

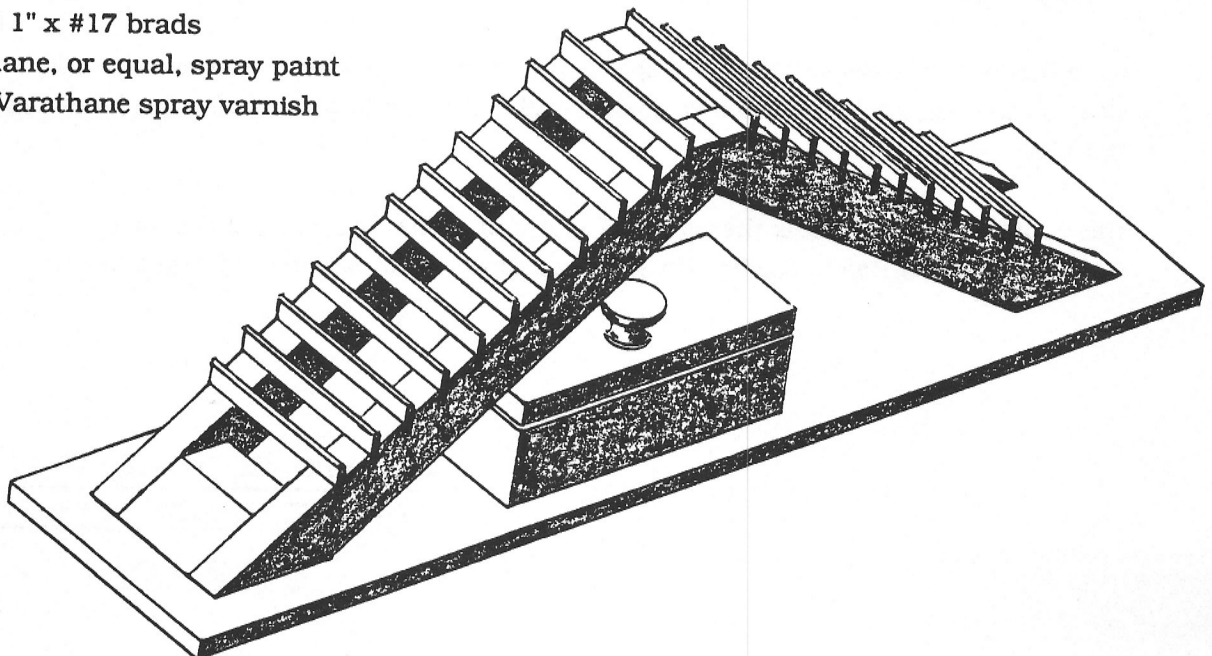
The Ladder Game can be used just as creatively as the imagination will allow. In addition to providing a fine motor activity, cognitive and social concepts can also be stimulated. The players move clothespins up and down the ladder according to the throw of the dice. The clothespins can be painted to resemble people, animals, objects or favorite story characters.

In playing, the characters start at the top or bottom of the ladder and try to be the first to reach the other end. The large dice have a maximum of three dots to allow for a longer game, for easy gripping, and to encourage beginning counting by sight or touch.

While this toy looks somewhat difficult to make, the drawings detailed drawings make each step clear. Patience rather than a high degree of skill is the necessary trait.

MATERIALS NEEDED

- One 22" x 5 1/4" piece of 3/8" birch plywood
- Four pieces of pine lumber with actual dimensions of 13 1/2" x 1 1/2" x 3/4" and cut according to Detail No. 1 - Ladder Side drawing
- Two ladder spacers as shown in Detail No. 2
- One top ladder spacer as shown in Detail No. 3
- Twenty-two ladder strips 3 1/2" x 3/4" of 1/8" thick brightly colored Plexiglas obtained from the Cadillac Plastic and Chemical Co. (See Some Sources of Specialty Items at bottom of Table of Contents.)
- The several pieces of the box, including hinge, knob, and Velcro as detailed in Details of Box
- A 1 1/8" square piece of solid birch, or similar for dice
- A pair of old-fashioned "two legged" wooden clothespins
- A pair of 1" x 3/4" brass butt hinges
- A 1 1/4" diameter knob
- Two small strips of Velcro, hook and loop
- Elmer's Carpenter's Glue
- Twelve 1" x #17 brads
- Varathane, or equal, spray paint
- Gloss Varathane spray varnish



- Bright colors of paint for dice and clothespins
- Non-skid material for the bottom
- Contact cement

TOOLS NEEDED

- Table saw
- Drill press and a 1/4" brad point drill
- Sander or sanding block and sandpaper
- Brushes, square, ruler, screwdriver, etc.

CONSTRUCTION SUGGESTIONS

Cut out the base according to Detail No. 5. Cut out the four ladder sides according to Detail No. 1. Note that the slots should permit a snug fit with the Plexiglas strips.

Cut out the top and bottom ladder spacers according to Detail No. 3. Cut out all 22 ladder strips from 1/8" thick Plexiglas. Sand off the sharp corners of the ladder strips that will be facing out.

Cut out all pieces of the box as shown in Details of Box. Assemble box, sand joints smooth, and install the hinges. Paint the base and ladder and the box and knob.

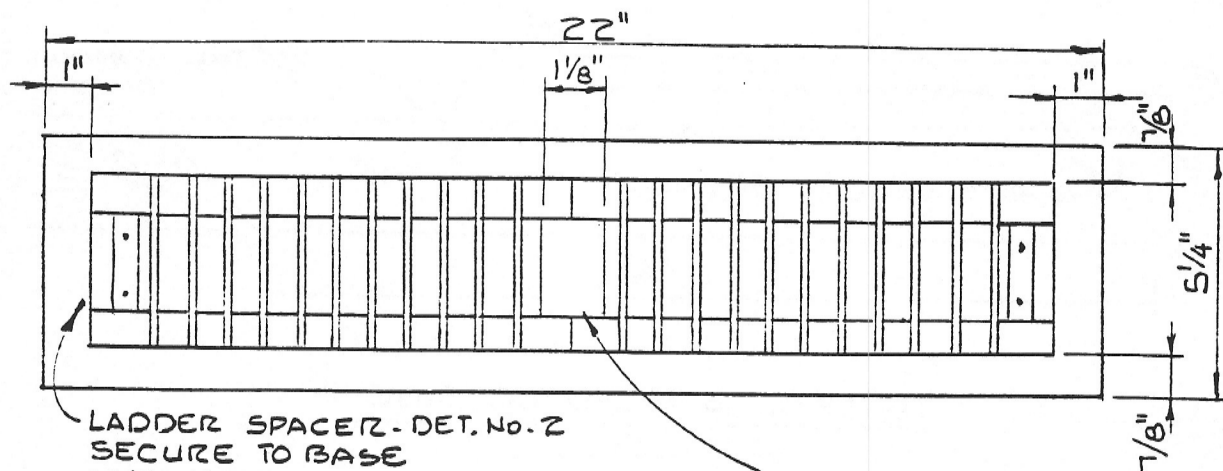
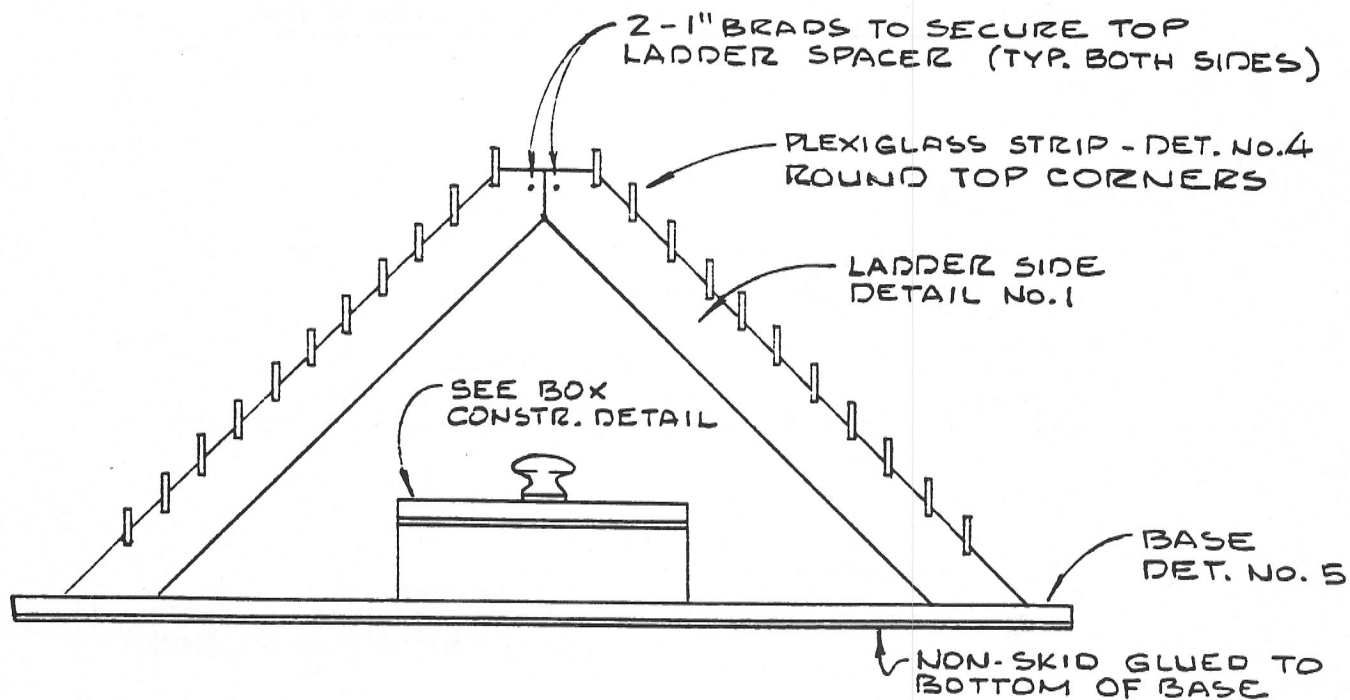
Cut out the dice from solid birch or pieces glued together to 1/8" thickness. Sand the flat areas and round the edges and corners. Locate the holes in the dice: have the two ones opposite each other, the two twos opposite each other, and the two threes opposite each other. Position the holes as on regular dice. Drill holes only 1/16" deep using the brad point drill. Spray paint the dice. When dry, use a tiny brush to paint the holes with a drop or so of black paint. Paint the clothespins to represent characters and, when dry, give them a light spray coating of gloss Varathane varnish to make them easier to clean.

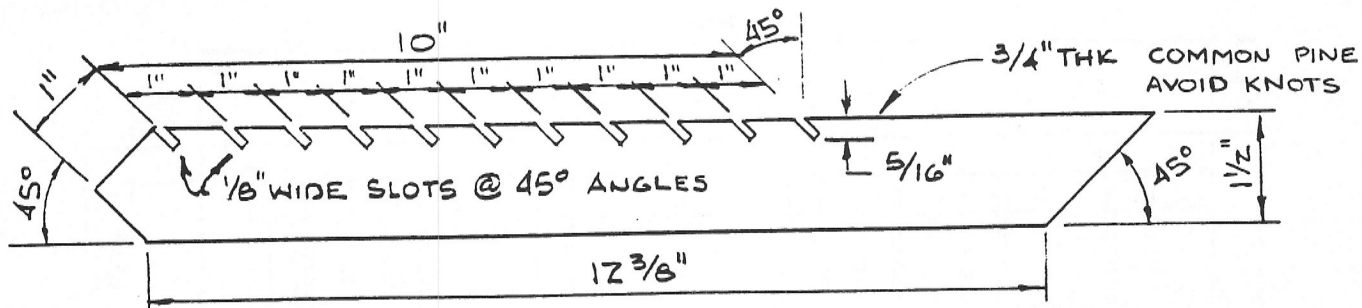
Glue the ladder strips in place. Scrape off the paint under where the box knob will be placed. Glue on the box knob. In a similar manner, glue the box in place under the ladder as shown in Detail No. 5 - Base.

Use contact cement to affix the non-skid material to the underside of the base. Glue the Velcro strips to the box lid and front panel as shown in the Details of Box.

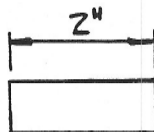
ROUND CLOTHESPIN
W/ FACE PAINTED ON
2 REQ'D



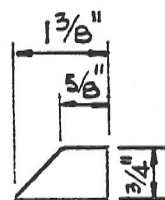
TOP VIEWFRONT VIEW



DETAIL NO. 1 - LADDER SIDE
(4 REQUIRED)

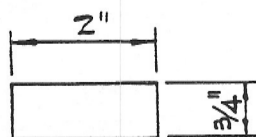


FRONT VIEW

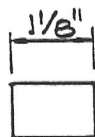


SIDE VIEW

DETAIL NO. 2 - LADDER SPACER (BOTTOM)

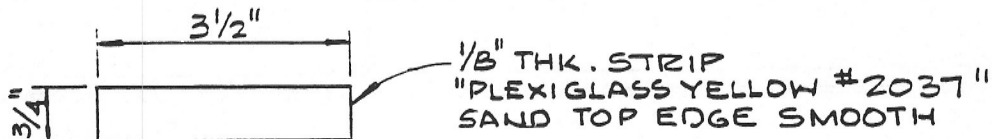


FRONT VIEW

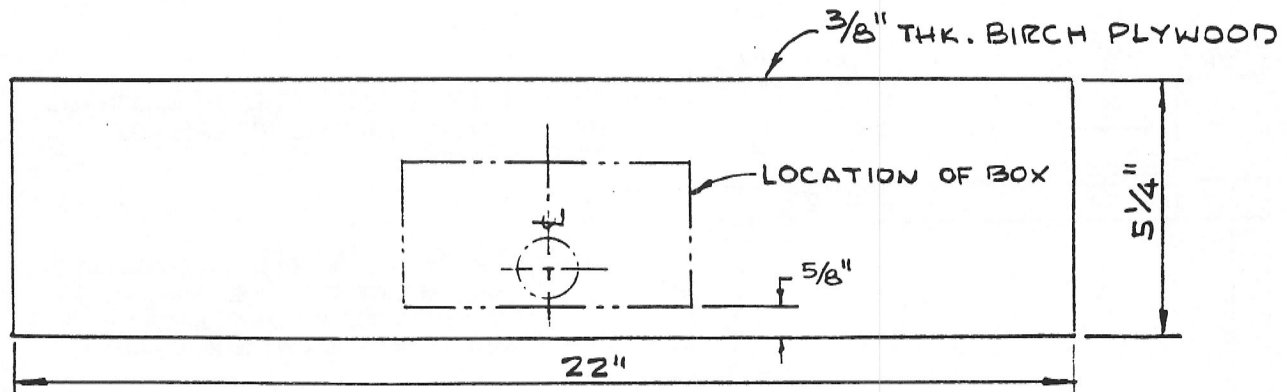
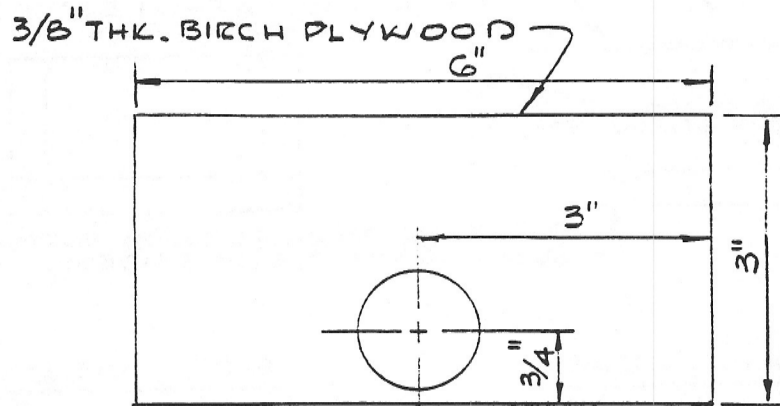
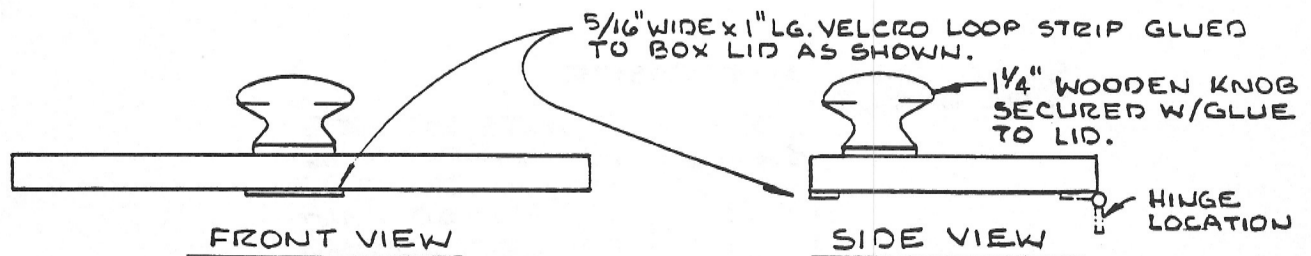


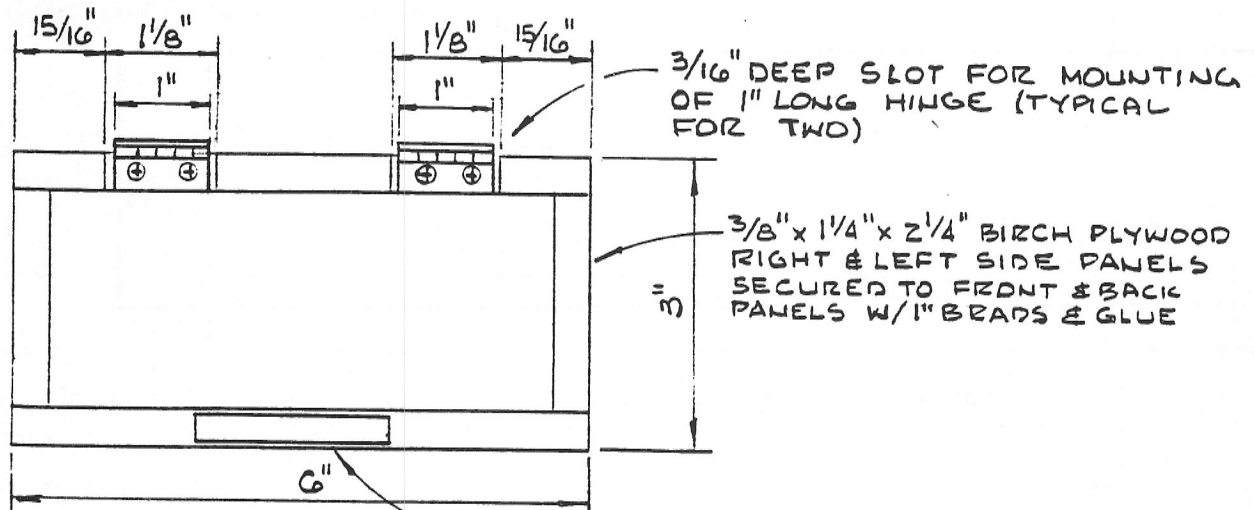
SIDE VIEW

DETAIL NO. 3 - LADDER SPACER (TOP)

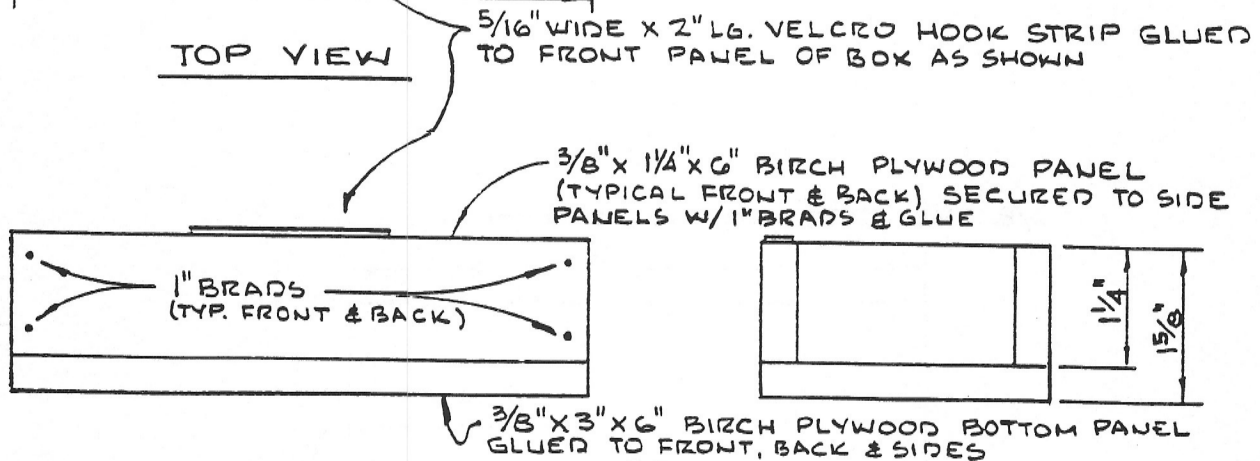


DETAIL NO. 4 - LADDER STRIP
(22 REQUIRED)

DETAIL No.5 - BASETOP VIEWDETAILS OF BOX LID



TOP VIEW



FRONT VIEW

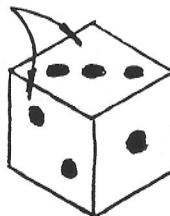
SIDE VIEW

DETAILS OF BOX FOR DICE STORAGE

NOTE:

BOX IS TO BE GLUED TO BASE OF LADDER GAME FOR STORING TWO CLOTHESPIN & 1 PAIR OF DICE

SAME POINTS ON OPPOSITE SIDE OF DICE



POINTS ON DICE ACHIEVED BY 1/16" DEEP DRILLING W/ 1/4" BRAD-POINT DRILL & COLORING EA. POINT MAX. 3 POINTS

1 1/8" x 1 1/8" x 1/2" MAPLE-BIRCH DICE (2 REQ'D)