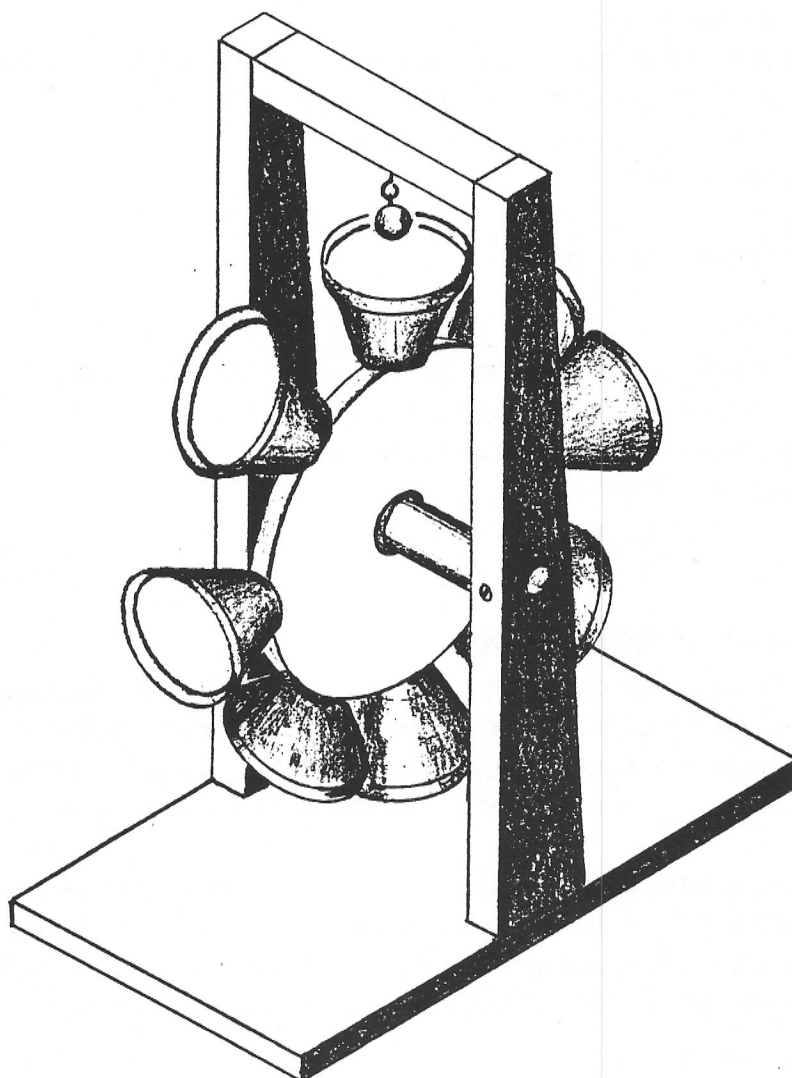


When the plastic or metal bell breaks off of a commercially made toy, what is left doesn't work as designed anymore. However, the bells are usually in excellent condition, and can be made into a Bell Wheel toy as described here.

Many children enjoy the tonal quality of bells. Some children, however, may not be able to hold the mallet of conventional bells to produce the sound. This bell wheel has been very successfully used with many of our Lekotek families as it does not require a mallet to make the bells ring. It has its own "mallet", a wooden ball which dangles from the top and hits the bells as they spin. In this way, a child can, with the slightest movement, spin the bells to begin the sound. The bells will rock back and forth for a while before requiring reactivation, so the child's efforts are rewarded.

The Bell Wheel is not only simple to make, it is also fun for the maker. The resulting toy is sturdy and colorful.



MATERIALS NEEDED

- The bells from a commercially made toy, such as "Round Bell" or "Spinning Rainbow." The dimensions given here are for the larger of the two toys, "Round Bell." If smaller bells are used, you will need to adjust the dimensions.
- One piece of 12" x 7" x 1/2" birch plywood
- Two pieces of 3/4" x 2 1/8" plywood tapered to 1/2" x 1 1/8"
- One piece of 3/4" x 1/2" x 5 1/2" plywood
- One piece of 1/2" birch plywood for circle 6 1/4" in diameter
- One 3/8" diameter x 7" long dowel
- Two pieces of 1/2" (inside diameter) PVC pipe 2 1/2" long
- One SKF bearing #1604 DS-TNT 608 "NICE" - 7/8" OD x 3/8" ID from Berry Bearing Co. (See Some Sources of Specialty Items at the bottom of the Table of Contents.)
- Non-skid material or rubber pads for the bottom
- Eight #4 1 1/2" Phillips head wood screws
- One "S" hook, size #813, for larger bells or two "S" hooks for smaller bells
- Two screw eyes, size #114
- One 7/8" wooden ball obtained from local source or from Cherry Tree Toys, Inc. (See Some Sources of Specialty Items at the bottom of the Table of Contents.)
- Eight #8 x 1" long flat head sheet metal screws
- Sixteen flat #10 washers
- Contact cement
- Varathane, or equal, gloss enamel

TOOLS NEEDED

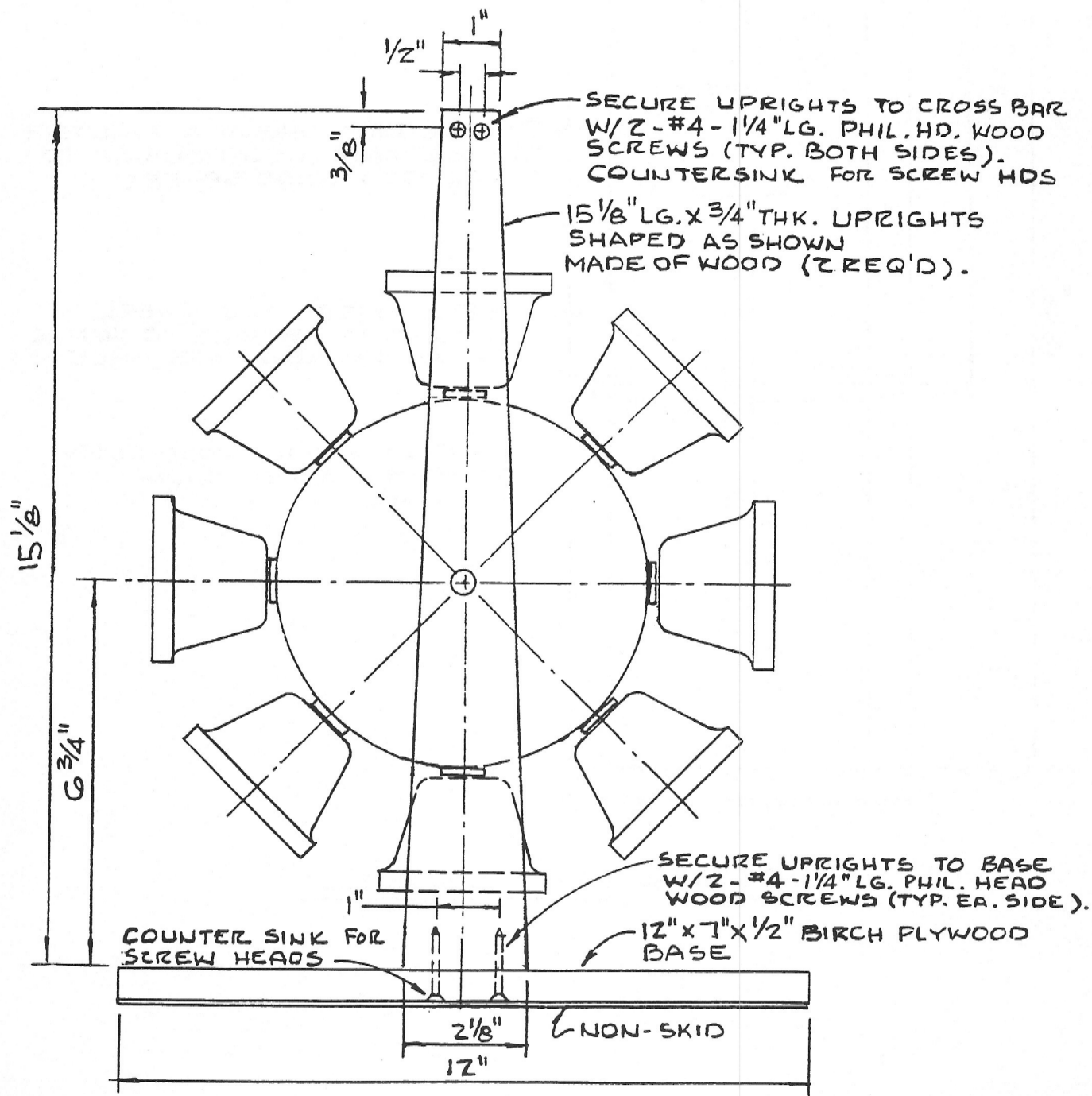
- Table saw (The taper attachment can be used to saw the tapered pieces.)
- A band saw or saber saw for cutting out the wheel
- A sander is helpful but hand sanding will do nicely
- Power drill and set of drill bits
- Paint brush, screwdriver, etc.
- Long-nose pliers

CONSTRUCTION SUGGESTIONS

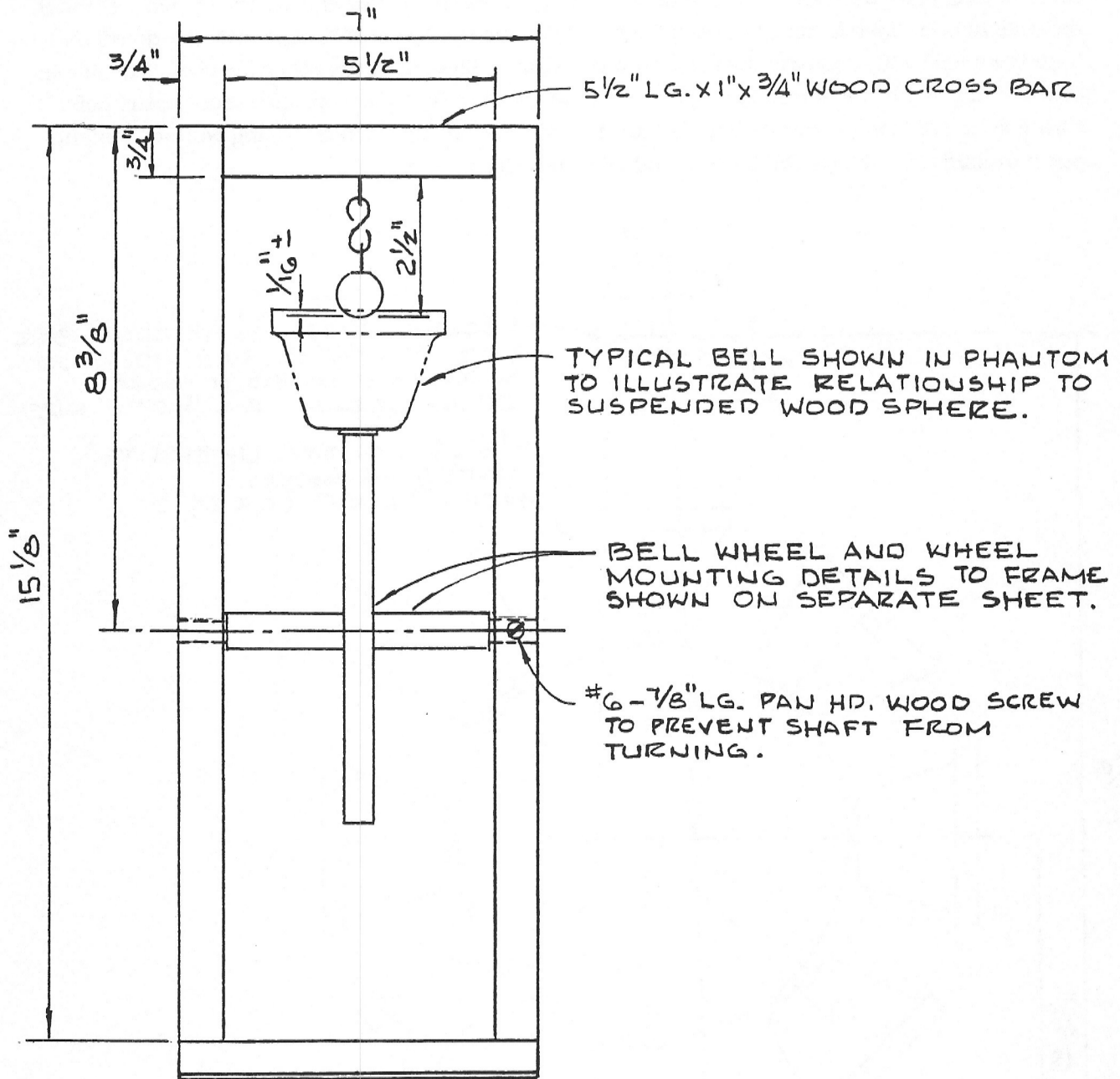
Cut out the pieces as shown on the drawings and sand each piece. Drill and countersink the holes for screws. Drill the holes for the wheel axle dowel. Mark the location for the bells on the wheel according to the Front View of Bell Wheel. Drill pilot holes for the #8 screws that will hold the bells. Paint the frame and the wheel with two coats of enamel.

Insert the bearing into the bearing hole in the wheel making sure of a really tight fit. Assemble the wheels, in order of the music scale, as shown in Detail No. 2. Drill tiny pilot holes in the cross bar and in the wooden ball and insert the screw eyes in each. Using long nose pliers, open up each screw eye, slip the "S" hook on, and close each screw eye.

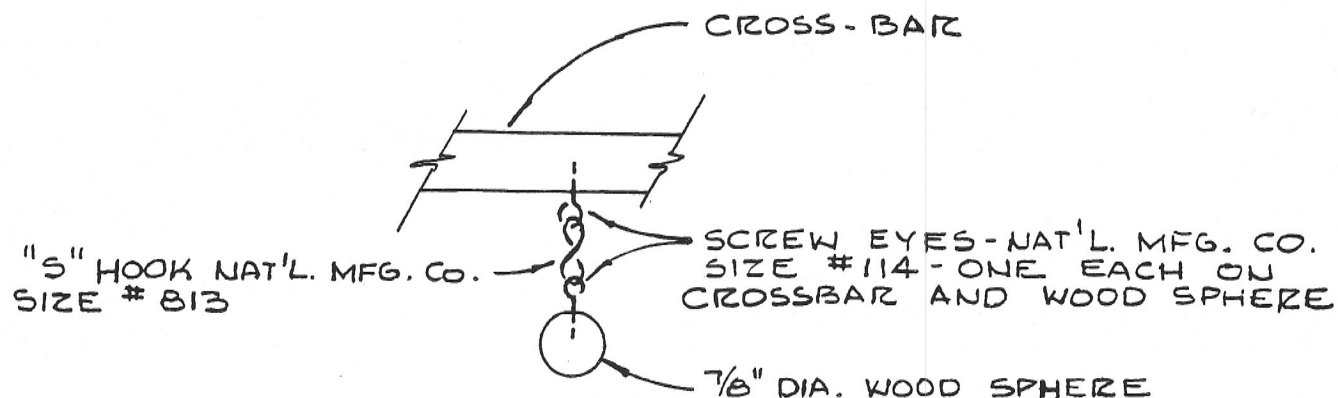
Cut the PVC pipe to length. Cut the dowel to length. Push the dowel from the outside, through the hole in one tapered upright about 2 1/2". Slip one section of PVC pipe over the dowel and then the wheel with bells and bearing onto the dowel. Then hold the other piece of PVC pipe in position and push the dowel through and into the hole in the other upright. Secure the dowel with a #6 x 7/8" long screw as detailed on the Side View of Bell Wheel. Using contact cement, put non-skid material on the bottom and trim the edges.



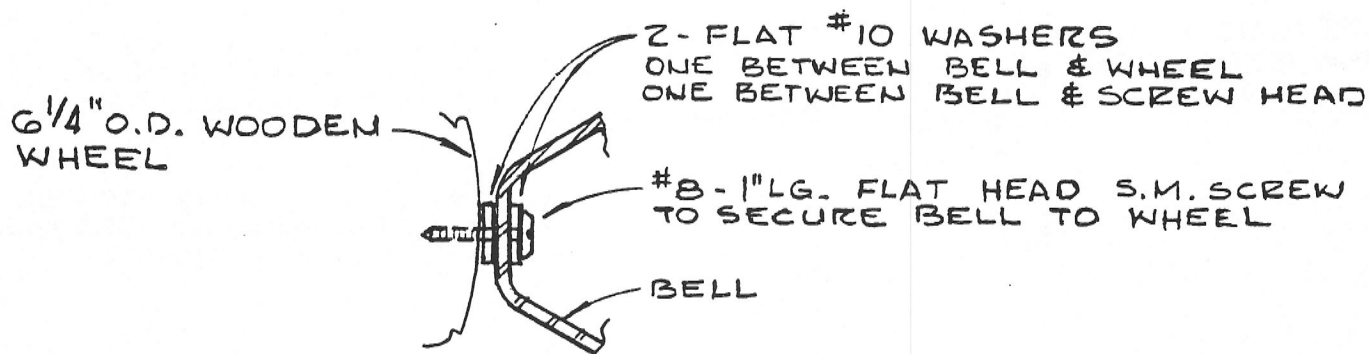
FRONT VIEW OF BELL WHEEL



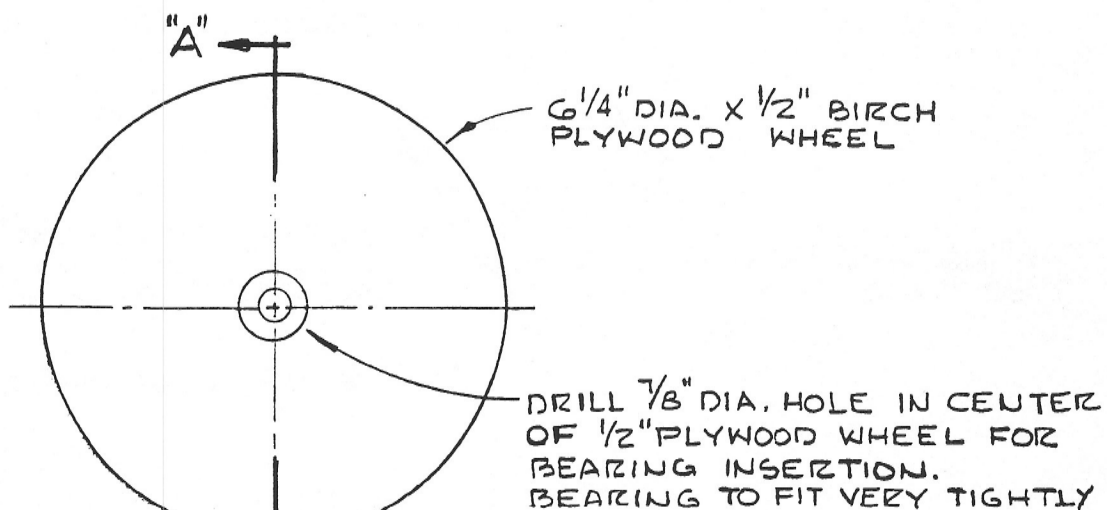
SIDE VIEW OF BELL WHEEL



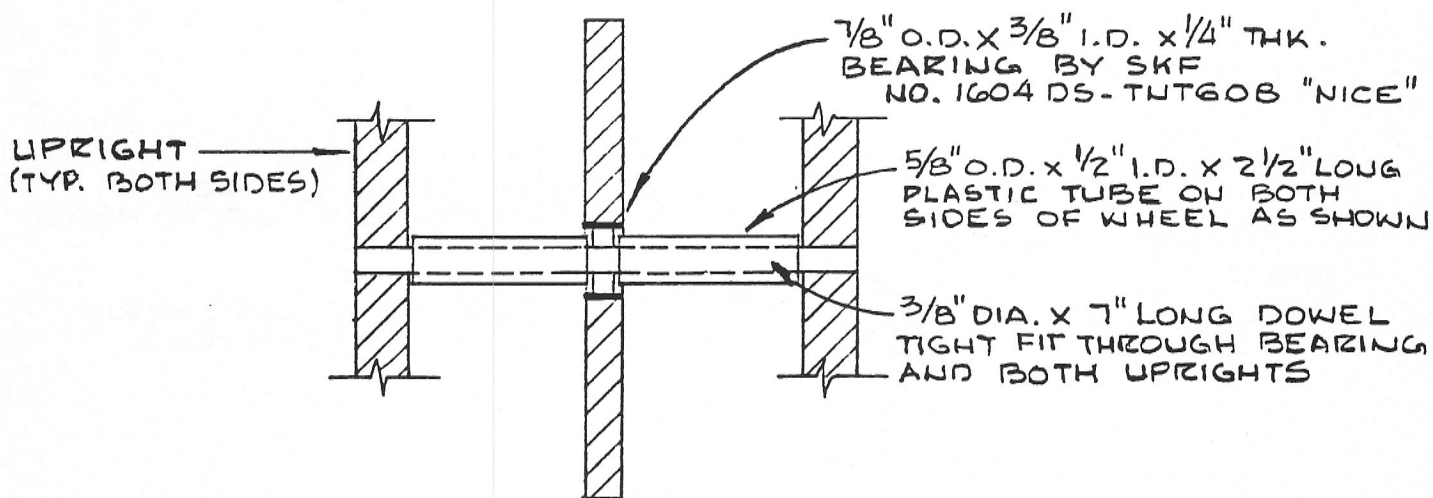
DETAIL No. 1
CHAIN DETAIL SHOWING
ATTACHMENT OF BALL TO CROSS-BAR



DETAIL No. 2
ATTACHMENT OF BELL TO
PLYWOOD WHEEL



BELL ATTACHMENT WHEEL



SECTION "A-A"

DETAILS SHOWING WHEEL MOUNTING TO TOY FRAME