

GILBERT
CARPENTRY
FOR BOYS

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side of this point, bore holes as shown in the top view. This is for the hand hold. Lay out chamfer on the edges with a pencil and plane. Under no circumstances should you use a marking gauge in laying out a chamfer. Sandpaper all surfaces and assemble, using round-head screws at the ends and flat-head screws for fastening the top to the side pieces. For a finish, paint or stain as desired.

CAMP OR AUTOMOBILE STOOL Fig. 44

A home-made stool of this kind is handy for many purposes, but it is called a camp or automobile stool because it can be packed compactly, making it convenient to be taken either in an automobile or carried in a camping outfit.

The legs should be made first; the dimensions for them are given on the drawing. Do not cut the angles on the ends of the legs till the stool is assembled.

Cut sections from an old broom handle for the spreaders or rungs. Bore holes in the legs to fit the spreaders. Put them in place and fasten by brads driven through the leg into the spreader. Both the

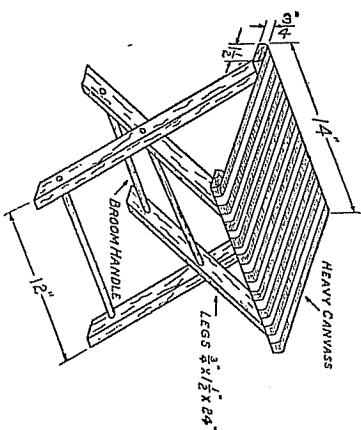


Fig. 44

inside and outside sets of legs should be fastened to the spreaders near the floor but only the outside set at the center. If both sets were fastened to the center spreader the stool could not be closed.

Set the stool on the floor opened to the distance you think will make a good seat, hold in this position by a string tied from one bottom rung to the other. Place a yardstick on the side of the stool with the edge touching the two lowest points on the top ends of the legs. While held in this position mark the angle for cutting the legs. Mark the bottoms of the legs in the same manner. Cut to line and fasten the two top pieces in place with long screws or finishing nails.

Paint all parts and when dry tack heavy canvas over the top pieces. The canvas will hold better if wrapped once around the top pieces before tacking.

MAGAZINE AND BOOK STAND Fig. 45

First get out all your pieces to the required dimensions. The construction of the piece involves no mortise and tenon joints, but a good

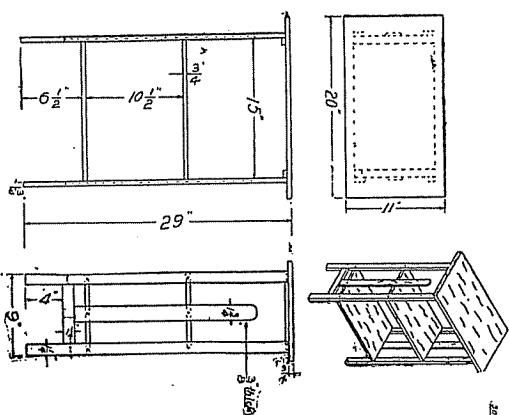


Fig. 45

job demands that all the ends be made perfectly square. This is especially true with reference to the spreaders.

Lay out the locations for the various holes for the screws, being careful to have them in the same relative position on similar pieces. For instance, the holes through the four upright pieces, through which the screws extend to hold the stretchers in place, should be exactly the same distance from the bottom of each piece. Similarly the holes for the screws which hold the shelves in place should all be the same length from the bottom. A good way to accomplish this is to lay the pieces on the bench, all four together with the ends exactly even, and then lay out all the holes while in this position. Of course, some means should be used to hold them firmly in place while the laying-out process is taking place.

After all the holes are bored, sand the parts well and then assemble. The finish you give the stand will depend upon the kind of wood you use. It would be well in selecting the material to endeavor to match the furniture with which the stand will be used. Oak is always good and can be stained very easily to harmonize with the surroundings.

NAIL BOX Fig. 46

All the joints in the box are the ordinary butt type, so the caution right at the beginning, is to make all the ends of the pieces just as square as it is possible.

The handle is the hardest piece to make. Get the stock to the largest dimensions first, then lay out according to the small detail drawing in the upper left-hand part of the sheet. To bore the holes, the piece should be held in the vise with the pressure across the grain of the wood. Unless this is done, the bit will split the thin wood. After the two holes are bored, draw two straight lines just touching the outside of the holes. The balance of the material can be removed with a chisel or your turning saw.

Before assembling the pieces, sandpaper them very carefully, always with the grain of the wood. Use one-inch brads to fasten together. The sides, ends, and bottom should be assembled first. Next, brad the inner partitions to the handle, then set all three pieces inside the box and nail through the sides.

The box may be left unfinished or it may be stained, or shellacked. This size would be very useful for mother to keep buttons, etc., in and should you make one for her, it will look very nice if you stain the outside and shellac the inside.

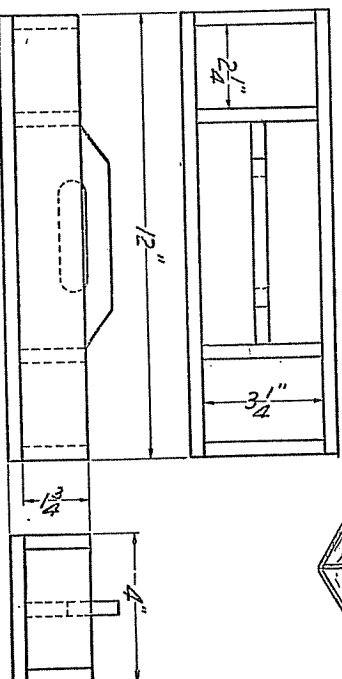
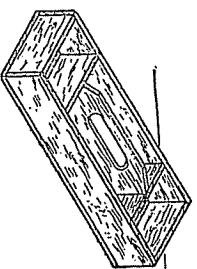
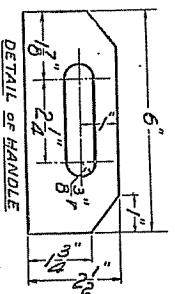


Fig. 46

ADJUSTABLE "W" BOOK-RACK Fig. 47

This rack is adjustable within certain limitations, hence is very convenient in case you have fewer books than would fill the space between the uprights if they were fastened securely at each end of the piece supporting the books.

Select a very good wood for this piece. Oak, black walnut or mahogany can be finished very attractively and would be recommended for use if you are able to obtain any.

For the best results the grain of the wood used for the M pieces should run parallel with the six-inch dimension,—that is, vertically.

The laying out of the M pieces will not be difficult as all lines are straight. Your hardest work will be in cutting them to shape. Your coping saw you will have to be used very, very carefully. Don't hurry. Saw as straight as you possibly can, endeavoring to leave as little stock as possible to be removed with any other tool. Some of the outside stock may be removed with your back-saw.

Fig. 47

FOOTMOBILE Fig. 48

Any material can be used as long as it is strong enough to stand considerable weight, because oftentimes older people like to try out things of this sort with the result that parts are broken.

Technical drawing of a mechanical device, likely a pump or engine component. The drawing includes a side view of the main assembly, a detailed view of a curved component (B), and several long, thin components (A, C, D, E, F, G, H). Dimensions are provided for several parts, including a 1/2 inch dimension for part A, a 1/4 inch dimension for part B, and a 1/2 inch dimension for part C. A scale bar at the bottom indicates 30 inches.

Fig. 48

Next make the handle and peg in a good hard wood. Part (C) should be made of metal; and, as it is merely an angle iron, with a few holes bored for screws and countersunk, you can have it made at any blacksmith shop for little money.

The wheels can be cut with a saw from a piece of inch wood; make them as round as possible because you do not want a flat wheel on your pushmobile.

Paint parts with colors to suit your taste and then assemble. Part (C) is fastened to the handle with flat-headed screws, the other parts are assembled with bolts. The wheels will last longer if a piece of sheet metal is tacked on for a tire and a short piece of iron pipe fitted to the hole to act as a bushing to turn on the bolt.

ROBIN AND WREN BOX Fig. 49

Material for this box can be obtained from a pine shoe box. This is suggested because the material is about the thickness required, and as the lumber is dressed, very little planing will be necessary.

Make the side pieces first. If you have not a one-inch bit, the hole may be cut with a knife, but be careful not to get it larger than called

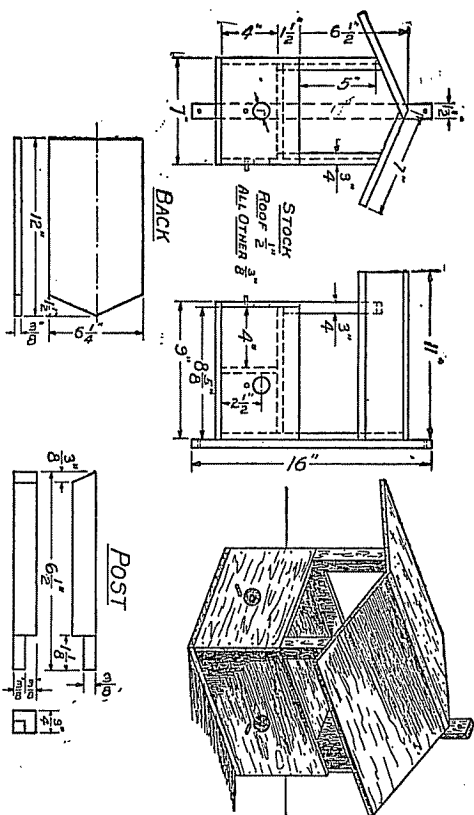


Fig. 49

for. Next, make the front, back and bottom, then fasten together. The partition can next be made and put in position, fastening from the bottom and through the sides. The floor should be made next and fastened by means of screws, or hinges and a hook. This should be done to enable the box to be cleaned out each season.

The four posts should now be made. Study the drawing carefully to insure your understanding exactly what is desired. Cut out and test the fit of the pieces before placing in position permanently. If satisfactory, nail in place and then put on the roof.

Perches are not necessary, but if they are desired as a matter of appearance, they should not be longer than three-quarters of an inch. If they are any larger, sparrows will be able to light on them and annoy little Jenny Wren.

The box may be covered with bark or twigs, or it may be painted gray, white or brown.

DRAWING TABLE Fig. 50

A drawing table, especially one with a movable top, is most convenient for any one making drawings. The top on this table can be raised or lowered to accommodate the person while standing or sitting. It can also be tilted at any angle which is desirable.

The expense of material for making the table is very little. If you have a large drawing board it can be used for the top, the other parts can be made of any cheap wood.

If you do not have a top and wish to make a drawing board rather than buy one, it should be made of soft wood; either pine or basswood is good as the thumb-tracks can be easily pushed in and pulled out of it.

Make the cleats (H) and fasten to the bottom of the drawing board with screws. Next, make parts (E), lay out the circular slot with a pencil compass and remove as much of the stock as possible, with a 3/8 inch bit, finishing with a keyhole saw, wood rasp, and sandpaper. These parts are fastened to the cleats with screws.

Now make parts (A) and (C). Put casters as indicated on (A) and then fasten (C) to (A) with screws.

The uprights (B) are straight pieces having two holes bored in them for bolts. These parts are also fastened to (A) with screws.

Parts (D) have 3/8 inch slots as indicated and holes in the upper ends for the bolts. Make the slots the same as suggested for part (E).

Washers should be put on the bolts between the head and the wood, and the nut and the wood. The top and bottom bolts are to be fastened in place with ordinary nuts, but the other two should have

wing nuts, making them easy to loosen and tighten when adjusting the parts.

The finished table can be stained and varnished or painted depending on the kind of material used. The top or drawing board should not

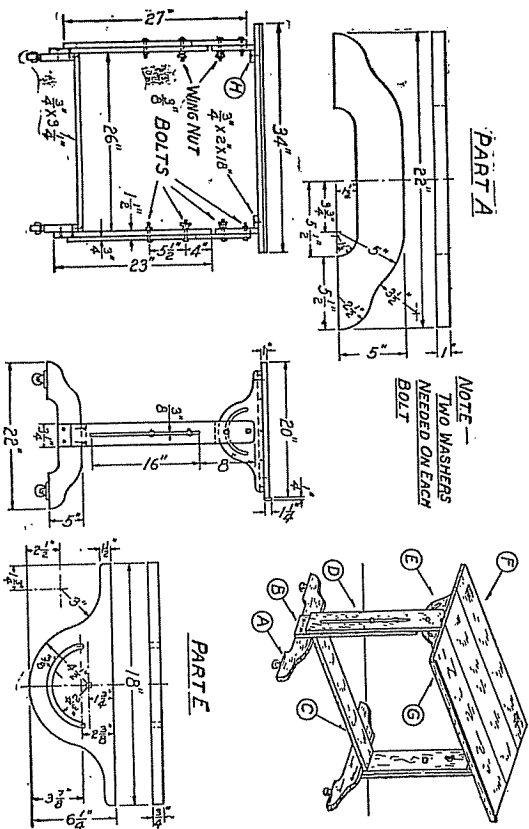


Fig. 50

be finished with more than just a thin coat of shellac, if, with anything at all. The left-hand end of the top board must be perfectly straight and square. A thin strip tacked to the front edge will keep pencils from rolling off.

TELEPHONE SCREEN Fig. 51

The kind of material to use for the screen will depend upon the kind of finish you wish to give it. If it is to be stained, choose a wood that has an interesting grain like oak. If it is to be painted or enameled, any kind of wood will do, so long as it is straight grained and free from knots.

Get out all pieces to the greatest dimensions indicated. The forming at the tops of the three members is to be done after the parts are glued together. All joints are to be half lap. Cut and fit all parts carefully, after which, cut out the inside corners to fit the panels to be used. No dimensions for this are shown because the depth of the cut will

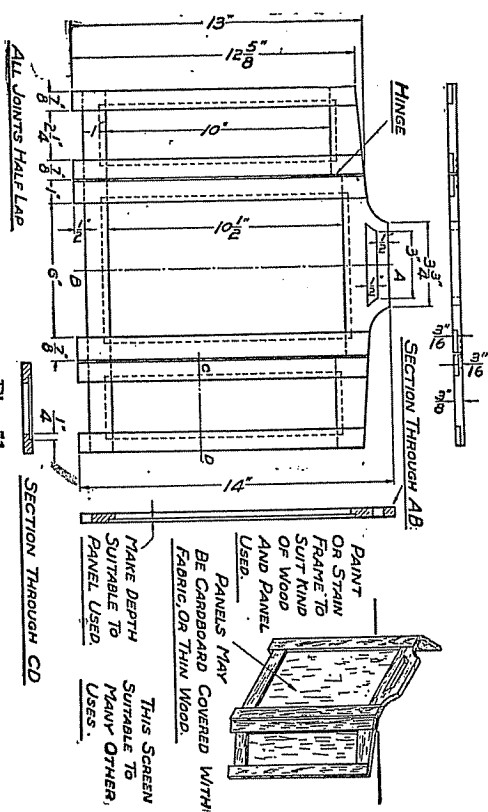


Fig. 51

depend upon the kind of panel to be used. If cardboard and silk are used, the depth will likely be less than an eighth of an inch. Decide upon what material you wish to use and then cut accordingly.

Be careful in the gluing together of the parts, especially if the wood is to be stained. When the glue has set, lay out and cut the tops of the side member of the screen. The handle portion of the middle section may be cut before the gluing is done, but the tops of the two side pieces of this section should be cut after assembling.

Be sure all parts are well sanded before staining. Fit the hinges, then stain with them in position or not as desired.

The finishing should be such as to match the material used as panels. If painting is the finishing method, good results will be secured by first selecting the panel material and then getting a paint or enamel that will match.

CLOTHES-PIN BLACKSMITHS Fig. 52

This toy requires very little explanation; it is so simple. First, make the two handles, they can be made of pieces from a cigar box. Then take three clothes-pins, cut two off near the top for the hammers, and the other, off at the top and bottom, making the anvil. The handles for the hammers are nothing more than two pieces of common wire used in baling hay. They are fitted tightly in holes bored straight into the hammer heads.

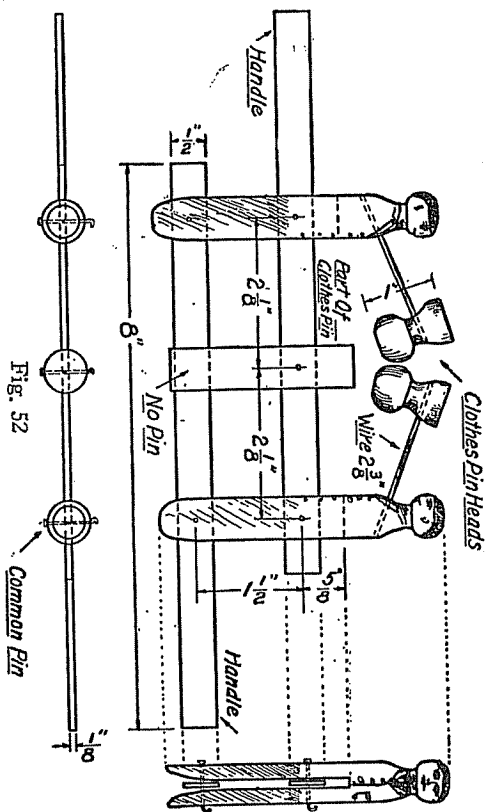


Fig. 52

For the blacksmiths, two more clothes-pins are needed. Notice that the holes in them, for the hammer handles, are bored at an angle.

The parts are assembled with pins, for which small holes should be made through the clothes-pins with a bradawl. The pins must be long enough so the points will project far enough to be bent over and driven into the wood. Very long pins are called bank pins and are made from two to three inches long.

Much time can be spent in decorating the men, anvil and hammers; no two boys will decorate them the same, but the boy who is most handy with the brush will produce the best toy.

To operate grasp one handle in each hand and pull and push together.

WHEELBARROW Fig. 53

The first thing to do is to make out a bill of material. Most of the stock will have to be purchased, no doubt, so be careful to avoid waste in ordering.

Make the frame first, following the framing plan shown. Lay out the side pieces with the required spread and fasten the cross pieces in place. Care should be taken to get this uniform. To do so, lay out a line on the floor and at the required distances lay off half the spread on each side of the straight line and at right angles to it. It will be noted that holes are to be bored in the two center pieces. In assembling these great care must be taken to insure the holes lining up properly.

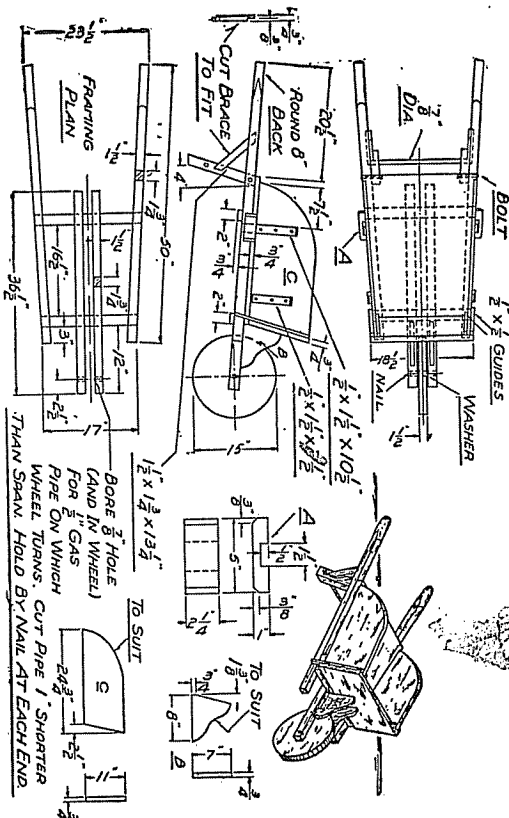


Fig. 53

Cut the braces and fasten to the two center pieces of the frame; these support the end piece of the box. The latter should be wide enough at the bottom of the box at this point to permit the guides to be fastened to it, and to extend down over the frame. The inside guides are fastened to the end piece at a distance inside the outer one that will permit the side pieces to enter and be held in position.

Probably the most difficult part of the construction will be the brace that runs from the handle piece down to the leg. To make this, hold it in position at the required angle, mark it accurately and then cut to shape. The wheel should be perfectly round and the hole in the center must be bored straight through. The rim should be lined with metal such as sheet iron.

It will pay to give the barrow one or two good coats of paint. Green is suggested.

TELEPHONE PAD AND GROCERY LIST Fig. 54

In making the telephone pad, if you should have a telephone stand, make the pad from the same kind of wood. Otherwise, use any good wood.

Get the piece to the over-all dimensions as shown in the drawing. Lay out the corners that are to be cut off. Remove with a sharp chisel. If you haven't one, use a saw and sandpaper.

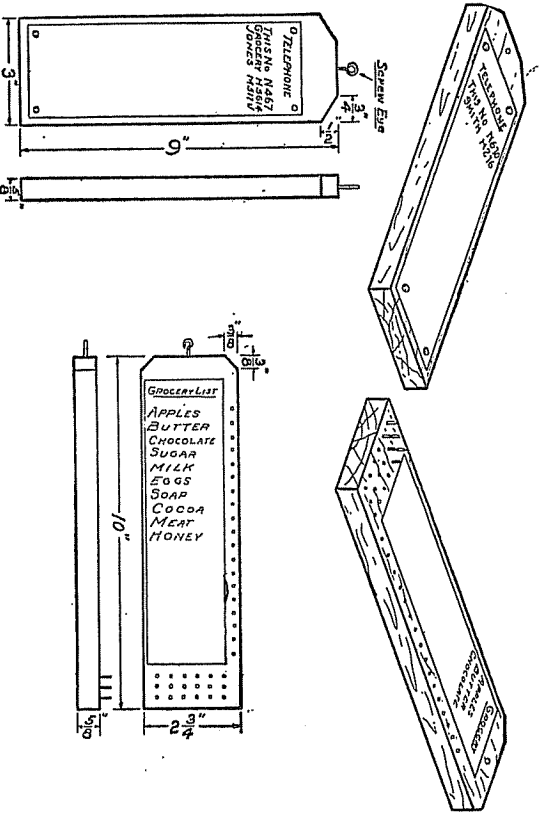


Fig. 54

The pad may be suspended at any convenient place by means of a small hole bored at the top, or a screw-eye may be used. Stain to match the telephone stand if you have one.

Next prepare the paper on which the writing or printing is to be done. Mark off as shown in the drawing. Fasten to the pad by means of a small drop of glue at each corner of the paper, or insert a brass upholstery nail. The latter method is very attractive.

The tool operations for the grocery list are the same as for the telephone pad. It may be made longer or shorter than the drawing shows, to suit any particular need.

The pegs which are used to show the groceries desired, are cut from used matches, three-quarters of an inch in length. The holes for the pegs are most conveniently bored by means of a small hand drill. Fasten paper in same manner as before, then bore holes opposite each material listed.

BOOK SUPPORTS Fig. 55

As this is an inlaying problem, a dark-colored wood such as gum or walnut should be selected. The former will give excellent results and a piece of very light basswood can be used for the inlaying.

In getting out the stock, plane up the uprights in one piece and the bottoms in the same way. This will save time. As the hardest part will be the inlaying, nothing more will be said about the other work.

Lay out your design for the inlaying. With a very sharp marking gauge, gauge for the sides of the inlay groove, both with and across the grain. The gauge is not intended for use across the grain, but in this case where a slight curve is to conform to the top, use it to make a line just deep enough so a knife will easily follow the mark. Gauge deeply with the grain and use a sharp knife across the grain in the path made by the gauge. Remove the wood to the required depth with a chisel not wider than an eighth of an inch.

The inlay should be cut next. Have it slightly wedge shaped to insure a good fit at the top. Fit carefully and glue in place. All the corners should be made mitered as this gives the best appearance. If carefully done, the basswood, if such is used, can be nearly cut to shape and bent the balance of the way. When the fit is satisfactory, apply glue to each part in small quantities. Clamp if necessary.