finished, and the secret can be maintained longer.

Now comes the tricky bit – fitting the drawer into the opening in the box. The drawer stop behind the false drawer front should initially be finished flush with the level of the side runners, such that the false bottom does not yet drop down. This stop should then carefully be pared down internally with a chisel to give just enough slope for the coin to slip off the drawer bottom when closed. Typically the drawer bottom

CONTINUED

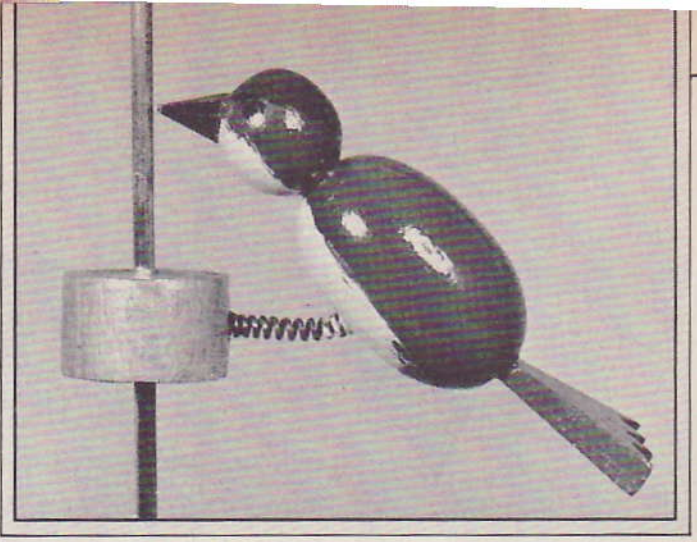
SPECIAL TOY FEATURE

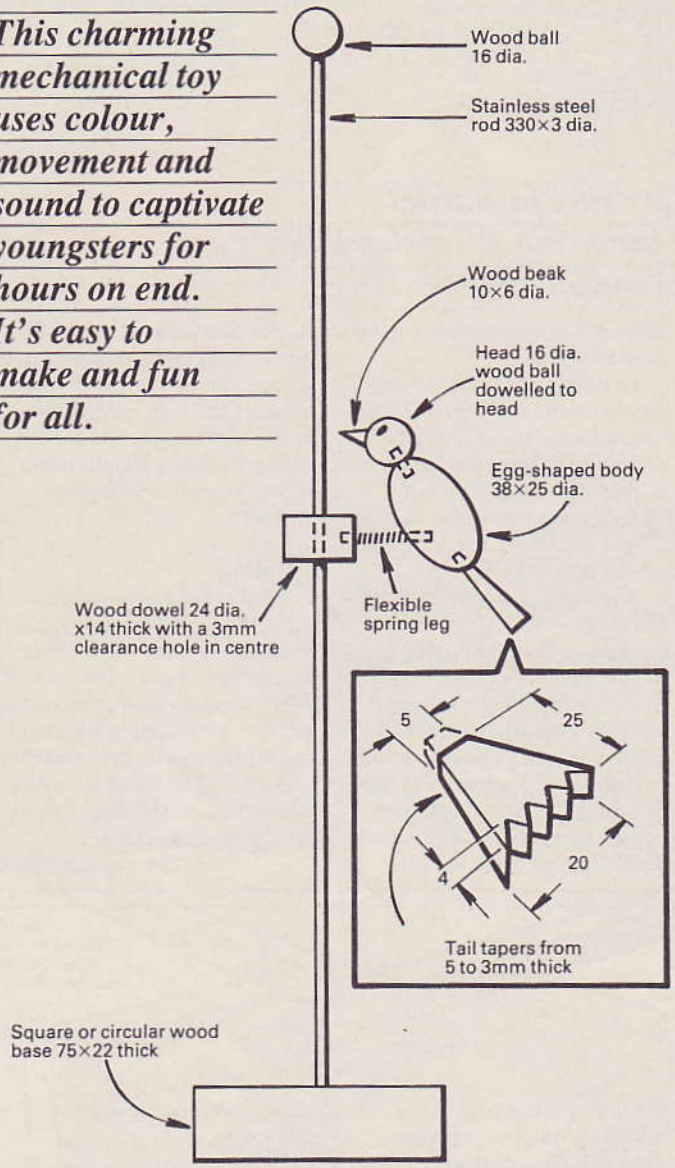
Practical WOODWORKING

CUPRINOL

DESIGNS BY DAVID BRYANT & RICHARD BLIZZARD

This charming mechanical toy uses colour, movement and sound to captivate youngsters for hours on end. It's easy to make and fun for all.





WOODPECKER UP A POST

A POPULAR novelty toy is the post-pecker. This is commonly made in the form of a small wooden bird which is arranged so as to peck its way down a small rod fixed into a wooden base. As it vibrates down the rod, it makes a small pecking noise as the beak hits the rod each time.

The principle of the woodpecker motion is as follows. The woodpecker itself is mounted on a small spiral spring which in turn is fixed to a wood disc or dowel. This dowel has a hole in the centre which slides along the steel rod. To make the woodpecker peck its way down the rod this centre hole is made marginally over-size. If you now tweek the woodpecker it will commence the pecking motion and as the spring rebounds the bird, it oscillates the dowel on the post which thus slips down with an intermittent motion.

It should be noted that because it is a toy with a number of small parts it is not suited to the younger child.

Construction

The centre post is ideally made from 3mm diameter stainless steel rod, though plain mild steel or brass rod will do if the former is unobtainable. The ideal spring connection between the woodpecker body and the sliding dowel is a piece of coiled spring wire of the type used to hang up net curtains. All the components should be glued together with a strong epoxy resin adhesive such as Araldite. Make sure the ball on the top is securely fixed so you don't have any accidents. Finish the bird in woodpecker livery.

SECRET MONEY BOX

CONTINUED

need only tilt 15mm or so, no more. It helps to make this a slight curve. If you make the tilt more than this, the drawer movement may be difficult to pull out. This is because the forces trying to push the drawer bottom level will then act too close to the pivot point. If the motion is jerky, ease this with a little candle wax and even wax the bottom of the drawer inside to encourage coins to slip off when the bottom tilts.

When the drawer works smoothly, move on to complete the finishing touches, i.e. the locking bar which stops the drawer being removed except when it is required to empty the money box. This is achieved by putting a screwdriver through a hole in the back to twist the locking bar horizontal. Line the inside of the box with cotton wool, foam or other shock absorbing material to deaden the noise of any coins falling to the bottom. Add the three knobs externally, then groove the box externally the thickness of one ply using a Stanley knife or equivalent to simulate the effect of the front having three drawers. If you want, you can carry this round on all sides for effect. Finally, finish the box and blackline the grooves to highlight the false drawer divisions

Finishing

Although traditionally children's wooden toys have usually been either finished in clear varnish or paints a really exciting new range of clear and coloured acrylic varnishes is now available from Cuprinol. Known as the 'Enhance' range they are low odour, quick drying, easy to apply, and brushes can be washed out in water. They are safe for children's toys and bring out the wood grain beautifully as can be seen on the Richard Blizzard rabbit design on page 48.

Free booklet

When purchasing Cuprinol products from your local dealer there is available from the 'point of sale' display a free booklet entitled 'The Complete Guide to Woodcare' which gives full details of the 'Enhance' range along with the rest of Cuprinol's products.