How to Build
A Portable Work Bench
and Tool Cabinet

Circular of Information 553
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Oregon State College
Corvallis

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November 1955
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The bench and cabinet plan presented in this circular solves the big problem of a fixed work bench: both tools and bench can be moved where they are needed—inside or out.

This bench saves both time and effort. "Housecleaning" is much easier, and tools and working area are in a compact unit for portable, instant use.

Construction

Construction details are drawn on pages 3 and 4.

The layout for cutting the plywood pieces also is shown. One 4' x 8' sheet of 3/4" plywood and one sheet of 1/2" plywood are all that is needed of these sizes. The drawer bottoms are made of 1/4" plywood, four pieces 18 1/2" x 19 3/4". This is enough thickness unless you plan to use tool outline pieces in the drawer bottoms.

The legs and two crosspieces at the top are made of fir 2 x 4's. Pine is best for the drawer runners and guides, since it planes smoother on the edges. Drawers then slide more freely, and are less likely to split when attaching.

A good water-resistant or water-proof glue used where indicated will make a much more solid and durable unit. If the back and end pieces are also glued before nailing to the legs, it will insure the bench against racking and loosening up with use.

The piston rack (shown in Figure 1) is optional, but handy to have if you are dismantling engines.

The best top covering is sheet metal, but tempered hardboard can be substituted if service is moderate and you want to cut costs. Glue the entire surface under pressure, if possible. Then apply an edge molding to cover the exposed edges. This molding could be a hardwood or metal strip.

You can fasten a small vice to the front, right-hand corner. Its weight then will be over the wheels, and not add to the weight load on the handle when moving the bench. If the vice is located on the end with the drawers, it will interfere to some extent with easy access to the top drawer.

The wheels are 6" diameter, solid cast iron discs. They are large enough to roll easily over rough places in the floor. Because the legs at the other end rest directly on the floor, the bench stays "anchored" once it is positioned. Heavy duty casters could be used under all four legs, but smaller wheels need a smooth floor to roll properly. With casters, the bench always tends to move around too easily when you're working. The larger cast iron disc wheels should not be too difficult to obtain, and should be cheaper and last longer than casters or other types of wheels. Larger wheels can be used if you desire to move the bench outdoors and away from a good floor surface.
FIGURE 1. This is a portable bench with piston rack attached. Note handle for pushing cart at left. Door is pushed back underneath bench.

FIGURE 2. Here's how you can arrange the top drawer. A 12-pocket muffin tin can hold lock washers, cotter pins, screws, nails, brads, stove bolts, etc. A jigsawed tool outline made of 1/4-inch plywood holds each tool. Outline is painted black for contrast.

FIGURE 3. Socket wrenches are kept in another drawer much the same as tools in Figure 2. Note that crescent wrenches are hung in compartment near side of drawers.
$\frac{3}{4}$ PLYWOOD 19 PCS. FROM 4' X 8' SHEET

1/2 PLYWOOD 18 PCS. FROM 4' X 8' SHEET

PISTON RACK ASSEMBLY

BEVEL BACK FOR TOP

DRAWER RUNNERS 8-REQD. PINE

DRAWER GUIDES 2-REQD. PINE

DRAWER BOTTOMS $\frac{3}{4}$ PLYWOOD

DRAWER GUIDES SUPPORT 1-REQD.

TOP SUPPORT 2-REQD.

SCALE 1" & $\frac{3}{4}$" = 1'-0"