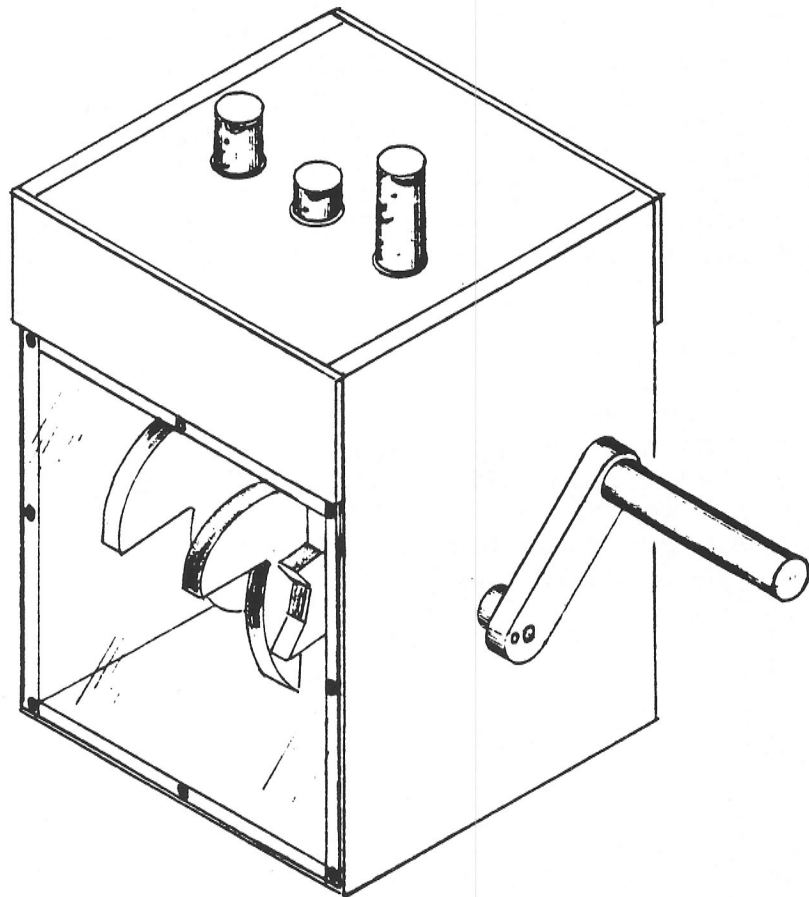


CRANK BOX

It is quite easy to turn the oversized handle on this box which causes little men to move up and down. A see-through front enables the child to look inside the box. Some children may find it difficult to rotate their wrists to turn the crank.



Materials needed:

- One 8" x 2' piece of 3/8" thick birch plywood
- 24" of 3/4" diameter dowel
- Two pieces 7 5/8" x 8 1/4" x .080" thick clear acrylic plastic sheet (safety-glazing)
- Eight 1/2" x #4 pan head sheet metal screws
- Three 1" x #6 regular slotted wood screws
- One 3/4" x #4 regular slotted wood screws
- Three 1/2" x #4 regular slotted wood screws
- One piece 7 3/4" x 7 1/2" non-skid material
- One piece 4" long x 1/2" diameter dowel
- About 30 - 3/4" long x #17 brads
- One 8 1/2" x 11" sheet carbon paper
- Varathane, or equal, gloss varnish
- Varathane, or equal, enamel in red, green, yellow and blue
- Elmer's Carpenter's Glue or equal
- Three 1/2" x #14 flat head wood screws
- Three 1" x #6 Phillips head tapping screws
- Two pieces 7 3/4" x 2 5/8" x 1/8" birch plywood
- Three discs 1 1/4" diameter x 1/8" birch plywood

Tools needed:

- Table saw
- Band saw or saber saw
- Power drill and set of drill bits
- Screwdriver
- Sander or sandpaper
- Ruler, paintbrush, etc.

Construction suggestions:

Cut three 7" discs of $\frac{3}{8}$ " birch plywood. Using carbon paper and the drawing on page 4, trace the outline of each of the three cams on a disc. Saw out the cams using a band saw or a saber saw. Drill the center $\frac{3}{4}$ " diameter hole in each cam. Drill a $\frac{1}{8}$ " hole and countersink hole in each cam as shown on the page 4 drawing.

Cut out the wooden pieces for the box and mark and drill the holes in each piece as detailed on pages 5 and 6. Sand all the pieces carefully.

Assemble all the wooden pieces of the box except the axle and "people" pegs.

Varnish the cams, the axle, the "people" pegs, the crank arm, the handle, and the inside of the bottom portion of the box. Enamel the outside either green, blue, red or yellow.

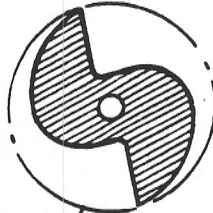
Assemble the $1\frac{1}{4}$ " x $\frac{1}{8}$ " plywood discs to the bottoms of the "people" pegs and insert into the box holes when the box is held upside down.

Slide the cam axle through the box side and, one by one, slide the axle through the center holes in the cams. Screw the cams onto the axles (a pilot hole here helps) so the cams are located directly below the "people." Drive a screw through the side of the box and into the axle on the opposite end from the crank arm. Screw and glue the handle onto the crank arm. Screw the crank arm with the handle onto the axle using two screws as shown in the drawing on page 6. The "people" should now move up and down when the crank is turned. Screw the two pieces of safety-glazing in place.

CAM No. 1



CAM No. 2



CAM No. 3

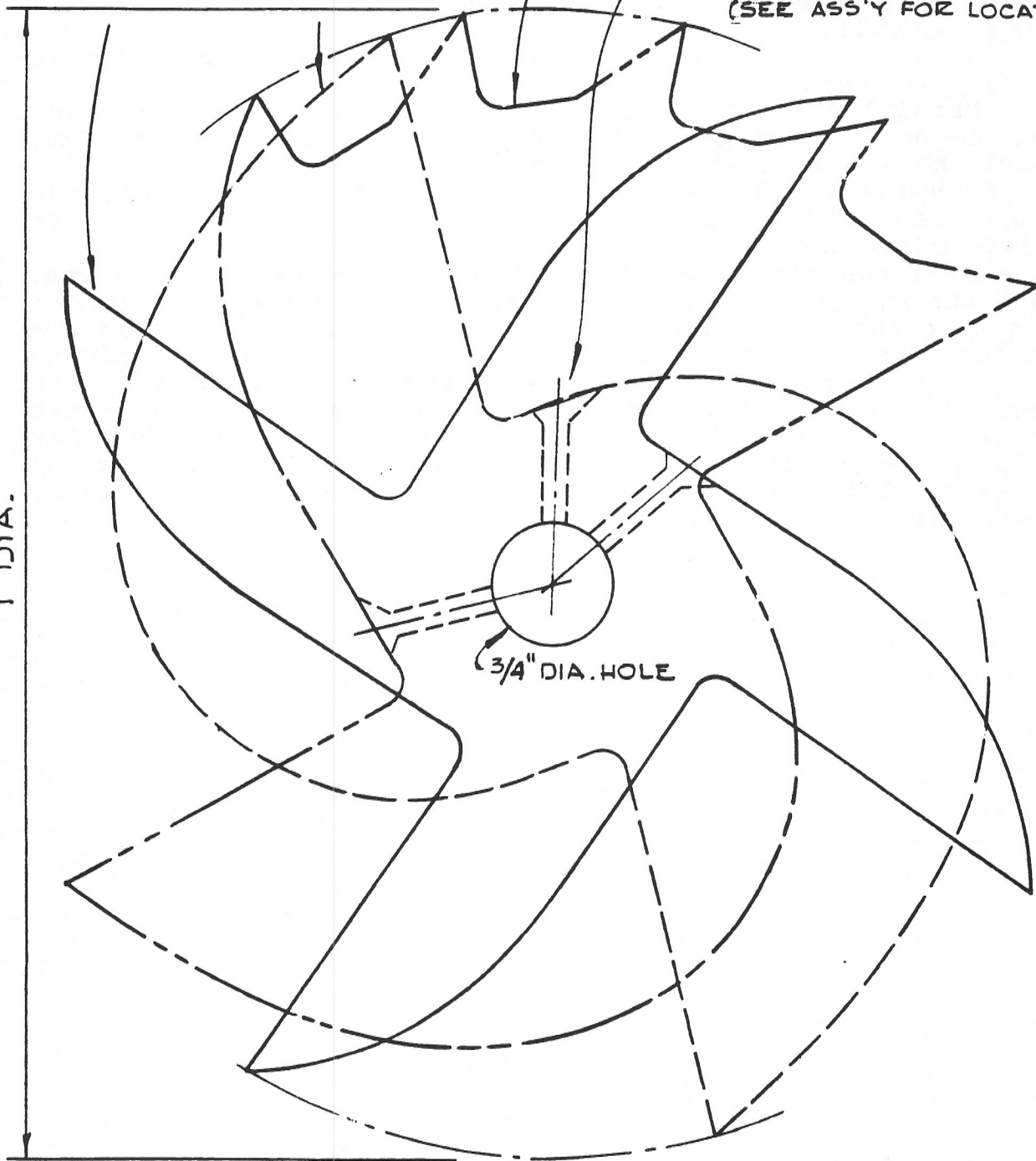


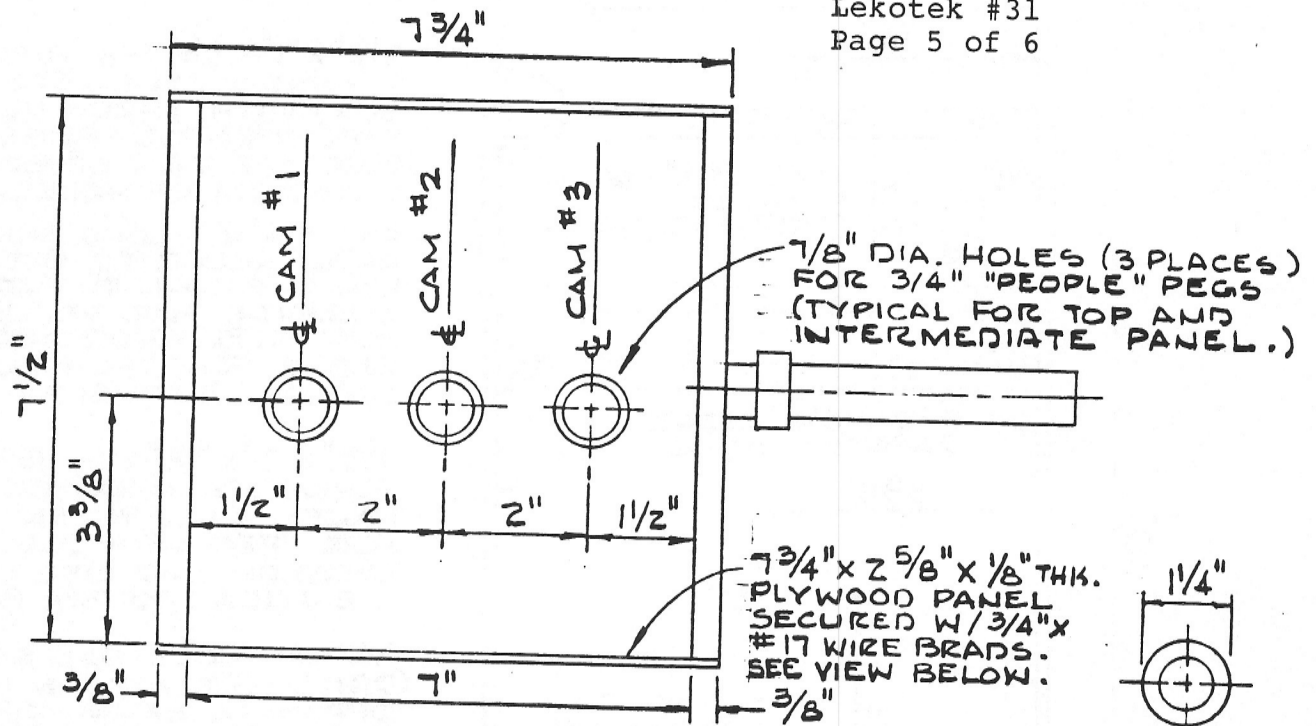
USE CARBON PAPER TO
TRACE CAM SHAPES
ONTO 1/2" THK. FINISH
BIRCH PLYWOOD.

DRILL PILOT HOLES AND
COUNTERSINK FOR 1"X#6
FLAT HEAD PHILLIPS
TAPPING SCREWS TO
SECURE CAMS TO SHAFT.
(SEE ASS'Y FOR LOCATIONS)

7" DIA.

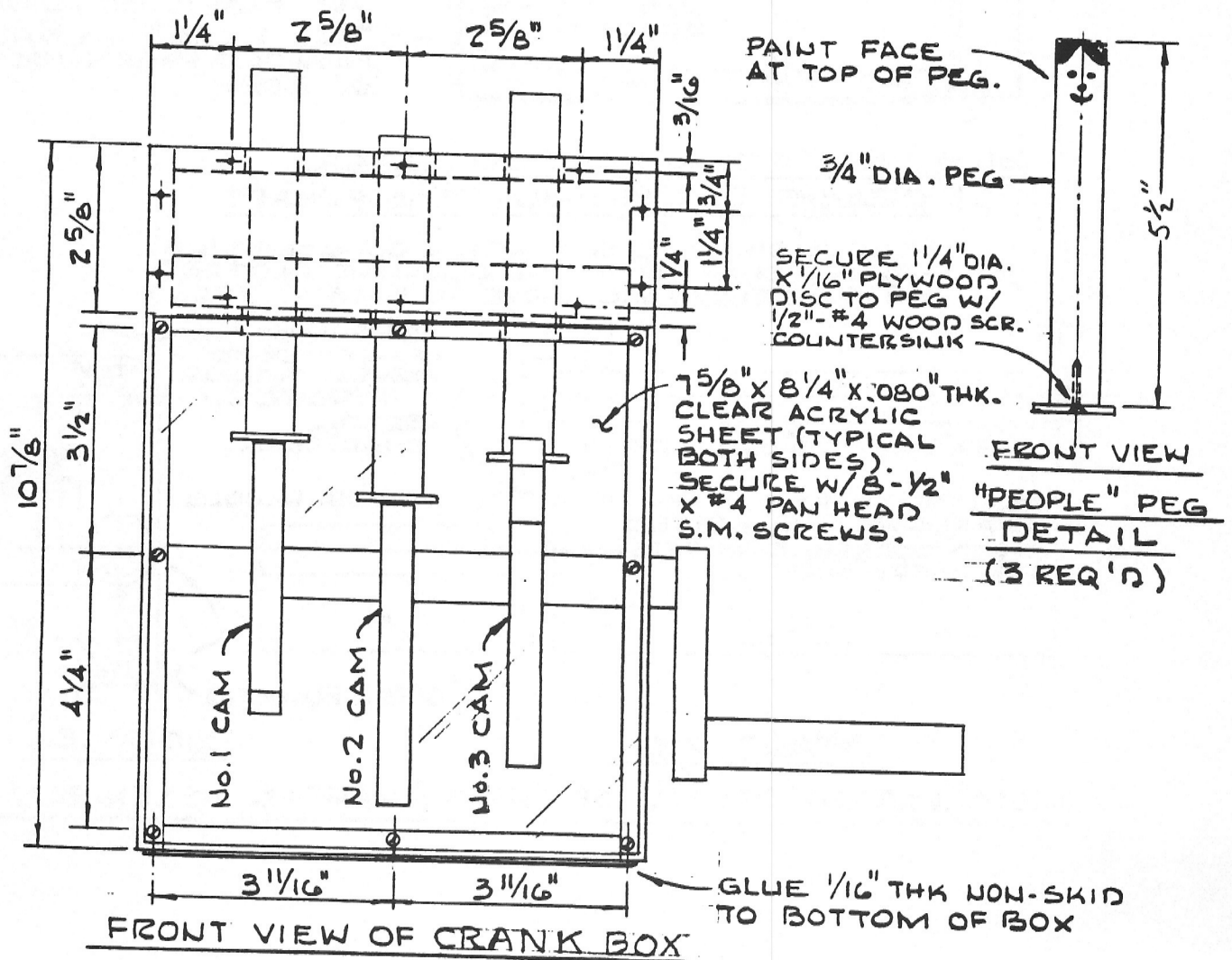
3/4" DIA. HOLE



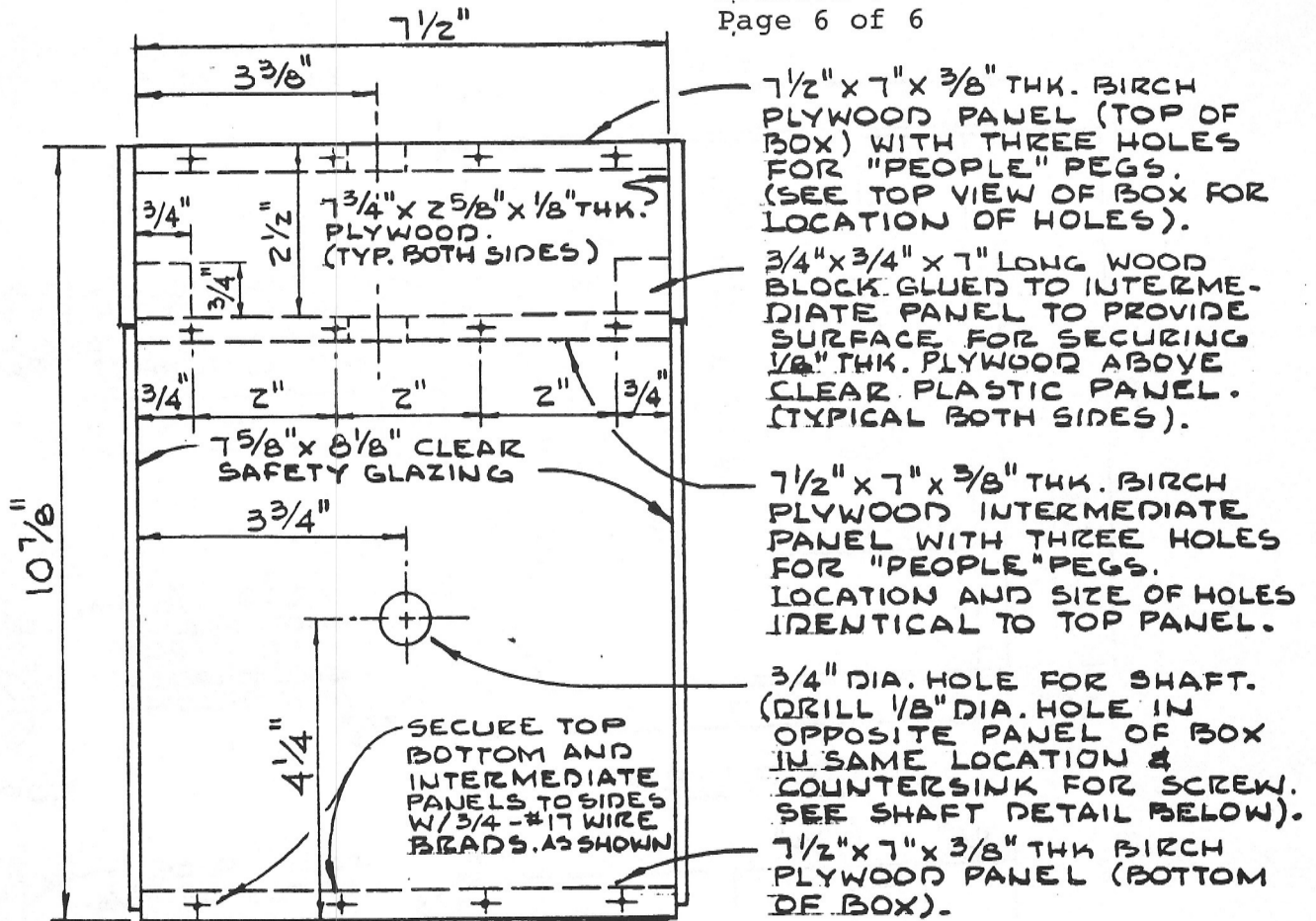


TOP VIEW

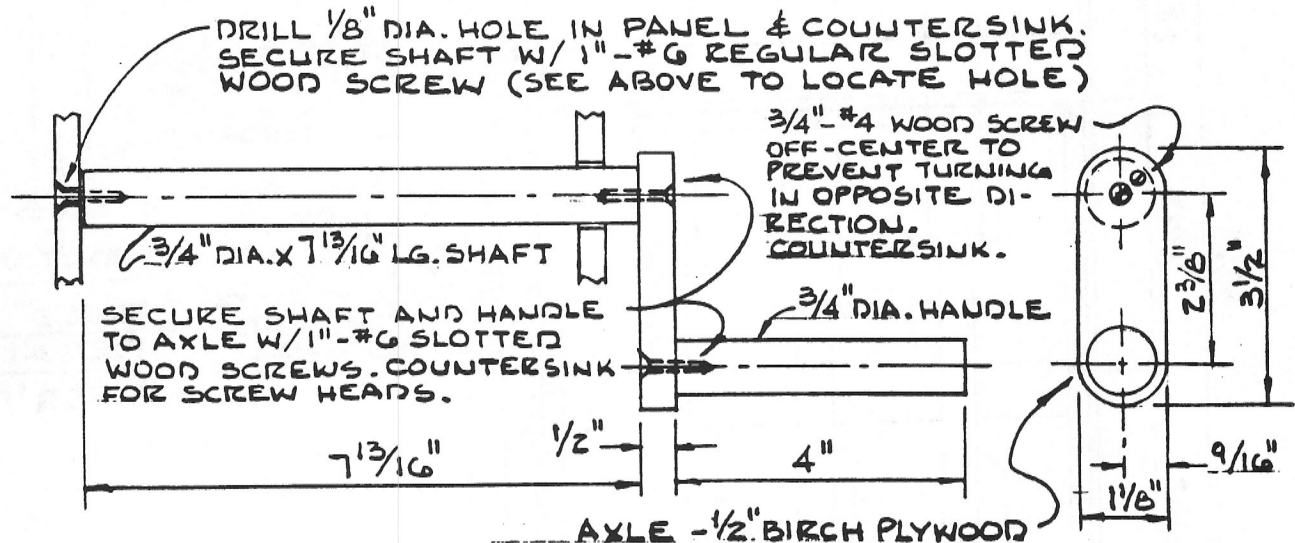
TOP VIEW



FRONT VIEW OF CRANK BOX



SIDE VIEW & CONSTRUCTION DETAIL OF CRANK BOX WITHOUT PEGS & SHAFT



FRONT VIEW

SIDE VIEW

INSTALLATION DETAIL OF SHAFT & HANDLE ASSEMBLY