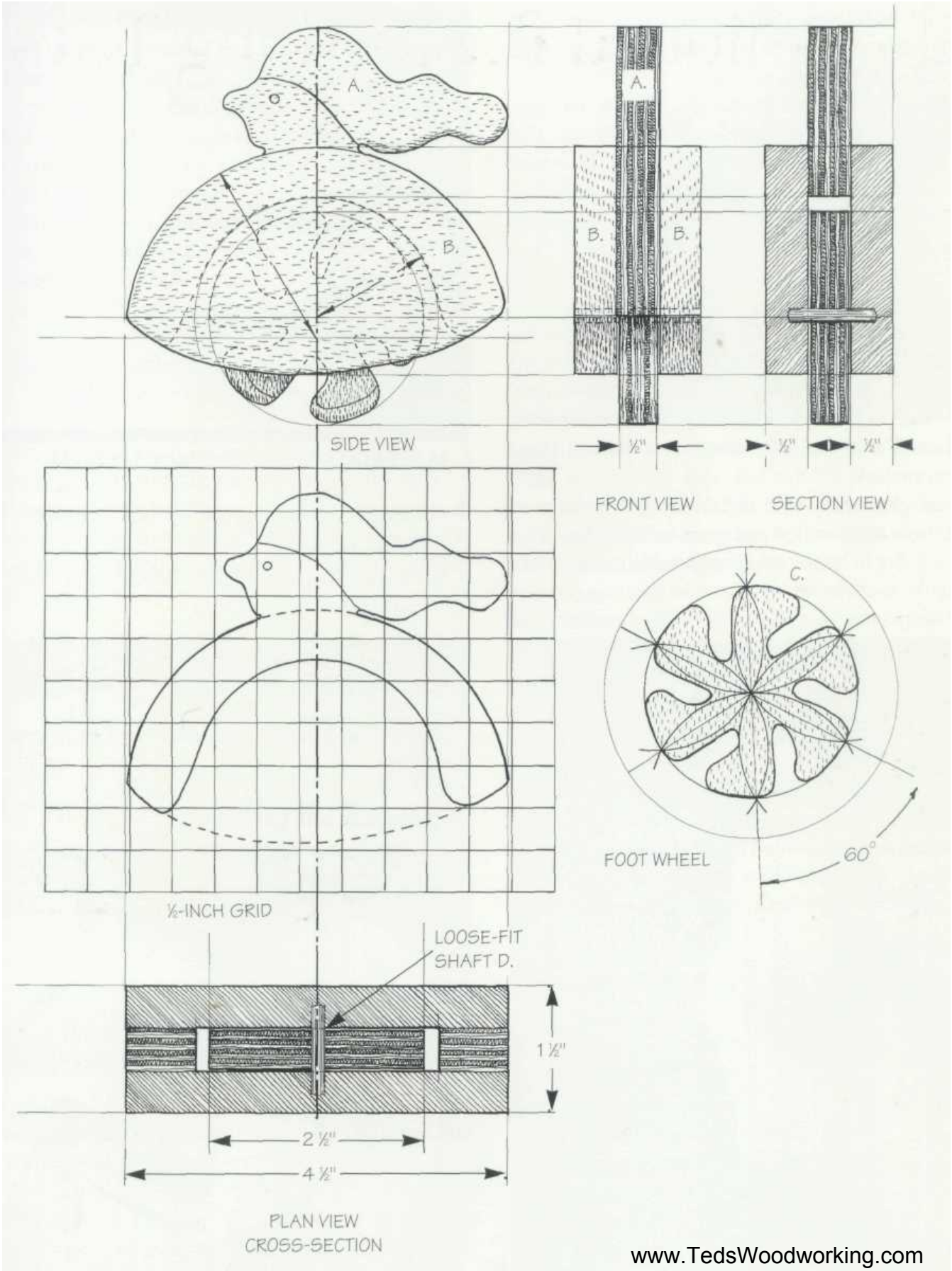
Old-Fashioned Push-Along Toys

RUNNING ROSY

A doll to kiss, a doll to cuddle—at some time or other, most of us have sought the cozy, clinging comfort of a toy doll. Running Rosy is something more than a doll. She's a sort of doll in a hurry, the perfect push-along-the-carpet plaything for younger kids. This is a beautiful plaything, a real delight for kids and adults alike. She's strong, easy to make, nicely rounded for "learning" hands, but best of all, her wheel-turning movement is just right for active toddlers who like to push toys along the floor. If you are looking to make a unique toy for a unique kid, then this is the one.

MAKING THE TOY

When you have carefully studied the working drawings, take the tracing paper, a pencil, ruler and compass, and carefully set out the design on the wood. If you are going to stay with my choice of materials—plywood sandwiched between solid wood—then you need six cutouts in all: two solid wood outside body parts, two plywood head and body spacers, and two plywood foot-wheels. If you are wondering about my choice of materials, it's pretty straightforward and logical. While the head-and-body spacer and the wheel need to be strong in all directions across the grain, they also need to be safe for kids,



as well as relatively easy to work with a coping saw. All things considered, we thought that best-quality 1/4"-thick multi-layer plywood was a winner on many counts. It's strong, it's stable, it's easy to cut, and it's easy to bond layers together to give extra strength.

When you have made all the cutouts, rub the two foot-wheels down to a smooth, round-edged finish—so that they are smooth to the touch and the total two-wheel thickness is something less than 1/2″. Next, establish the position of the pivotal dowel holes through the wheel and into the inside face of each solid wood body part. Then drill them out with a bit size that gives you a slightly loose fit for your chosen dowel.

To assemble: Glue one body part to one side of the central head-body spacer. Set the two foot-wheels in the cavity so that the feet are facing in the correct direction. Slide the dowel in place, and, lastly, glue the other body part in place so that the foot-wheels and pivotal dowel are nicely contained.

When the glue is dry, rub the whole works down so that the corners are rounded and good to hold. Aim for a form that is going to be safe and comfortable in a toddler's hands. Finally, use watercolors to tint in the imagery, give the whole works one or more coats of clear varnish, and the toy is finished.

SPECIAL TIP

Wooden toys must be childproof! Being mindful that toddlers are, at the very least, going to stick the toy in their mouths, it's most important that all the fixtures, fittings and materials be totally secure and nontoxic. Perhaps most important of all, the wood must be splinter resistant. With all this in mind, we chose to use multi-ply for the central layer and for the wheels, for the simple reason that it's easy to work, good to touch, strong across short grain "necks," and it glues and finishes well.

Don't think you can cut costs by using the coarse-centered plywood that goes by such names as "block ply," "stout heart" and "Malaysian." I say this because plywood of this type and character tends to be difficult to work, soft, almost impossible to sand to a good finish, and prone to splintering. No, when we say "multi-ply," we are specifically referring to the type of plywood that is built up in thin 1/16" layers or veneers. A plywood of this character has a smooth, white, close-grained face, it's tremendously strong and it's great to work. Ask for "best-quality, multi-ply, multilayer or multi-core plywood," and don't be talked into anything else.

Note, a sheet of 1/4"-thick multilayer plywood should be made up of four or five thin veneer layers.

MATERIALS LIST

A Head-body spacer (2)	¼″×5″×5″ plywood
B Outside body parts (2)	½″×3″×5″ solid wood
C Foot-wheels (2)	¼″×3″×3″ plywood
D Pivotal dowel (1)	¼″ dowel × 1¼″ long

Note that all measurements allow for a small amount of cutting waste.

HARDWARE AND EXTRAS

E Artist's watercolor paints—colors to suit
F Clear varnish

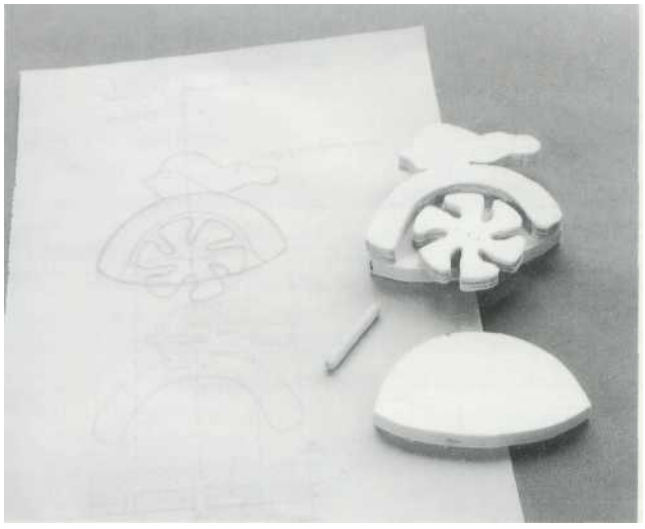
USING PLYWOOD

Best quality multi-ply is a first choice material for small cutout type toys. It is *amazingly strong and it rubs down to a good smooth-to- touch finish.*

STEP-BY-STEP STAGES

1 Check the component parts against the working draw ings. And just in case you are wondering why I opted to use two 1/4"" thicknesses to make up the 1/2"-thick spacer—rather than a single 1/2" thickness—the simple answer is that I had lots of pieces of 1/4" ply that needed to be used up.

2 Fix the two wheels together with a piece of double-sided sticky tape and rub them down so that they are slightly less than 1/2" in total thickness. The use of the tape not only ensures that both wheels are identical, it also makes them easier to handle.



3 Test the wheels in the body cavity. They need to be an easy loose-turning fit. Note that in this test run I have the feet running in the wrong direction!

4 Rub the whole works down to a smooth finish. Close your eyes to test the finish—it's vital that every surface, edge and angle be supersmooth to the touch.

RUNNING REG IN HARDWOOD

Kids are so perceptive! When our Rosy toy was finished and up and running, I took it around to the 5-year-old girl next door for a bit of no-nonsense, in-depth criticism. Of course 1 was expecting a little bit of praise, but, oh no. All she said was, "But. . . where is running Reg?" So there you go, we had no other option but to make a Running Reg toy.

COUNTERCHANGE CUTTING

The clever thing about this project is not so much the design, but rather the way the two contrasting thicknesses of wood are cut and then counterchanged. It's an amazingly simple but subtle technique. All you do is sandwich two contrasting sheets of wood together, fret the design through both layers, and then swap the cutouts around so that the cutouts are contrasting.

PROCEDURE

Take the four pieces of wood—the sycamore, the mahogany, and the two pieces of plywood—and use the double-sided sticky tape to make a sandwich that has the plywood as the filling. When you are happy with the arrangement, carefully press transfer the traced imagery through to the sycamore side of the sandwich. Use the scroll saw to fret out the outside profile. This done, ease off the outside layers—the sycamore and the mahogany—and stick them together.

Cut out the **plywood** inner shape and the wheels. Then comes the very clever procedure of counterchange cutting. The method is beautifully simple. All you do is take the two profiles— the sycamore and the mahogany, all nicely stuck together with the double-sided tape—and saw them down into all the little parts that go to make up the design. For example, with this design I ran cuts through at either side of the hat band and under the chin. All you then do is swap the cutouts around and put the toy together in much the same way as already described.

MATERIALS LIST: OPTION

A (1) Prepared sycamore or maple wood—½″×5″×6″

B (1) Prepared thick dark wood—I used a piece of salvaged mahogany—½″×5″×6″

C (2) Pieces of plywood—¼″×5″×5″

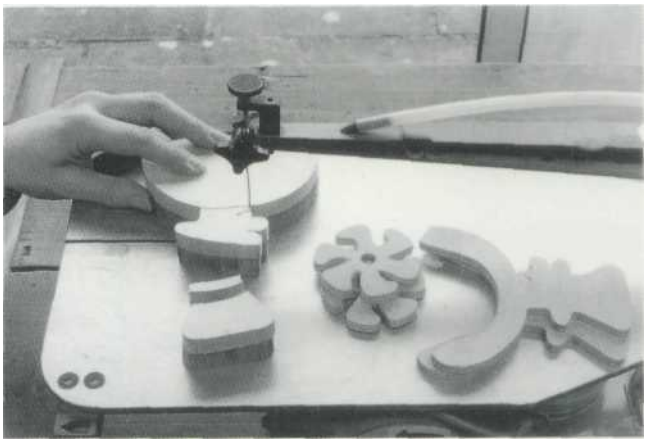
HARDWARE AND EXTRAS

D PVA glue

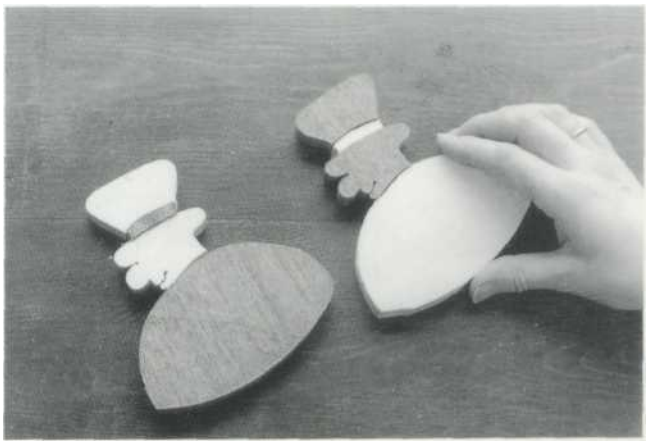
E Yacht varnish

F Double-sided sticky tape

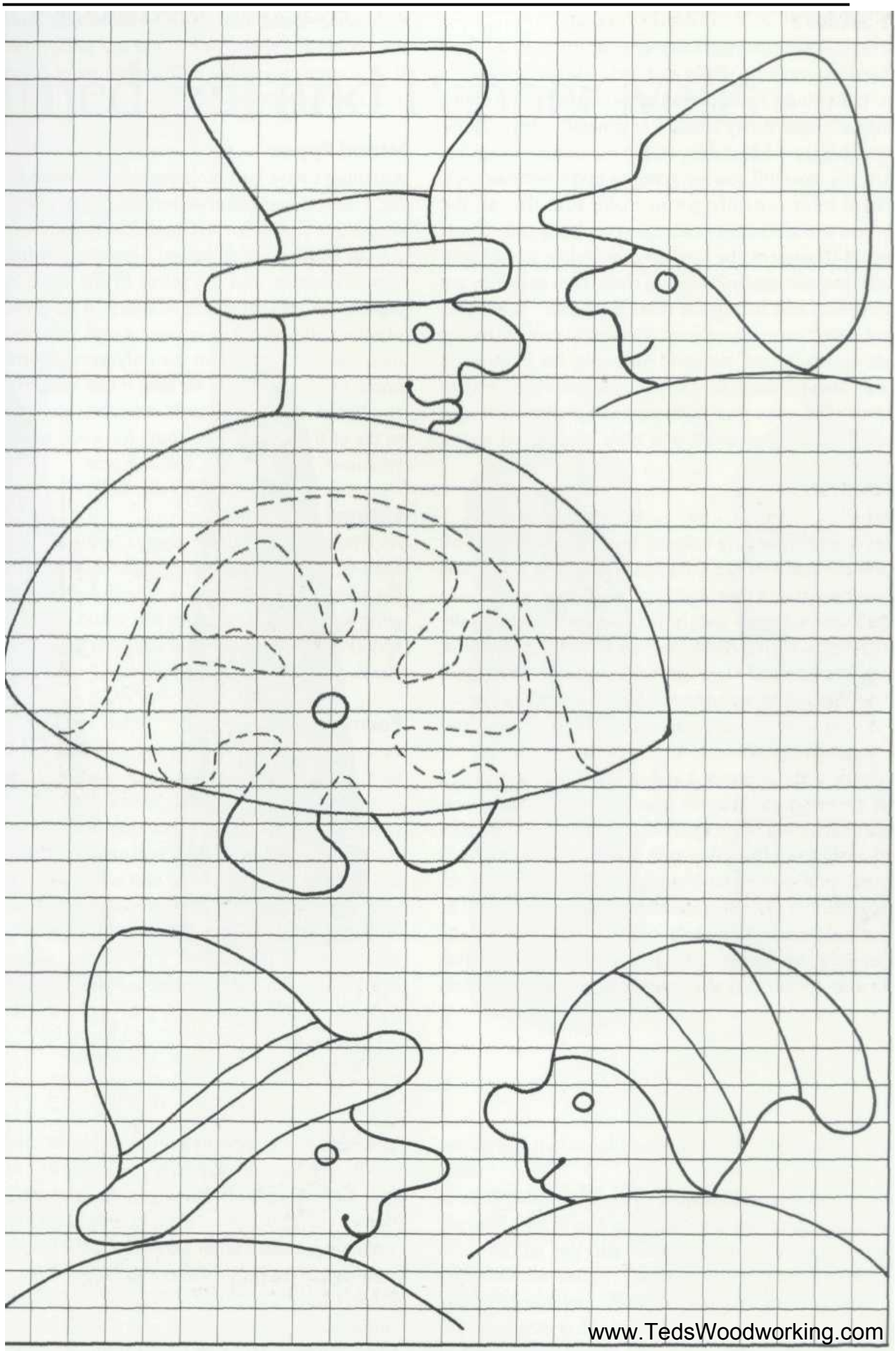
STEP-BY-STEP STAGES



1 Having fitted the very finest blade in the scroll saw, very carefully cut the design down into its component parts. It's important that you use a new, well-tensioned blade and go at it slowly, so that each and every cut is well placed and square to the wood.



2 Ease the layers apart, remove the double-sided tape and counter-change the parts. Note the little cut that goes to make the design of the mouth.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TOY SAFETY

Traditional wooden toys are enormous fun! Woodworkers like making them and kids like playing with them. But you do have to bear in mind that the average, intelligent finger-sticky toddler is generally going to do his level best to push the toy in his mouth and/or up his nose, if not worse! If you are going to make wooden toys, you have most certainly got to make sure that all the structures and all the materials are completely safe. If you are going to present the toys as gifts and/or make them for sale, you are legally bound to make sure that they are "safe, sound and fitting for their purpose." What this means is that you must ensure that every part of the toy is safe—no splinters, no toxic materials, no loose parts that can be swallowed. Be warned, ignorance is no excuse under the law—*you must make sure that everything is safe!* The following will provide you with some good sound guidelines.

Paint

Since kids like brightly colored toys, it's vital that you make sure that you use paints that are completely safe and nontoxic. Yes, your dad's old paint might still be in good condition, and, yes, it would give a wonderfully glossy, hard-wearing finish, but then again, it is almost certainly poisonous! Most old paints contain all manner of toxic mixes, everything from lead and antimony to arsenic. You must set out on the assumption that all old paints are dangerous.

When 1 asked around, I was assured that all modern paints are required by law to meet certain nontoxic, lead-free standards. But when I took it a bit further and phoned a paint manufacturer, they said that though their paints do most certainly come within safe standards, they don't necessarily come up to the standards required by the "Toy Safety" laws. As you can see, the whole area of paints and toy safety is somewhat difficult. I personally think that the best advice is either to use water stains and cover them with water-based varnish or to use acrylic paints. If you are concerned about paints and toy safety, then it's best if you write to various well-known paint manufacturers and ask their advice.

Wood Types

Although I have had no personal experience in this matter, I do understand that certain exotic wood types are dangerous if they are chewed. For example, I read of a case in which a child chewed a wooden toy from a Third World country, and the juices in the wood caused the child to go into some sort of shock. II we err on the side of safety and take it that some wood varieties are toxic, then the best advice is to use only wood varieties that we know to be safe. So, if we take it that modern American and British toymakers know what they are doing, it looks to me as if we should be going for wood types like lime, sycamore, beech, birch, oak and pine.

Fittings

As I remember, kids are always trying to pry their toys apart **in** an effort to find out how they work. This being the case, it's a good idea to avoid nails, small pieces of wire, and component parts that could in any way crack, splinter or shatter. The best advice is to use brass screws, glued dowels and glued layers.

Form

In many ways, the form a toy takes is as important as its substance and structure. For example, if a toy has a component part that is long, thin and spiky, or a part that could be swallowed, or a part that could be inserted into the ear or nose, then it follows that the toy in question has been badly designed. If and when you are designing your toys, or if you decide to modify this one, you must make sure that it's safe. For example, it might be a good idea to extend the walking girl's hair so as to make more of a handle, but the question is—would it be safe?

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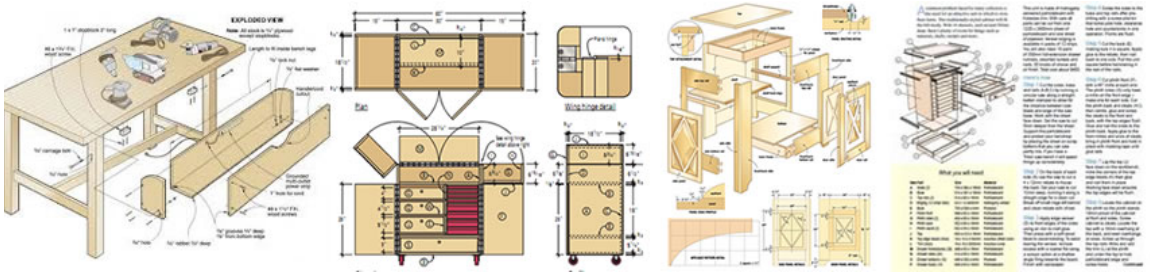

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