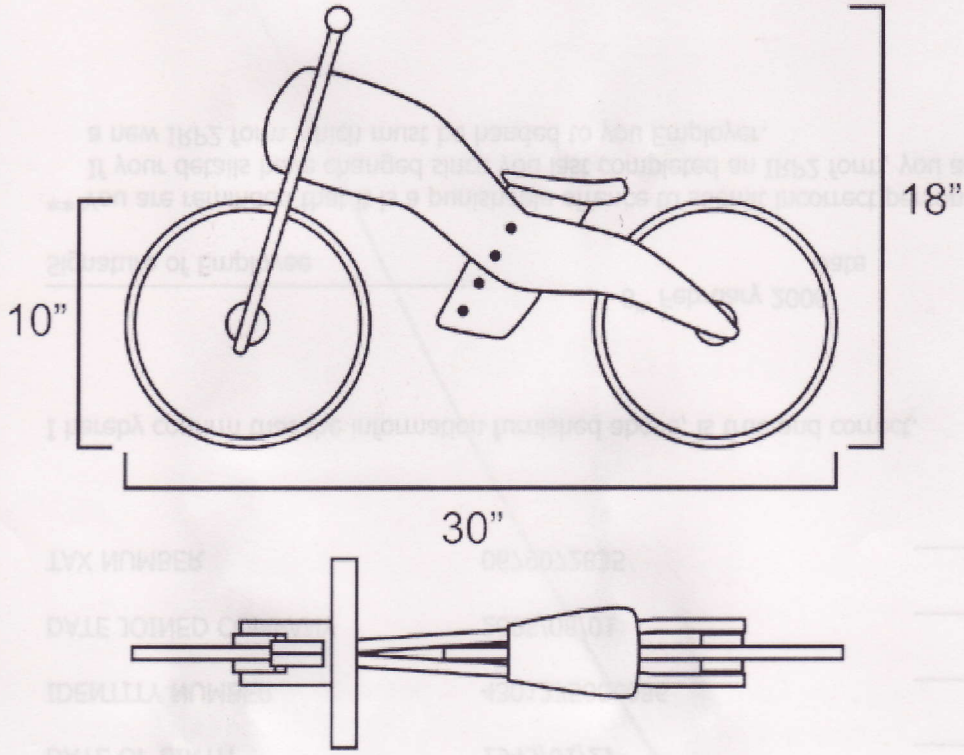
01_diagram

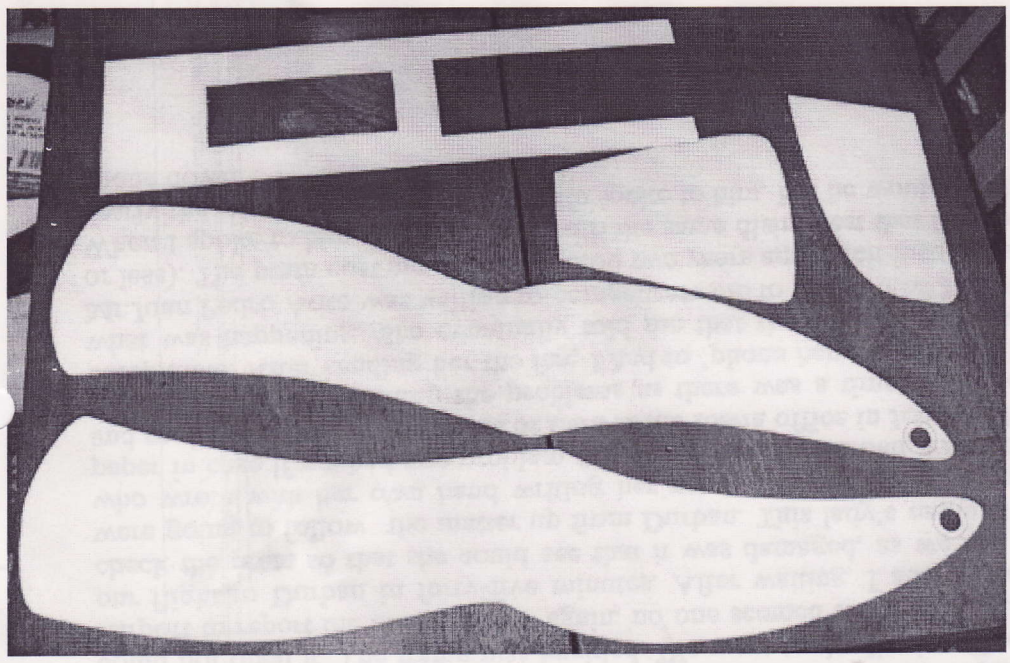
ALL SIZES



About a year ago, Alli's Mom pointed out a wooden coaster bike that would be a cool toy for Fuller someday. I had seen pictures of them before and had always thought they were kinda cool. Also, they supposedly help kids learn to ride bicycles without training wheels. But, instead of letting Alli's Mom buy him one, I proposed that I would make one and they could pay for the materials.

02_patterns

ALL SIZES



To begin, I traced over the outline of a photograph of a Rolli-Rider ™ in Freehand and printed out paper patterns of the body, seat and front fork. The store-bought bike has wooden wheels, but I figured this would take too long to make, so I decided to spring for a pair of 10" steel wheels. I chose steel wheels over plastic because I liked their styling.

03_sides

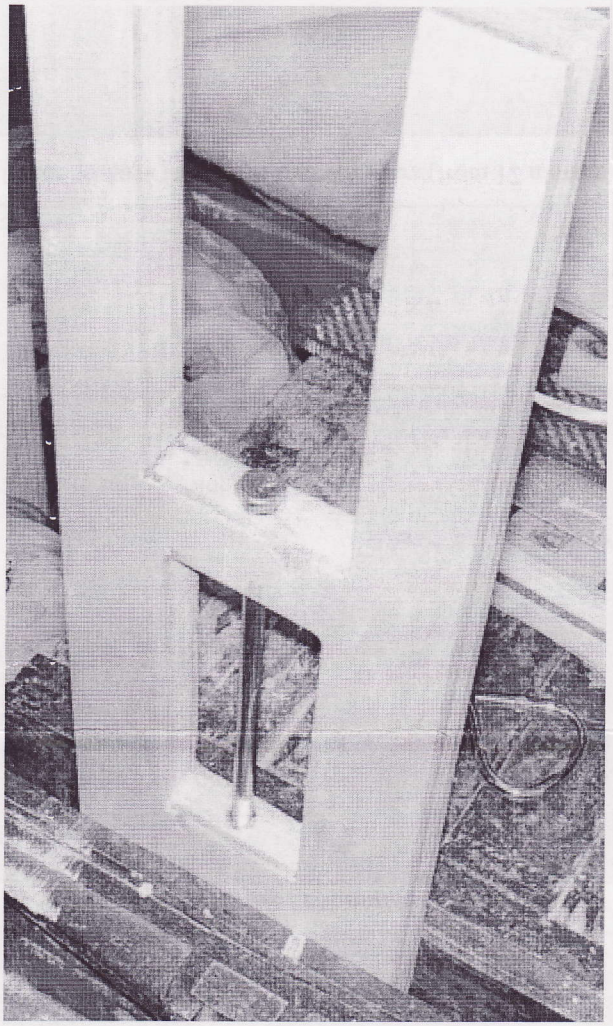
ALL SIZES

Then I went up to Covenant College's carpentry shop and used their bandsaw to cut the pieces out of ¾" plywood.

This photo has notes. Move your mouse over the photo to see them.

04_frontFork

ALL SIZES

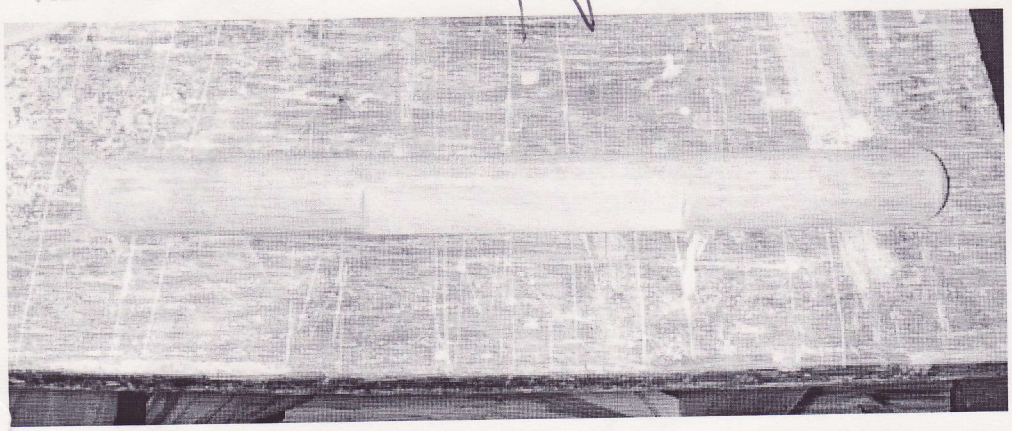


The most difficult section of the bike was the front fork. Since I had chosen steel wheels, I needed to use ½" axels. These beefy axels were too thick for the fork design I was copying. So, even though I had created this nice looking front fork, I decided to scrap it and redesign the forks. However, this picture does show the bolt that attaches the fork to the frame and allows the front wheel to turn.

This photo has notes. Move your mouse over the photo to see them.

05_handle

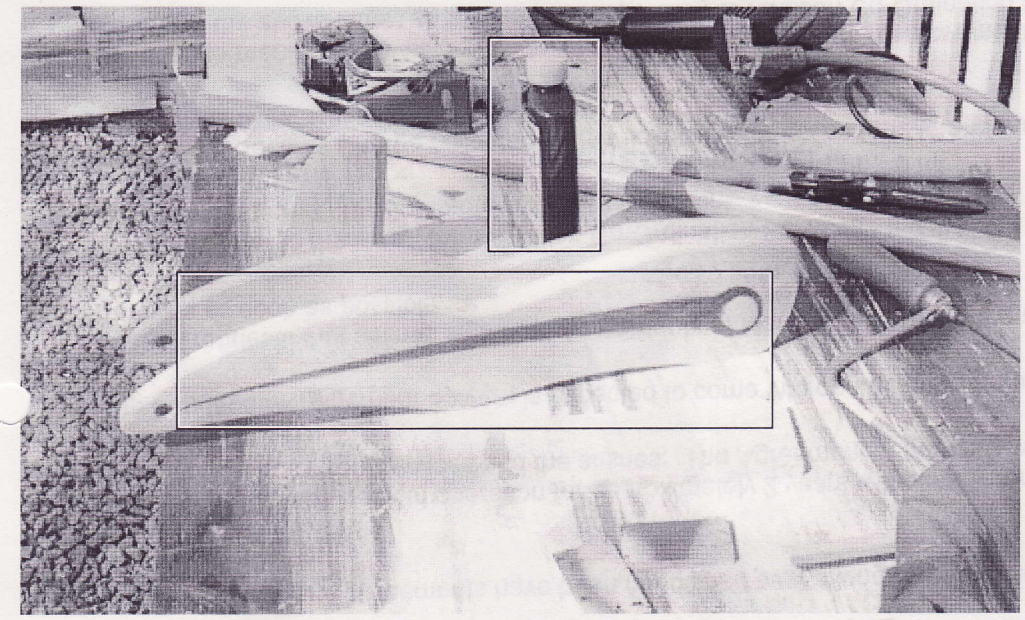
ALL SIZES



I made the handle from a section of 1" hardwood broom handle – which was cheaper than a hardwood dowel of the same thickness. I used a belt sander to round the ends, and a coping saw to cut the flat section.

06_staining

ALL SIZES



Once I returned home, I started assembling the pieces. After a test fitting, I decided to stain the pieces before gluing and screwing it all together.

This photo has notes. Move your mouse over the photo to see them.

No Section "07"

08_finished

ALL SIZES

Fortunately, my office has a printer with a straight-pass feeder designed for CDROM's. So, I printed the logo onto a copper disk that I hand cut into the size of a CD. Then, I coated the disk with polyurethane, cut it into an oval badge, and epoxyed it on the front of the bike. (You can also see how I re-designed the front forks to accommodate the ½" axels.)

This photo has notes. Move your mouse over the photo to see them.

09_finished

ALL SIZES

After finishing it, I was really worried that the wheels were too heavy. For months, I toyed with the idea of completely remaking the bike with wooden wheels and the original fork design. I was so scared that Fuller wouldn't be able to handle the bike's weight, that I hid the bike from him while I pondered whether to rebuild it.

Then one day, Fuller happened upon the bike, took it from its hiding place, and began riding it around the house. I think he's ridden it an average of 1 hour/ day since then.

Occasionally he'll lose concentration and fall over. He seems to have a little trouble getting back up because of those darn heavy wheels. But, at this point he's proven he can handle the weight, and that he really loves the bike - so it no longer makes sense to rebuild it.

But, if anyone is going to build one of these, I've prepared a blog entry with suggestions and a pdf of printable patterns on how I'd have done this bike differently: