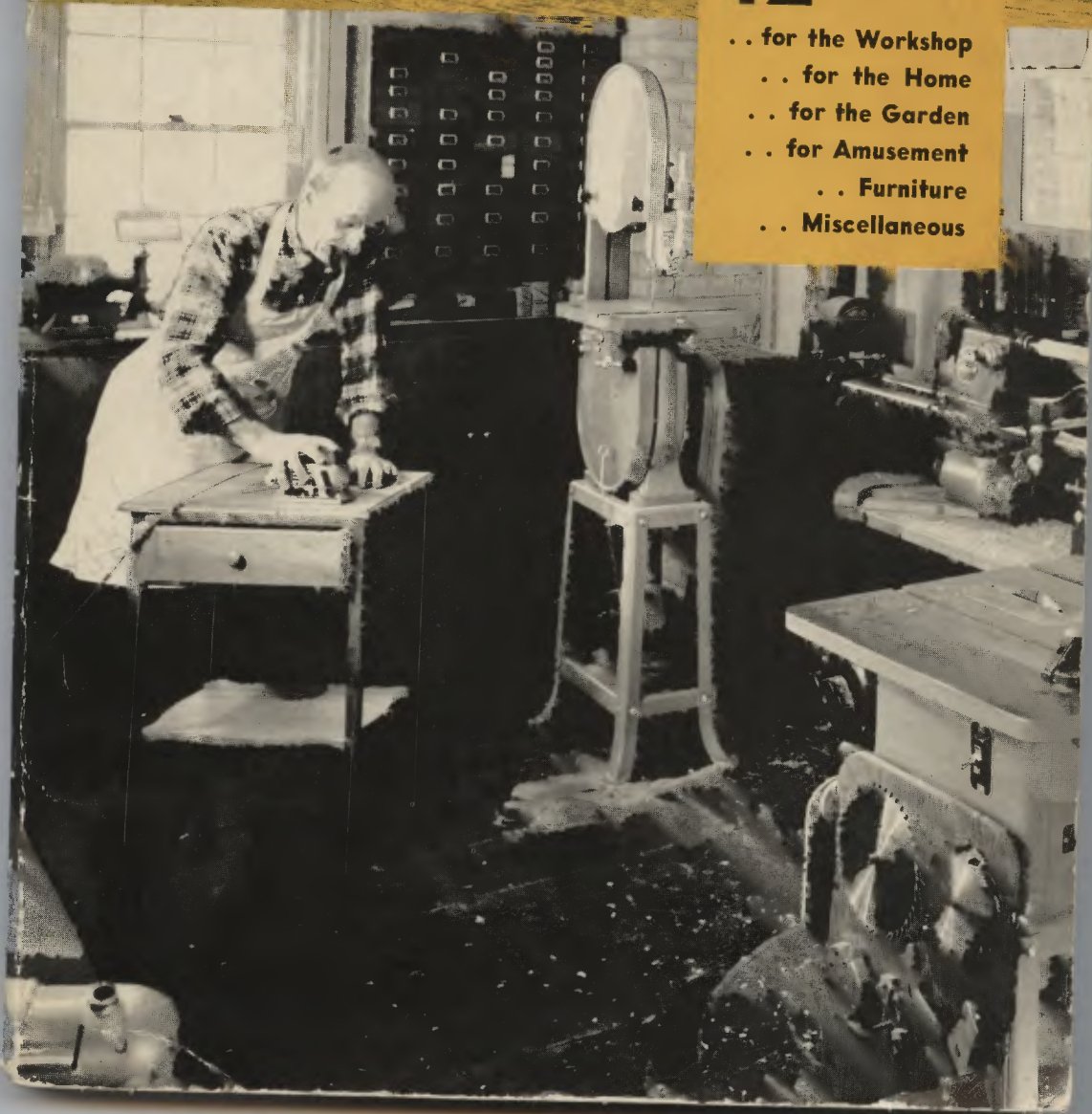


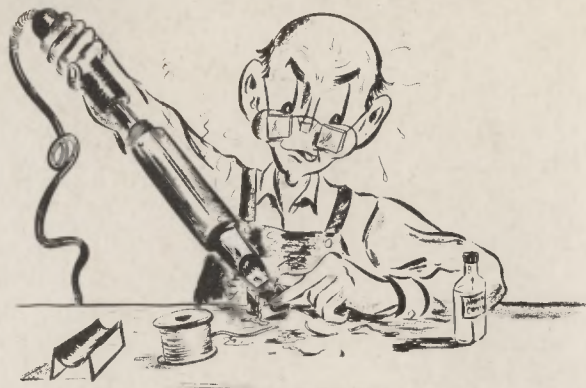
WALT'S WORKSHOP

42 PROJECTS

- .. for the Workshop
- .. for the Home
- .. for the Garden
- .. for Amusement
 - .. Furniture
 - .. Miscellaneous



preface



The things which can be said in favor of the home workshop and of woodworking as a hobby are almost without limit. One can dwell at some length on economic values, on the hobby as a leisure time activity, or its influence on family life.

During many years' experience in teaching evening school I have observed men and women from all walks of life, and in every conceivable vocation, react to the stimulus of working with tools and wood. The signs of pride in accomplishment, of worried minds relaxed, were unmistakable.

The economic advantages of an ability to work with tools were pointed up during World War II and in the post-war years. Materials were scarce; labor high or even unavailable. It made home repairs and improvement, for many, a case of do-it-yourself-or-do-without.

Ray Giles, author of *How to Retire and Enjoy It*, once made a statement I like to repeat. He highlighted perhaps the greatest value of the workshop hobby when he said: "One of the surest ways to live long and pleasantly after your working career is over is to get yourself a home workshop."

The workshop hobby was given a substantial impetus by Station WNBQ-NBC in Chicago, when in 1949 they televised my show "Walt's Workshop". Thus they brought living testimony of the joys of working with tools to hundreds of thousand who otherwise might not have seen for themselves how simple and satisfying it is. "Walt's Workshop" was the first educational show of its kind on television and is the prototype of other TV workshop shows elsewhere.

I take this opportunity to acknowledge with deep gratitude the help extended to me by Phil Creden, advertising manager of the Edward Hines Lumber Company who sponsored this TV show. He had the imagination to appreciate what visual broadcasting would do for the neophyte and the skilled workshop craftsman.

I make grateful acknowledgement also to American Technical Society for permitting the use of some of the material from my books, "Fundamentals of Carpentry", which they published; and to Russ Johns, editor and publisher of Popular Homecraft magazine, who collaborated with me in presenting WALT'S WORKSHOP in book form.

Walt Durbahn

WALT'S WORKSHOP

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the home workshop



This is where I finally installed my workshop—which started out in one corner of a basement some years ago.

the home workshop

Your home workshop can be almost anything — a little cabinet in the kitchen or bedroom containing the tools for small or light hobbies; a bench in the basement with a vise and some hand tools, for repairs about the house; or an elaborate basement or above-ground shop with all kinds of hand and machine tools.

It is a good idea, however, to grow gradually into the home workshop; that is, start in a small way, then as your interest, skill and needs increase, add to your collection of tools and machines. There are many well-equipped shops standing idle because some owners became over-enthusiastic at the start and failed to realize their tools require a certain amount of skill and knowledge. And so they got discouraged and dropped the whole thing.

It is surprising, on the other hand, how quickly tool skills can be developed with a little patience and application, especially if you possess an appreciation for the pleasures and profits that can be derived by proper use of leisure time.

It is superfluous to say that every home should have a few essential tools such as: hammer, saw, tri-square, screw driver, hand drill, pliers and an adjustable wrench. These tools are necessary for simple repairs about the home. When the urge develops to build projects it is necessary to add tools like a jack plane, a few chisels (possibly $\frac{3}{8}$ " , $\frac{3}{4}$ " , $1\frac{1}{4}$ "), framing square, coping saw, brace and a few auger bits, a level, possibly a soldering iron, a cold chisel and, of course, a work bench with a vise, and a couple of saw horses. All this equipment can be housed in a corner of the basement or in the garage.

The final stage in developing a home workshop requires a room in the basement, in the garage, or wherever space can be acquired for additional tools and machines. They should be kept under lock and key to keep little hands from getting hurt.

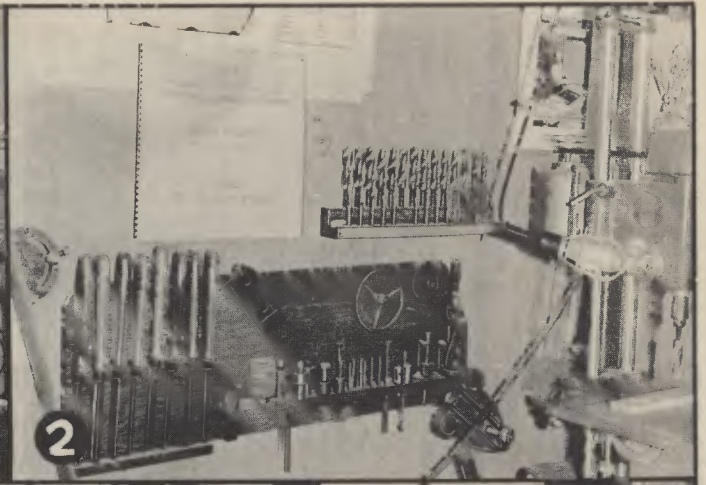
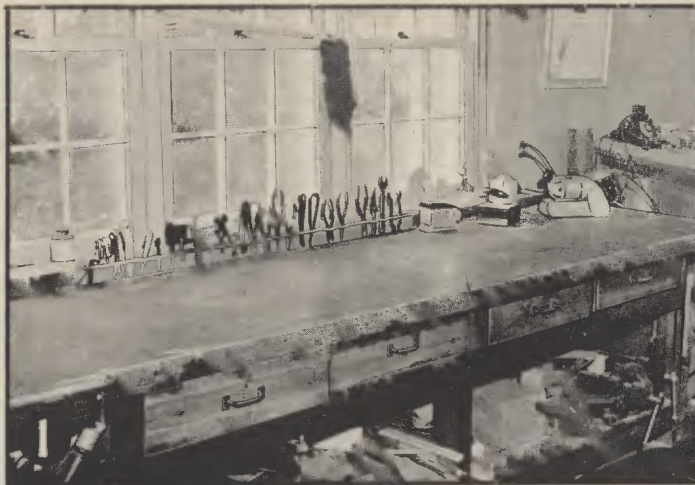
When I arrived at this final stage, which I call *my* ideal shop, I moved my work bench out into the west side of a double garage, above the ground and overlooking our garden (Fig. 1). It's not a model by any means, but it does serve my purpose and has given me much pleasure. An explanation of its arrangement and equipment might help you plan your own home workshop.

The floor area inside the shop is 12'0" x 21'0". The work bench is in front of three windows on the west side. This bench is similar to the one described on page 10, but is twice the size. The drawers carry equipment less frequently used, and the shelf underneath is a catch-all.

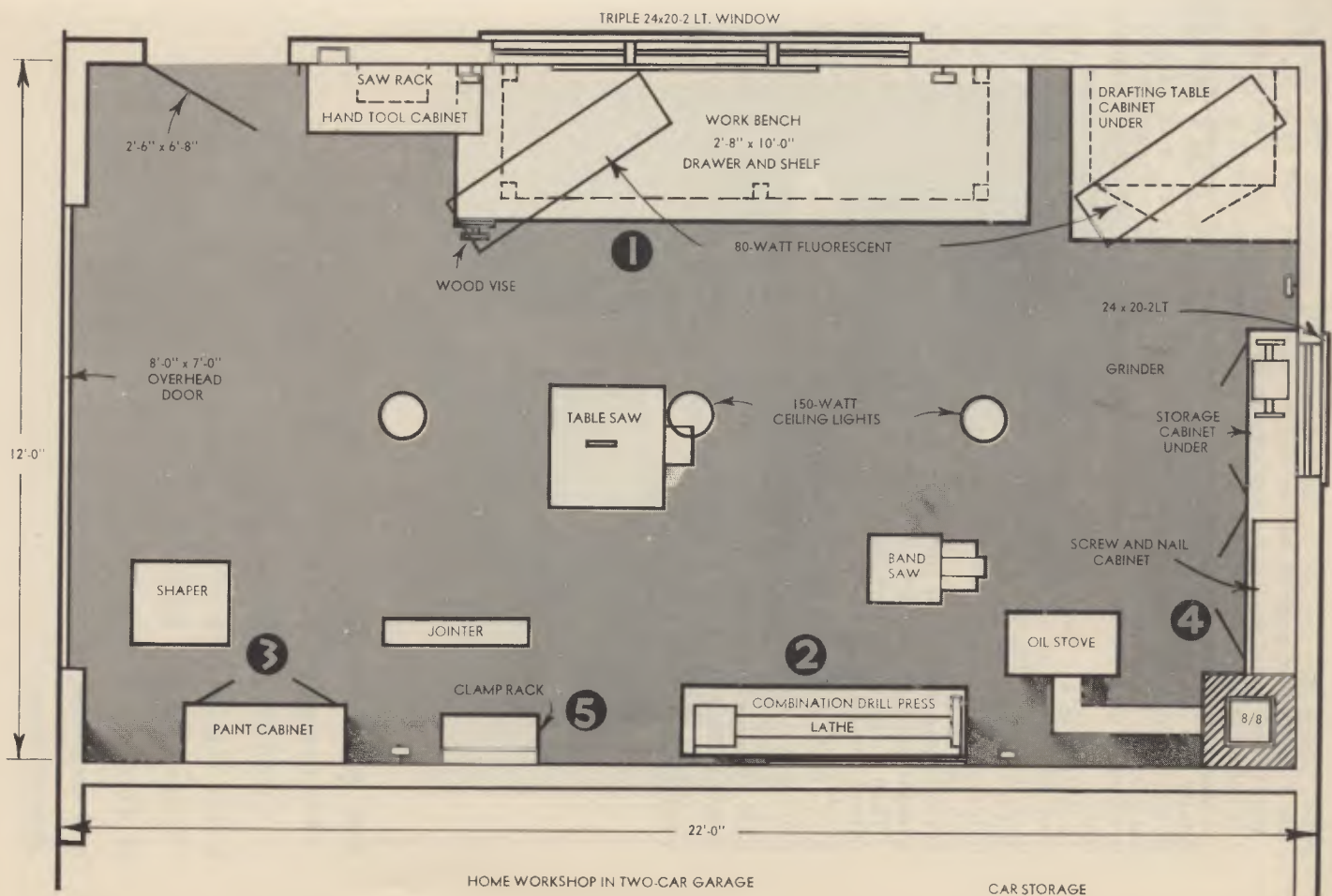
Under another window on the north side is a storage cabinet for small machines and equipment. On top of this cabinet is the grinder, also a supply cabinet on the right for screws and nails (Fig. 4).

Over the vise on the left hand side of the work bench is the cabinet described on page 13, for hand tools. Beneath the tool cabinet is a rack for hand saws. Thus I keep all hand tools where they are most apt to be used. Keep in mind when planning your shop to arrange tools and accessories for your machines where they too are most likely to be used.

Note that the spring holder for small tools like pliers, nail sets, dental snips, etc., has been placed on top of the bench along the back where they are handy (Fig. 1). Also note that the rack for the turning tools and drill press accessories has been placed on the wall behind the lathe and drill press (Fig. 2). Clamps — and there are many different kinds which are acquired over a period of years — should be



4



5

stored where they are not buried but are easily accessible. The clamp rack described on page 20 has served my purpose very well (Fig. 5).

Paints and wood finishing supplies can be stored on open shelves but it is better to have a cabinet with doors to keep out the dust (Fig. 3).

A workshop should have a planning area, a place where drawings and details can be worked out and where books, magazines, etc., can be stored conveniently. In my shop the planning area is a 3'0" x 4'0" drawing board in the corner to the right of the work bench. The drawing board is mounted on a storage cabinet which contains books, papers and magazines.

Lighting in the workshop is quite important. The windows over the work bench will give adequate lighting where it is most needed on bright days, but even this must be augmented with artificial light on dark days and in the evenings. In this shop you will find three 150-watt incandescent lights with reflectors, on the ceiling, and two fluorescent lights each with two 40-watt tubes. Note, however, that the fluorescent lights are placed at an angle over the bench vise and over the drawing table. This angular arrangement prevents shadows on the work at these stations.

Then there is the reel light with its 25-foot cord which enables one to extend the light to any place in the shop. Don't forget to provide an ample supply of duplex receptacles in the walls for power machines. Floor outlets might be more desirable but in a small shop with movable machines it seems more advisable to connect floor machines to wall outlets. The wiring in the shop should be on at least two circuits — one for light, the other for power, and provided with a lock as a safety precaution.

Saw table and jointer and other machines which require the handling of long stock should be placed near the center of the room in line with windows and doors for exceptionally long lumber.

saw horse



Your workshop just isn't complete without a saw horse (I cannot get along with less than two). The saw horse is as basic as the work bench.

saw horse

Every home workshopper needs a saw horse in his shop; two, in fact, for working around the house. It serves occasionally as a work bench, the tray holds tools, you'll use it for scaffolding or as a stepladder, to mention just a few uses.

The length and height of the saw horse will be determined by each person's particular needs and preferences. Tall men, for instance, might want the saw horse a little higher than the dimensions shown. These dimensions are for the average person and run-of-the-mill jobs. It is suggested that you use a soft and lightweight material such as No. 1 pine or spruce.

materials

- 1 pc. 2 x 4 x 3'6" — No. 1 pine
- 1 pc. 1 x 4 x 9'0" — No. 1 pine
- 1 pc. 1 x 10 x 5'6" — No. 1 pine
- 1 pc. 1 x 2 x 9'0" — No. 1 pine

procedure

1. Lay out the bottom cut (1) as in Fig. I, using the figures 4 and 24 on the framing square to get the angle cuts. Measure the length $24\frac{5}{8}$ ", reverse the square and again use the figures 4 and 24 on the square to lay out the top cut (2), Fig. II.

2. Lay out the angle cuts on the edge of the leg for both the top and bottom cut by using the figures $5\frac{1}{4}$ and 24 on the framing square as in Fig. III.

3. Cut to the line with the cross cut saw to make one leg. Use this leg as a pattern to lay out the other three legs.

4. Lay out the gain joints, Fig. IV, which will receive the legs. The legs of the saw horse are set back 4" at the top, causing the legs to set at an angle of 4" to 24" of height. Square a line (1) across the top side of the 2 x 4 four inches from the end. Lay out the angle cut (2) on both sides by holding the square to 4 and 24. Lay out the width of the leg and draw lines (3) and (4) on the top and edges of the 2 x 4. Gauge the line (5) $\frac{3}{8}$ " from the edge to complete the layout of the gain joint. Cut the gain joint by sawing along the lines and remove the wood with the chisel, from nothing at the bottom edge to $\frac{3}{8}$ " at the top.

5. Taper the legs from 2" at the bottom to the full width 2" from the top. Nail the legs into place with three 8D coated nails.

6. The end pieces (A) are cut from the 1 x 10 piece. Be sure the grain of the wood will run across rather than up and down. Nail the end pieces in place with 8D nails so that the bottom of the legs will have a spread of 15". These end pieces should be nailed tight up against the 2 x 4.

7. Cut the tray bottom to length, measuring the length from outside to outside of the end pieces (A). Fit into place by cutting out for the legs, then nail to the end pieces (A).

8. Cut and nail in place the 1 x 2 tray side pieces (B), also the 1 x 2 tray supports (C).

(Design courtesy American Technical Society: "Fundamentals of Carpentry," by Durbahn.)

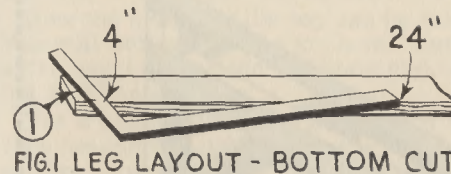
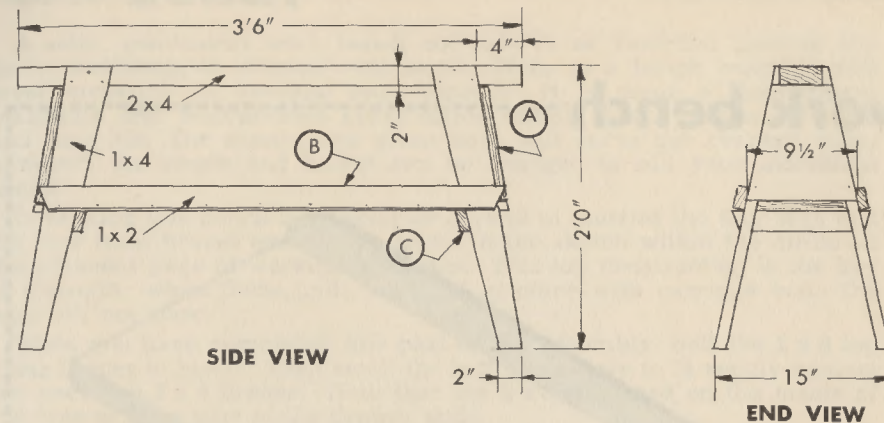


FIG.1 LEG LAYOUT - BOTTOM CUT

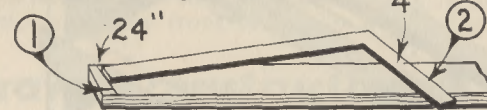


FIG.2 LEG LAYOUT - TOP CUT

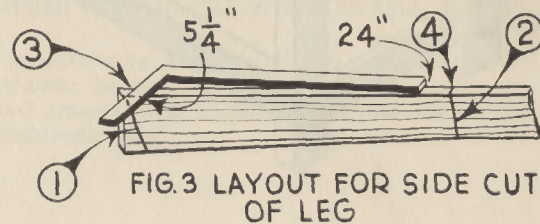


FIG.3 LAYOUT FOR SIDE CUTS OF LEG

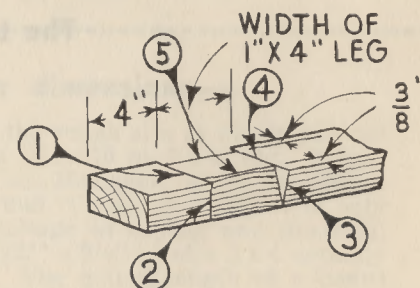


FIG.4 GAIN JOINT FOR RECEIVING LEG