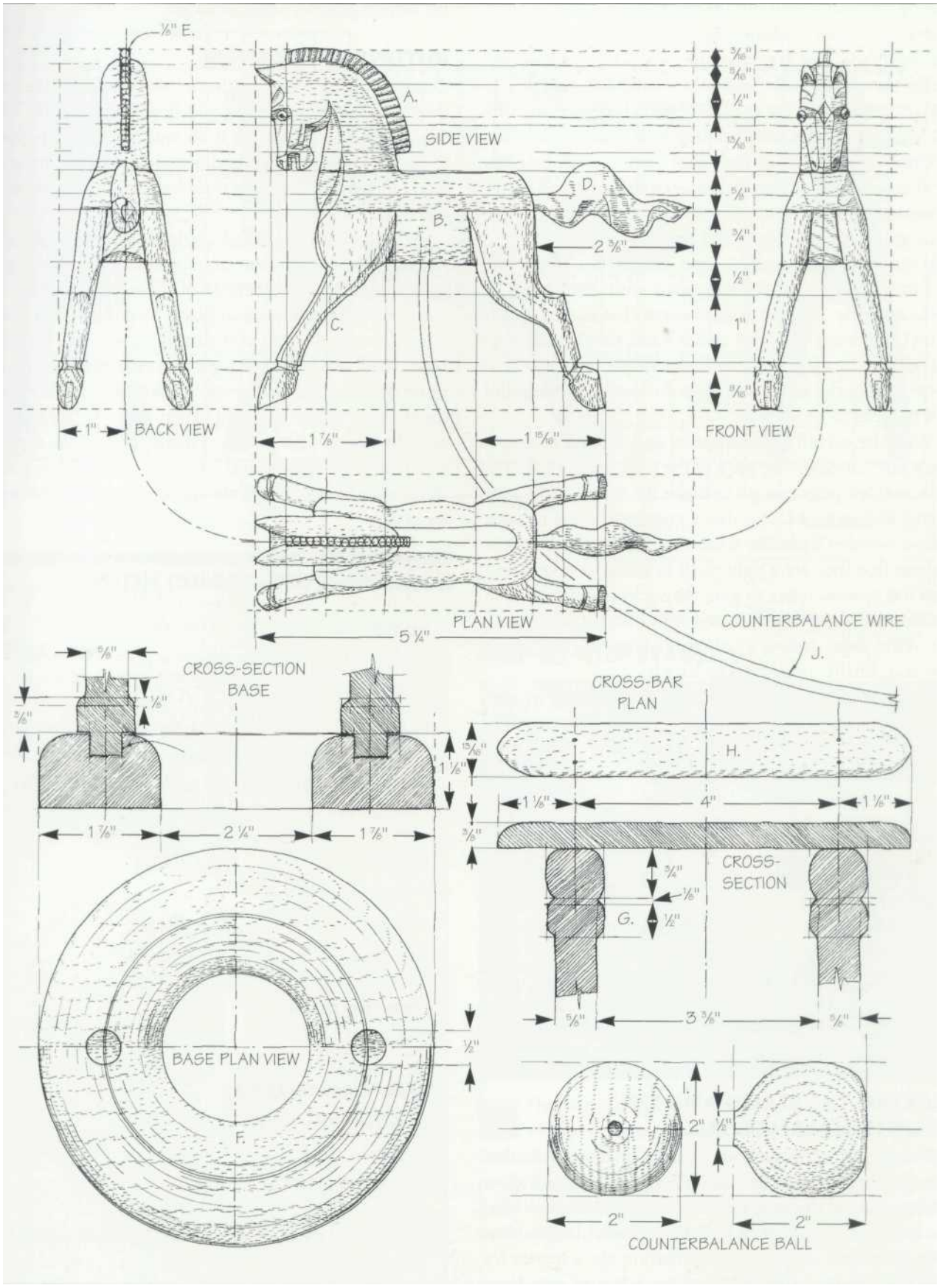
Counterbalance Horse Toy

One of the pleasures of making a traditional toy of this size, type and character is the fact that you can change the specifications, the working drawings, the imagery, and the techniques to suit your own needs and fancies. For example, you might prefer to go for an elephant or a tiger rather than the horse, or you might want a straight-sided slab rather than the turned base. Our advice is to have a good long look at the working drawings and the various photographs, and then either copy our design directly or go your own way and adjust the designs to suit.


⅛" E.
A.
SIDE VIEW
D.
B.
C.
2 ⅜"
3⁄16"
5⁄16"
½"
13⁄16"
⅝"
¾"
½"
1"
3⁄16"
1" BACK VIEW
1 ⅞"
1 15⁄16"
FRONT VIEW
PLAN VIEW
5 ¼"
COUNTERBALANCE WIRE
J.
⅝"
CROSS-SECTION BASE
⅛"
⅝"
1 ⅛"
1 ⅞"
2 ¼"
1 ⅞"
CROSS-BAR PLAN
15⁄16"
H.
1 ⅛"
4"
1 ⅛"
⅜"
¾"
⅛"
G.
½"
CROSS-SECTION
⅝"
3 ⅜"
⅝"
½"
BASE PLAN VIEW
F.
I.
2"
½"
2"
2"
COUNTERBALANCE BALL

MAKING THE HORSE

Having roughly fretted out the shape of the head and the four legs, begin by taking the seven component parts—the head, the four legs and the two body pieces—and gluing them together to make the blank. The best procedure is to first glue the two body parts together, then fix the legs to the body and finish with the head.

Once you have made the blank, then comes the pleasurable task of whittling the horse to shape. It's all pretty straightforward. All you do is round over the back of the neck and body, swiftly model the face and the hooves, trim the legs and so on. Of course, the degree of modeling **will** to a great extent depend upon your knowledge of horse anatomy. But that said, I believe that in the context of toys, the imagery is best stylized and simplified. Or to put it another way, yes, the horse needs to look like a horse, but at the same time you do have to be mindful that it needs to be strong.

With the overall horse whittled and sanded to shape, run a saw cut down the back of the neck and glue fix the little wooden pegs that go to make the mane. After a lot of trial and error, 1 found that a good method is to cut a couple wooden barbecue sticks into 1" lengths, slice the ends so that they are a tight push fit in the saw kerf, and then use cyanoacrylate to glue the sticks one at a time in the slots. When you are pleased with the shape and placing of the pegs, dribble a tad more glue along the whole row and, finally, trim them to length.

When you come to the tail, whittle it to shape as seen in the side view, and then whittle the shape as seen in the top **view.** It is a little bit tricky because the pine is relatively hard and grainy, but you don't have to get too fussed about the precise shape. Lastly, drill two holes in the horse—one for the tail and one for the wire. Then glue the tail into place.

Making the horse is pretty easy, but if you look closely at the photographs, you will see that I needed to correct various mistakes. For example, I needed to inset strips to strengthen the hooves, and I had to glue and dowel-pin one of the legs so as to strengthen the short grain. All I am saying is don't get in a sweat if a leg splits off or something else breaks. Just make a glue-and-peg repair and start over.

MAKING THE STAND AND THE COUNTERBALANCE BALL

The stand can be as plain or as fancy as the mood takes you. As long as the height and placing of the posts allow lor the swing of the wire and the counterbalance ball, and the horizontal crossbar is level and parallel to the base, then the actual shape and construction are a matter for personal choice. I decided to go for a turned ring base, and whittled posts, crossbar and ball, but you could go for turned posts or other changes.

PUTTING IT TOGETHER

Once you have made the horse, the stand and the ball, then comes the frustrating and finger-twistmg, but very enjoyable, task of putting it all together. Start by gluing the posts in the base and gluing and pinning the crossbar. Don't forget that the posts must be parallel and the crossbar level.

Now, having first drilled a hole in the horse's belly and flattened one end of the counterbalance wire, dribble glue in the hole on the underside of the horse and push the flattened end of the wire in place. This done, drill a hole right through the ball and thread the ball on the wire. Next, bend the wire into a gentle curve and position the horse on the crossbar. Try out various curves of wire until the horse is nicely balanced. Then glue the ball in place and clip off the excess wire. Finally, give all the **surfaces** a thin coat of varnish and let it dry. Burnish the whole thing with beeswax, and the horse is finished and ready for action.

MATERIALS LIST–

HORSE

A Head (1)	1″×2″×2¼″
B Body (2)	1½″×¾″×3½″
C Legs (4)	½″×2″×3″
D Tail (1)	⅝″×1″×3″
E Wooden barbecue sticks (2)	⅛″ diameter

STAND

F Base (1)	1½″×6″×6″
G Posts (2)	1″×1″×14″
H Crossbar (1)	½″×⅞″×6½″

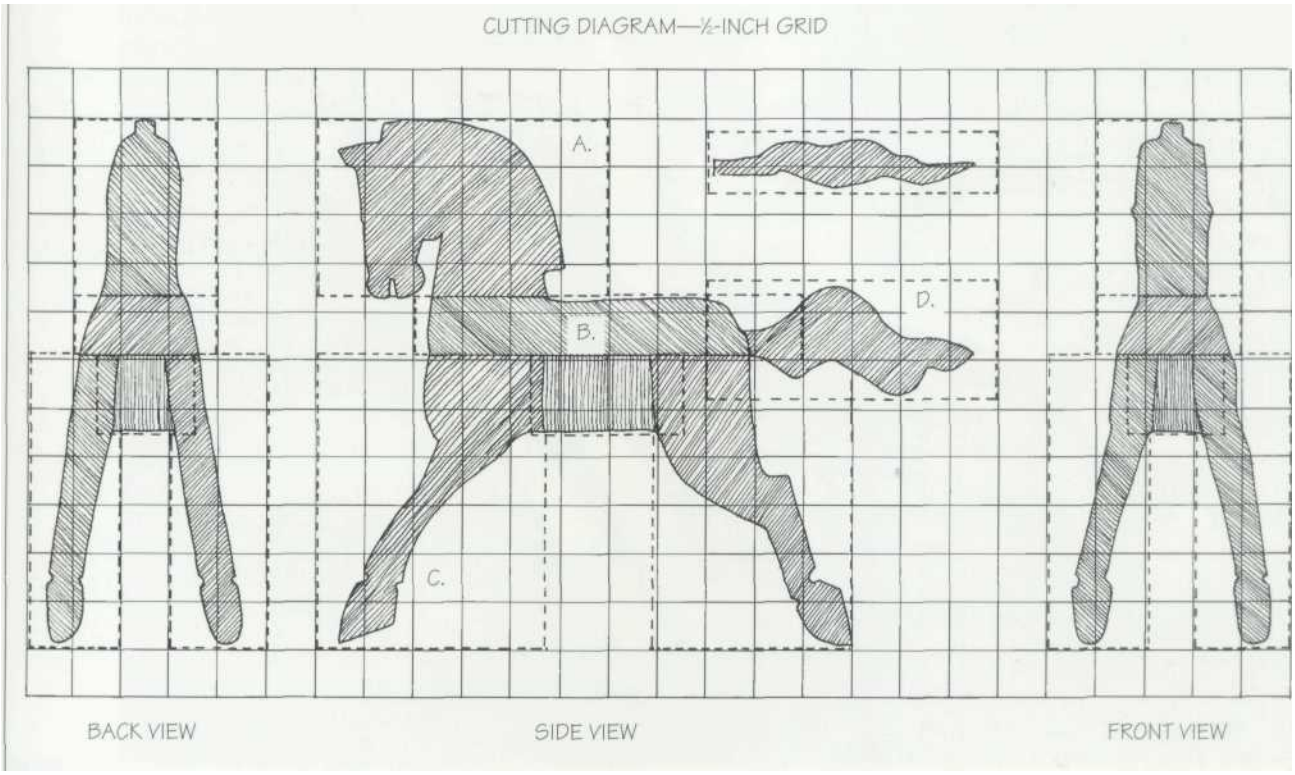
COUNTERBALANCE

I Ball (1)	2″×2″×2″ cube

HARDWARE AND EXTRAS

J Wire coathanger (1)	16″
K Screws and nails	various
L Cyanoacrylate	

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

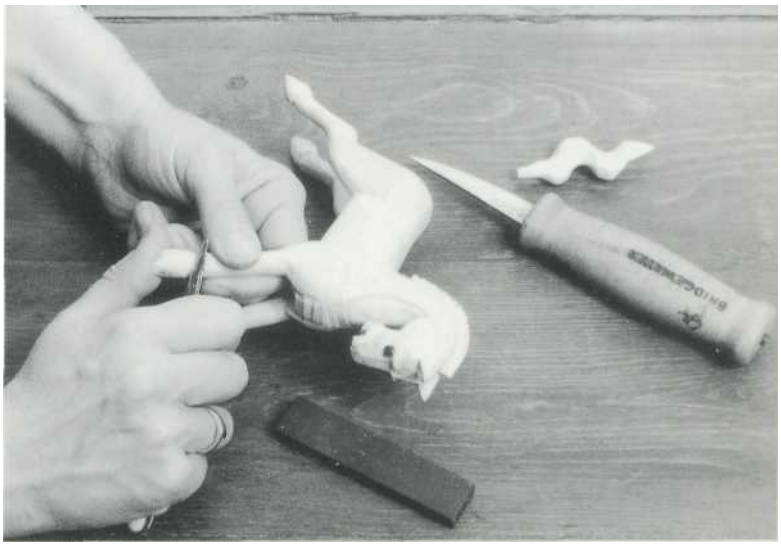


WORKING DRAWING B

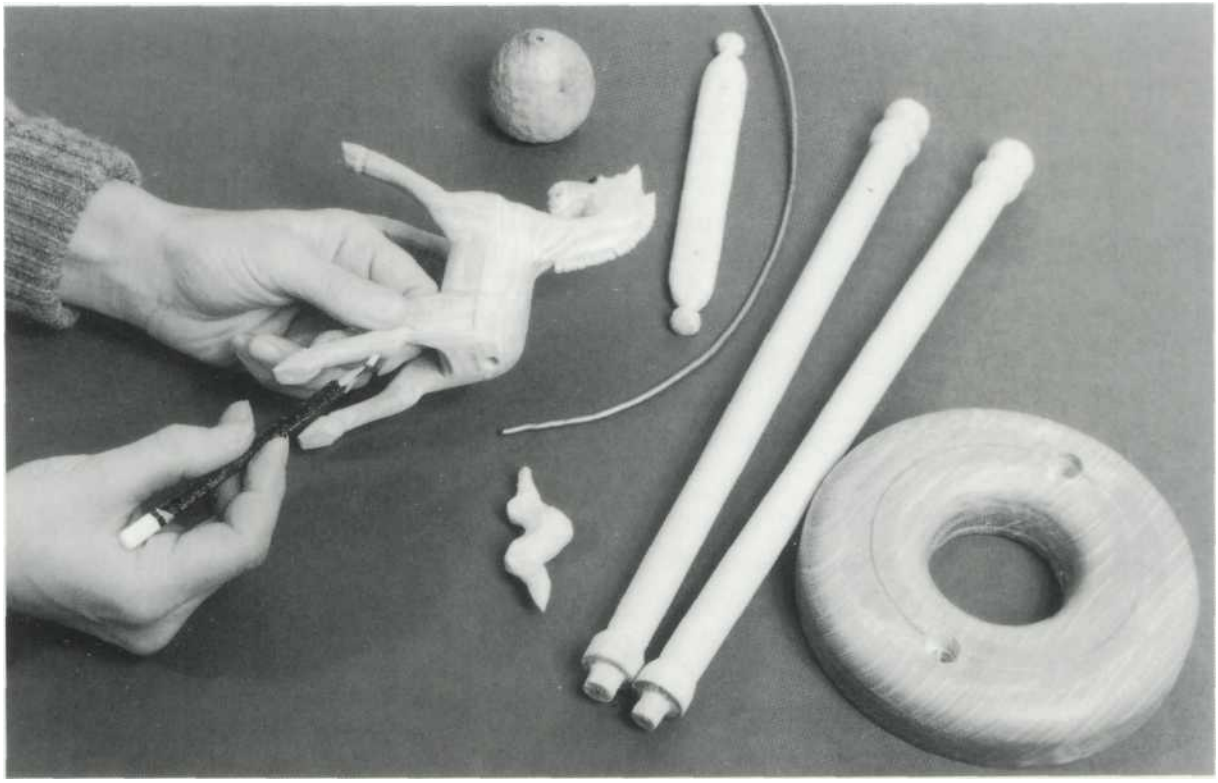
SPECIAL TIP

Gill—my wife and better half—has just pointed out that there are toys for babies, toys for toddlers and toys for adults. She says that while the balancing horse is the perfect toy for an adult—you know the sort of thing, a toy that can be played with at the dinner table when kids, friends and family are looking on—it's not the sort of toy that you give to a boisterous five-year-old!

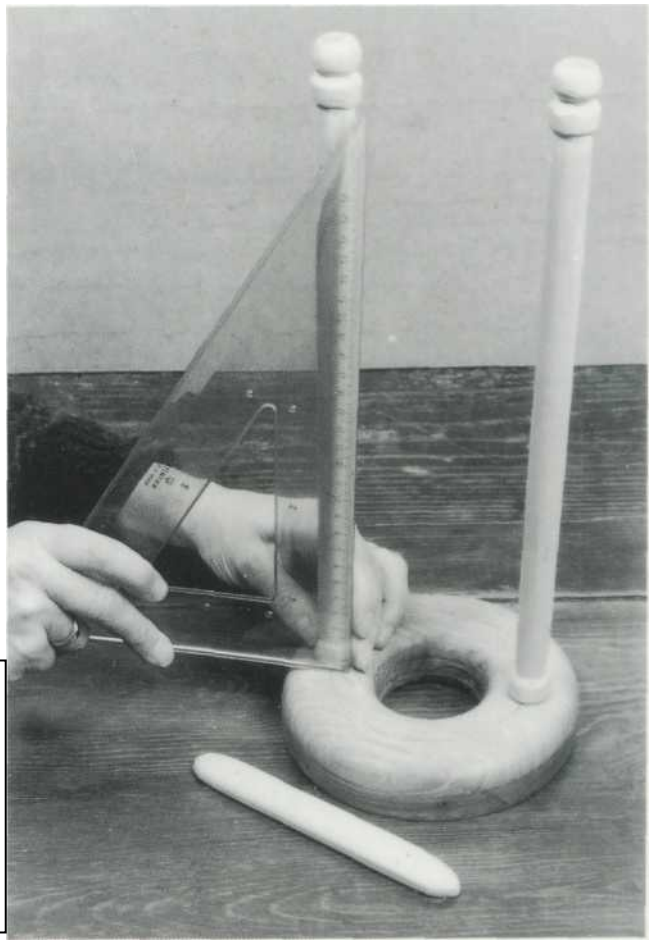
STEP-BY-STEP STAGES



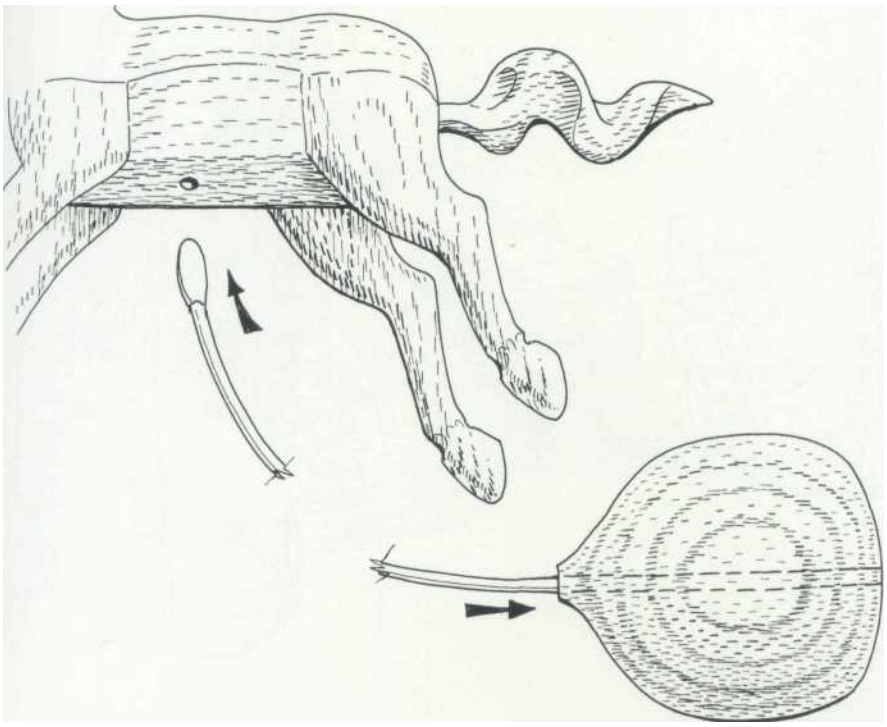
1 Having glued up the blank, use your knives to model the details. Use tightly controlled paring cuts, all the while being careful not to damage the relatively fragile short-grain areas like the ears. Note that I had a trial fitting of the eyes at this stage—I was eager to see how the overall image looked.



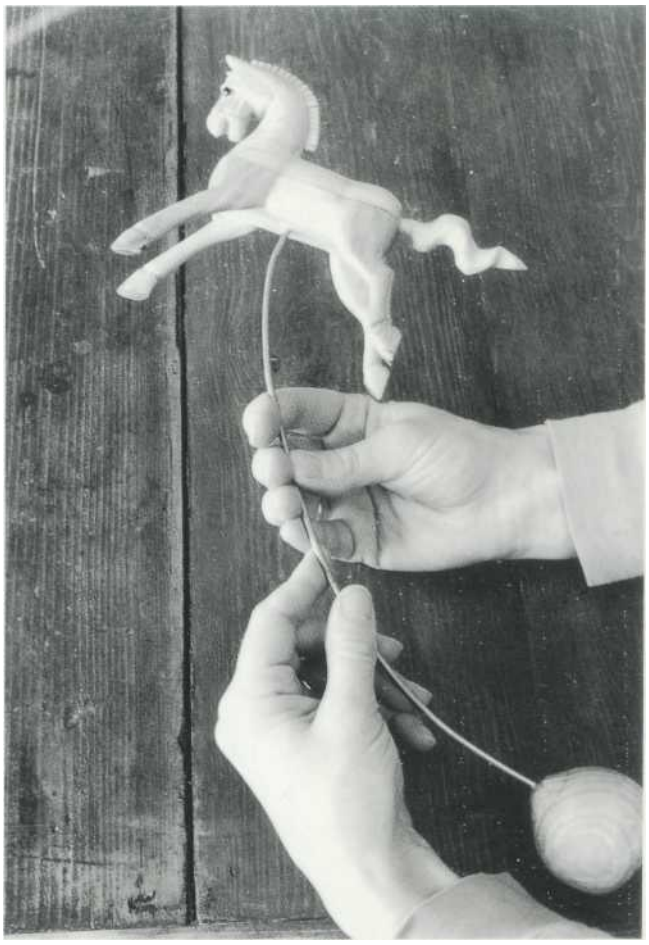
2 I had a bit of trouble when it came to the short grain on the back legs, so much so that I needed to reinforce one of them with a glued dowel. All I did was drill a hole across the run of the gram, dip a cocktail stick in glue and run it in the hole.



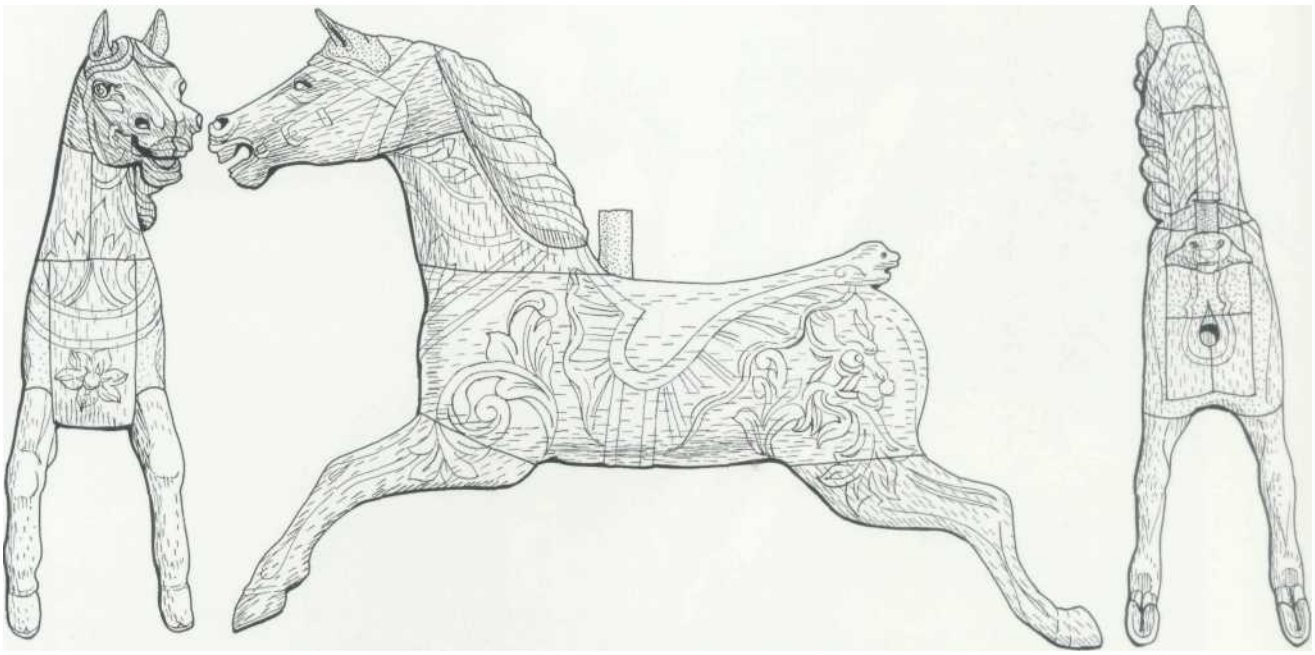
3 When you are gluing up, make sure that the posts are square to the base and parallel to each other. The good thing about using the PVA glue is that the long setting period allows you plenty of time to fiddle and fuss to get it right.



Flatten the end of the wire, smear it with glue, and then force it into the drilled hole (top). Having played around until the horse is more or less balanced, thread, glue and wedge the ball in place (bottom).



Finally, tweak the curve of the wire until the horse is perfectly posed.



DESIGN OPTION

Design for *a single-seater galloper, circa 1895-1905, by J.R. Anderson. We drew a good part of our inspiration for this project from this design.*

DESIGN OPTION

Here's *a head detail from a carousel horse circa 1926, Circus World, Orlando, Florida (lop), and a horse from the Crescent Park carousel, circa 1895, Riverside, East Providence (bottom).*