

GILBERT CARPENTRY FOR BOYS

BY

ALFRED C. GILBERT

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The initial should conform as far as possible in design to the general shape of the design of the end. It will have to be cut with a sharp knife, using a straight edge as a guide.

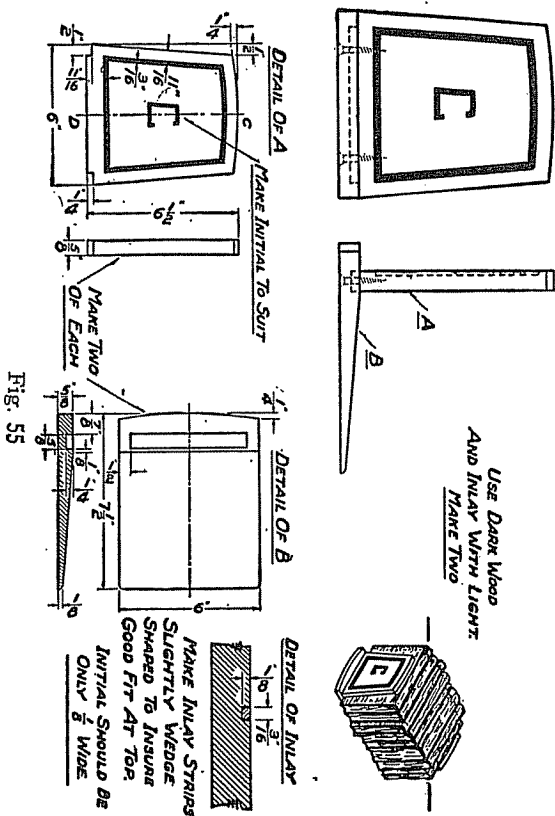


Fig. 55

When finished, sandpaper well and fasten upright to the bases with flat-head screws. Apply two or three coats of shellac, rubbing between each coat with very fine sandpaper slightly oiled.

MARKING GAUGE Fig. 56

Very little carpenter or shop work can be done well without a marking gauge, as it is one of the chief laying-out tools. They are not expensive, but many boys like to have tools, they have made themselves, in their kits. If you desire a single gauge, bore a hole for just one dowel at the center; but if you wish a double gauge for laying out mortise and tenon joints, bore two holes in the block about $\frac{1}{2}$ " apart. Two dowels can be inserted with the peg forced between them, each

having a brad driven in the end, for a marker, so two lines can be made parallel at the same time.

To make the single gauge, square up a block $1" \times 2" \times 3"$, make a center line on the face and another $\frac{3}{16}"$ to the left of it. The latter should be squared up over the edge. Bore one hole at the center of

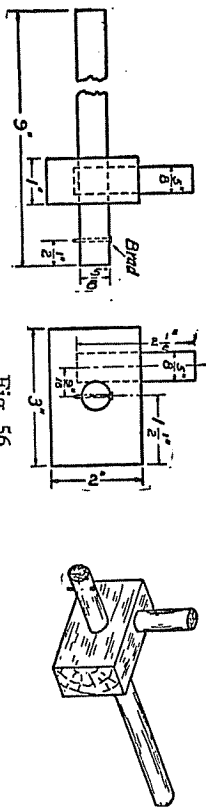


Fig. 56

the block and another through from the edge tangent to the first. The latter is for a piece of dowel rod which wedges against the longer piece, holding it in place.

ARMCHAIR Fig. 57

The armchair can be made of soft wood, if it is to be painted, but should be made of oak or other wood, if it is intended to be stained and finished to match other pieces of furniture.

Plane up the back legs first. Remember to square all surfaces from a working face and edge. Next get out the front legs, they can be planed up in one piece and then cut to length.

The rails, which are $1\frac{1}{4}"$ wide, can also be planed up in long pieces and sawed to length. It is always easier to plane long pieces than short ones especially for beginners.

Use two-inch or two-and-one-half-inch, round-head, No. 10 screws for assembling the legs to the rails. For these screws bore $\frac{3}{16}"$ holes through the legs as indicated on the drawing. Do not turn the heads of the screws into the wood but just have them come flush.

Make the seat next and fasten the rails to it with screws driven up through the rails. The holes for the screws can be countersunk into the rails. This is done by boring half-way through the rails with a $\frac{1}{2}"$ bit and the rest of the way through with a $\frac{3}{16}"$ bit.

The rail across the top of the back and the back rest are made next. The $\frac{3}{4}"$ piece is $\frac{1}{2}"$ thick and is tapered to $3"$, one inch from the

bottom. The top rail is formed with a turning saw on the top edge and the curves on the bottom edge are made by boring $\frac{7}{8}$ " holes while the piece is clamped in the vise, with a scrap piece of wood between it and the jaw of the vise. Bore with the spur set in the crack, making one-half the hole on each piece.

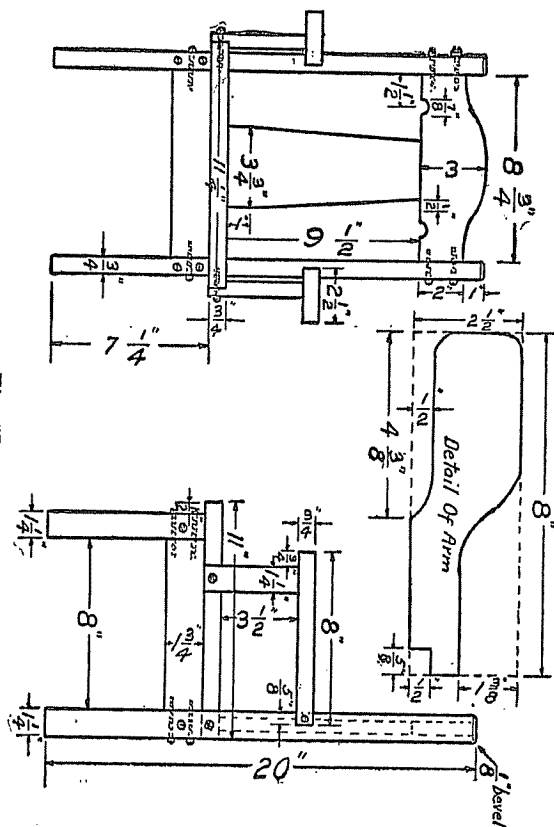


Fig. 57

Fasten the back rest to the rail and seat either by wood dowels or nails having the heads filed off. The rail is held in place by one-and-one-half-inch round-head screws.

The arms and supports should be made and assembled with finishing nails before fastening to the arm and seat of the chair.

Sandpaper and apply paint or stain and shellac or varnish.

PLANT BOX Fig. 58

Any material may be used for this box, but cypress is recommended. This wood possesses a quality that makes it very valuable for the construction of articles that will be subjected to dampness.

Get out all your pieces to the greatest over-all sizes. You will notice that the bottom piece is the only one having the ends square. The ends of the other two pieces are not square, so it is only necessary to make sure that your stock is long enough for the purpose, then get them to this required width and thickness. The ends should be laid

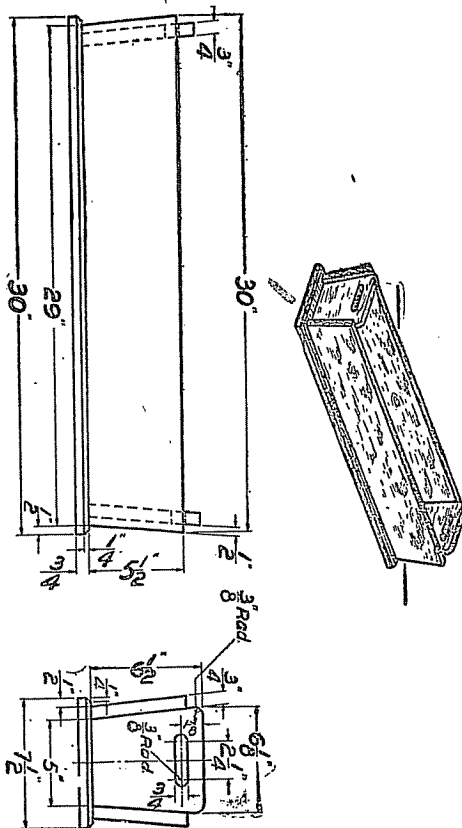


Fig. 58

off with reference to the difference in the lengths of the two edges. To do this, locate the center of the piece, then work from this center to the ends. This is a principle that should be remembered and applied to other problems.

Locate the centers of the holes that are to be bored for forming the hand hold, then bore part way from each side, removing the balance of the stock with a chisel, or your coping saw.

Bore a number of holes in the bottom to provide a means of the surplus water being carried away after the plants are watered.

The box may be fastened together with nails or round-head screws. The latter will look better and will give a better job all around. Flat-head screws should, of course, be used for fastening the bottom in place. For protection and for added attractiveness, the box should be painted. A dark green is recommended.

First make the legs of pieces of 2" x 4". Then make the top and bottom rails and nail them to the legs. Next, the back rail, and the apron for the front, and also fasten them to the legs with nails. The shelf which is fastened to the bottom rails is for the purpose of storing stock and unfinished work and also making the bench more rigid.

Make the cutout in one of the front legs for the sliding part of the vise and bore a hole through the leg for the adjusting peg.

Next make the vise, which consists of two parts. The part that slides through the cutout in the leg, is pinned in a slot cut in the bottom end of the vise. An iron bench screw can be purchased at any hardware store. The screws come in different lengths; of course the longer the screw the wider the vise can be opened. For the screw, bore a hole through the vise, apron and leg. Gouge out a place around the hole in the front of the vise so the round plate will fit up against the vise, fasten it to the vise jaw with screws. The nut is to be fastened to the inside of the leg with screws also. For ordinary work the peg can be left in the first or second hole in the sliding part of the vise, but for holding wide pieces, open the vise and adjust the peg to some other hole.

If you desire a bench stop one can also be purchased and fitted in a hole made in the top of the bench, about six inches, in from the front edge, and five or six inches back of the vise so it will not strike the rail.

ANIMAL TRAP Fig. 61

As shown in the drawing, the trap is ready for trapping rabbits, etc., but for use in catching rats and mice, it should be lined with tin to prevent the animals from gnawing out.

Make the box first. Next build the door H and the slides for it. See top view for corner of door and slides at M. Be sure to allow a little play to insure the parts working easily. On the back of the door brad a small block Z. This is the catch which holds the door open when supported on end of part B. Part A is next fastened to top with nails three inches back from door as shown in the section view. Part B is nailed to the long arm O. The latter is pivoted in A by a nail. Be sure that O works freely on the nail.

Part C is not fastened to arm O, its purpose being to act as a guide. Part D is pinned as indicated to arm O and to F, which supports the platform K at the end inside the box. F is pinned to E, which is to be

nailed over a hole cut in back of box as indicated by dotted lines in the sectional view.

To set the trap, the bait is suspended above the small platform. A fish-hook is useful for this as it holds the bait securely. When

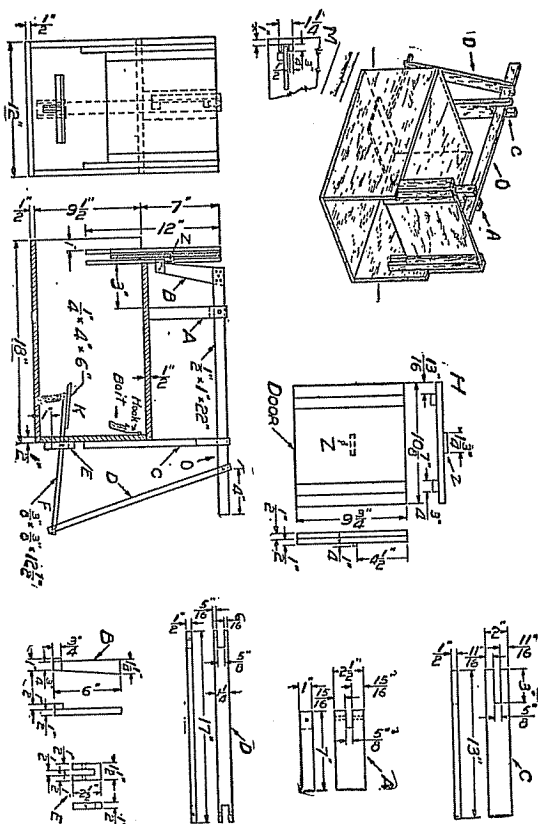


Fig. 61

the animal steps on the platform, to secure the bait, the downward motion is transferred through the arms to the trigger, which is drawn back from the door. The latter is released and the animal imprisoned.

KNIFE, FORK AND SPOON BOX Fig. 62

Pine lumber from a good shoe box makes excellent material for this box, as it will take a good shellac or varnish finish.

First get out the sides, ends and partitions. The ends must all be sawed perfectly square, as a butt joint, such as this construction is, never looks well when the fit is not almost perfect.

Next make the handle. Make the finger holes by boring five three-quarter-inch holes on a line one and one-eighth inches from the top edge. Hold the piece in a vise while the boring is done, with the pressure of a vise across the grain. Bore the two outside holes first, working toward the center. Smooth the sides of the finger holes so it will be comfortable to hold. A long brad driven into the handle on each side of the finger hole will add a great deal of strength to it.

Sand all the pieces well, then assemble. Begin by fastening the partition and one end piece to the handle with inch or inch-and-a-

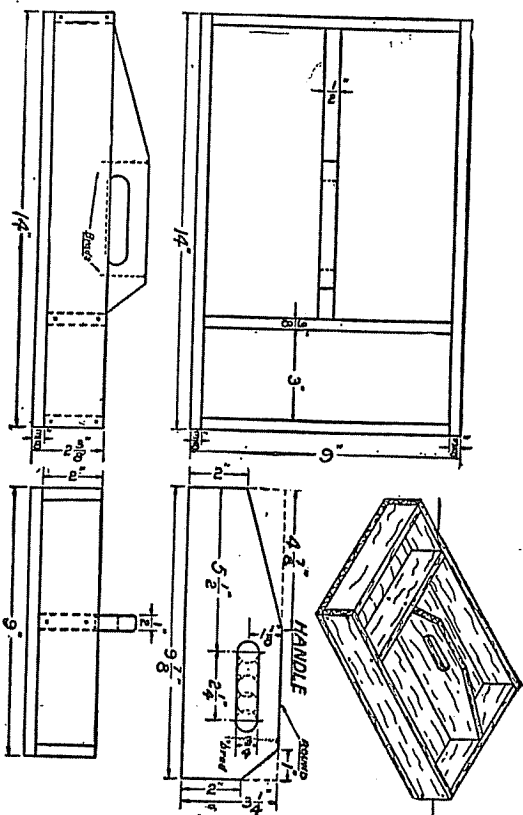


Fig. 62

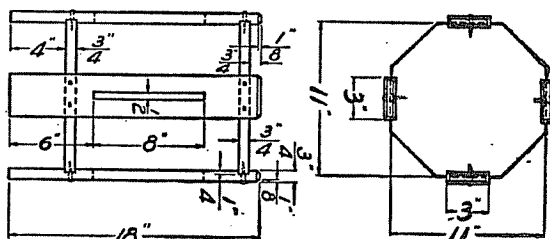
quarter brads. Then fasten the sides and other end to the partition and end in a similar manner. The bottom should then be fitted to the box.

The box should be finished with white shellac, varnish or enamel. It should be treated in some way as it will be much easier to keep clean than if left natural.

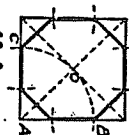
TABORETS Fig. 63

The top and bottom pieces are octagonal shaped, that is, eight sided. The method of laying out is clearly indicated and no difficulty should be experienced.

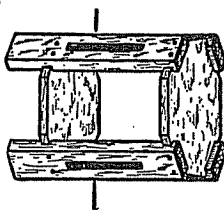
Lay out the grooves in one leg first, then place all the pieces flat on your bench with the bottoms exactly even, then lay out the grooves



METHOD OF LAYING OUT OCTAGON.



Lay off from each corner one half of diagonal of square, as AB. Connect points thus found.



SUGGESTIVE DESIGNS FOR LEGS.

Fig. 63

on the other three by scoring across from the first leg. In this way the grooves will have the same location on each leg, and should the legs vary a trifle in length, the error will be at the top. If at the bottom, the taboret will not set evenly.

Gauge the depth of the grooves, cut sides with back-saw and remove stock with a sharp chisel. Be sure the grooves are the same thickness as top and bottom pieces. If you should have made a mistake in getting these pieces to size, be sure then to cut the grooves to correspond to the thickness you have.

The legs are fastened to the upper and lower parts of the taboret with one-and-a-half-inch round-head screws. In the legs, bore holes seven thirty-

seconds of an inch in diameter. Bore smaller holes in the upper and lower pieces.

To get the legs located uniformly, have the center of each one exactly coincide with the diagonal lines drawn across the top and bottom pieces. If this is not done, the legs might not occupy the same relative position and the taboret might be twisted out of shape.

Very good wood will likely be chosen for this article and it can therefore be stained. This adds greatly to the appearance by "bringing out the grain." It is understood, of course, that all parts should be thoroughly sanded before the assembling is done.

SELF-FEEDING MATCH-BOX Fig. 64

This box may be made from any kind of wood and finished in a variety of ways. It will be well to consider the woodwork in the house, and make the box to match, if you can.

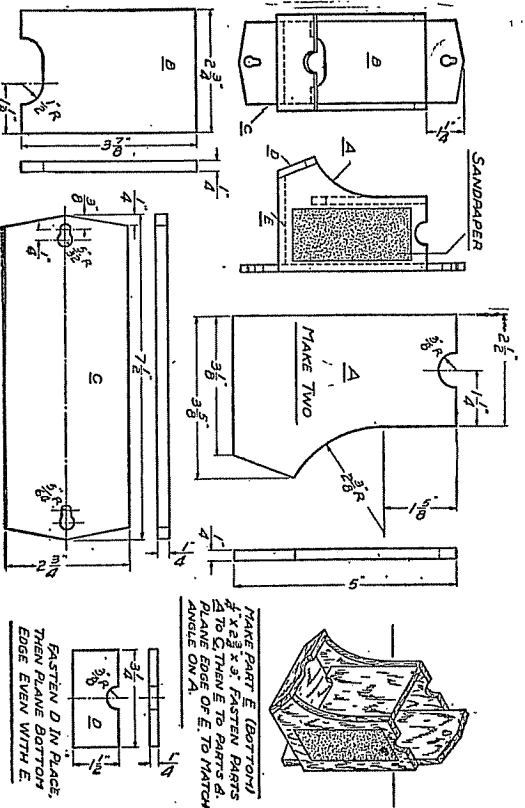


Fig. 64

Make a stock list. Combine pieces if possible in getting out the rough stock. Note that two pieces of A will be required. Lay out in

one piece and at the center bore the hole indicated in the top, afterwards sawing in two.

The main caution in this construction is in regard to the boring of the various holes. The stock is all rather thin and of course is easily split. Hold all the pieces across the grain where it is possible to do so. To form the rounded portion in B and D, it is well to bore them. To do this, it will be necessary to place a piece of stock next to each piece in order to hold the bit in place while boring.

The side pieces can be easily sawed to shape with the coping saw. Sand all the pieces well, then assemble with brads, taking great care not to split the stock.

Finish the box to suit.

STRADDLE HORSE Fig. 65

Start work by making your patterns for the various pieces by means of your pantograph. Next prepare your wood and transfer the patterns to the various pieces.

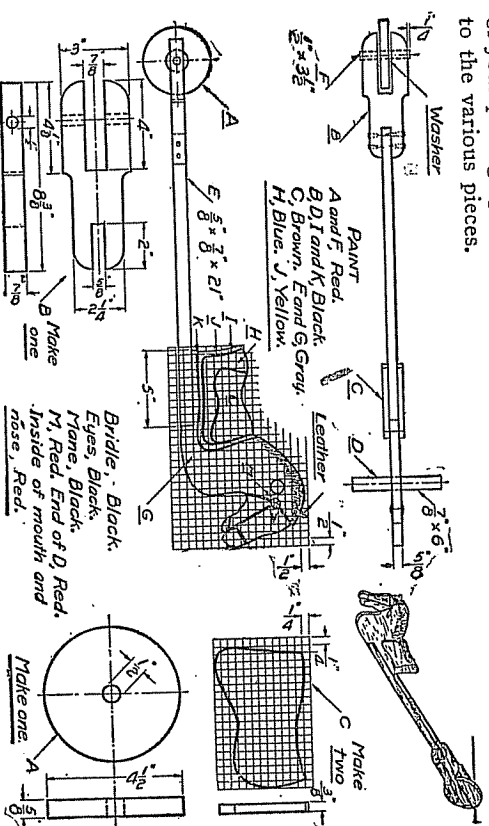


Fig. 65

Part B cannot be laid out in the same way the others were. First square up a piece of stock to the over-all dimensions. Next draw a

center line on the piece, then lay out from that. This piece will require careful work with your coping saw on some of the parts. In boring for axle F, lay out on each edge of B and bore from each side. If the boring was done entirely from one side, the bit might not come out on the other side exactly opposite the point you started from. In boring from each edge, the chance for making a poor job is greatly reduced. This hole should be bored before completing the other work on the piece.

Next make A. Lay out and bore hole from each side. Be careful to get the outside of the wheel true. A good way is to describe a circle on the stock with a sharp pair of dividers, scoring rather deeply. This will give you a good line to work to. The drawing shows the hole in the wheel one-half inch in diameter, but it would be better to make this slightly larger so it will revolve freely on the axle.

The painting should be done before the wheel is placed in position. Place washers in position as shown in the drawing.

PICTURE FRAME Fig. 66

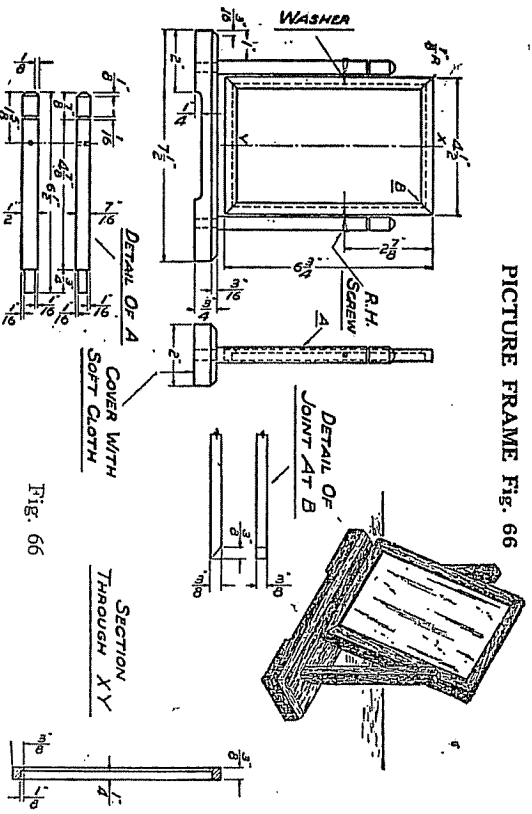


Fig. 66

Get out your stock for the bottom piece, then lay out and cut the mortises. These go clear through the piece and should, therefore, be laid out from both sides.

Get out stock for the two upright pieces and cut the tenons to fit the mortises in the bottom part. The fit should be a snug one. Next lay out and bore the holes for the screws.

The frame will cause the most concern. The joint at the corners is called a miter joint, the pieces meeting at an angle of 45 degrees. Some try-squares have a 45-degree angle on them. If you have a square of this kind, lay out the angle with it, but if you haven't one, follow the detail of the joint shown.

Some stock will have to be removed for the picture and glass. This can best be accomplished by marking out with a sharp marking gauge and then removing the stock with a sharp chisel. This will not be as difficult as you may think and no trouble should be experienced in getting a good job.

When all the parts fit well, sandpaper thoroughly and then assemble. Glue uprights to the bottom, being sure they set at right angles to it. Fasten the frame together with brads and glue. Stain to suit.

FEEDING BIRD Fig. 67

To obtain the best results with this toy it must be made very accurately, because if the parts do not fit together well the mechanical action will not be as it should.

Begin by making part A, the bottom part or handle. Lay out with a pencil compass and cut to form with a bracket or coping saw. Bore holes for the strings and countersink on the under side for the knots made at the ends of the string to fit in. Drive a small staple between holes.

Part B comes next and is fastened to A with cigar-box nails. A screw hook is screwed near the top of the piece on which to hang the rubber band.

Make parts D and the block G and fasten them together with glue and two fine brads, about $\frac{1}{8}$ " No. 18, sandpaper all parts before assembling. Drive a pin in the top of the block and turn over, making a hook. Drive a small staple in bottom of block.

Draw out the patterns for the head and tail and saw to form. Bore holes in which to tie the ends of the strings and also for the pins used in assembling to the body. Sandpaper the parts and tie strings in place. Head and tail must fit loosely in body and swing freely on pins. Assemble parts, not permanently but just for a test as they must be taken apart for painting. Thread string through bottom board and tie.