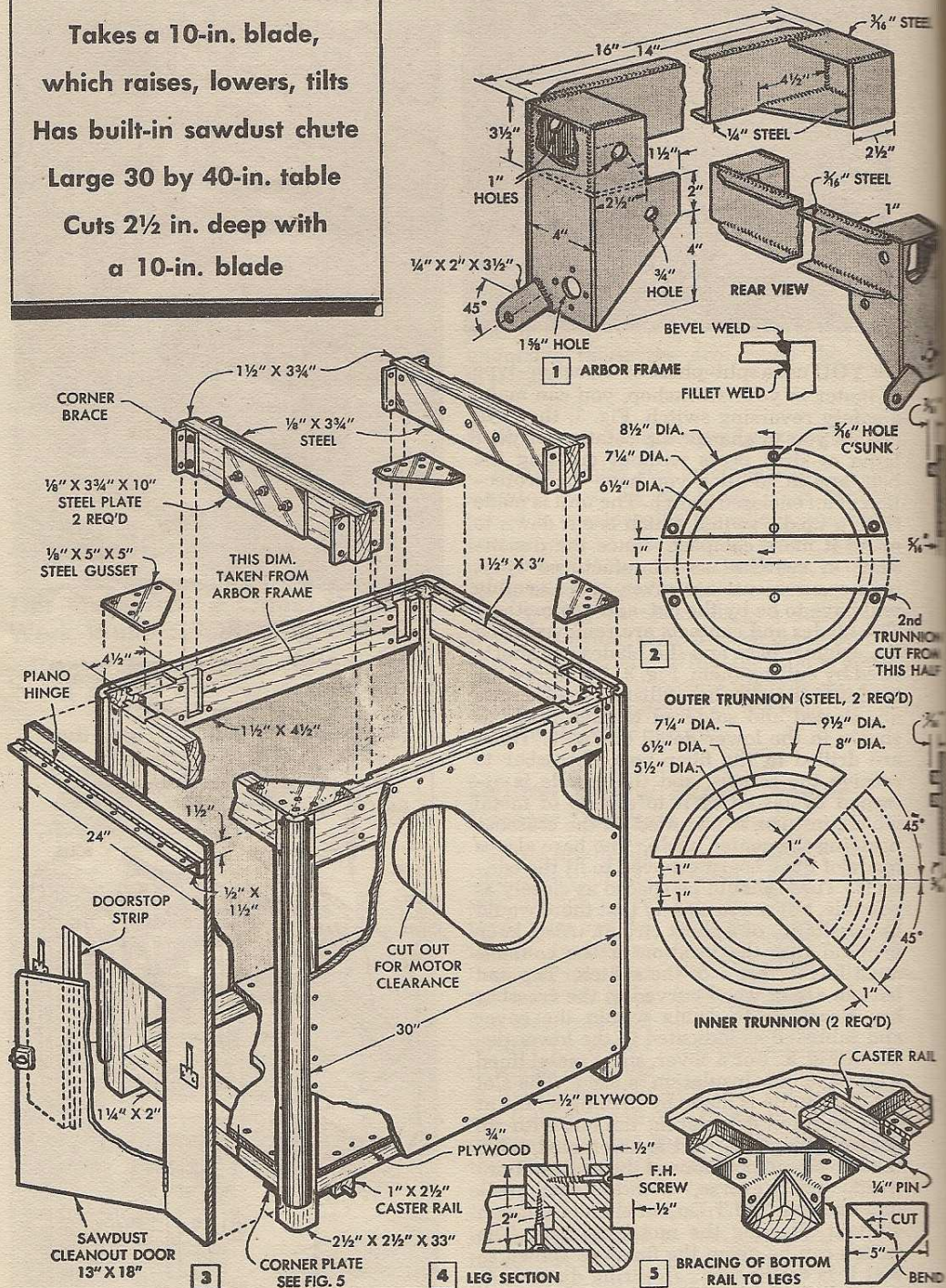


Features

Takes a 10-in. blade,
which raises, lowers, tilts
Has built-in sawdust chute
Large 30 by 40-in. table
Cuts 2½ in. deep with
a 10-in. blade

10-in. TABLE SAW

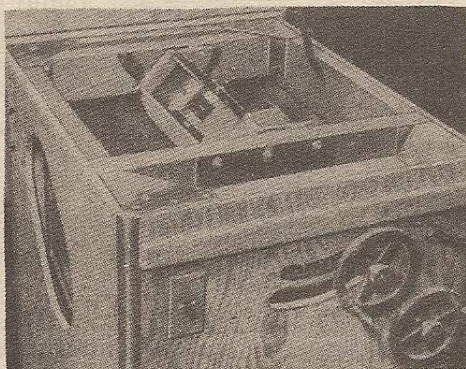


HAS TILTING ARBOR

WOODWORKING craftsmen will rate this tilting-arbor table saw "tops" because of its versatility, speed and accuracy. By turning one handwheel the blade is raised or lowered for any depth setting within its capacity. A few turns of another handwheel tilt the blade for any angle cut up to 45 deg., the settings being indicated by a degree scale and pointer. The saw table remains always in a horizontal position; only the saw arbor tilts. The hardwood table with hinged extensions is plenty large enough to handle a 4 by 8-ft. plywood panel. An enclosed base catches all the sawdust, and swivel casters fitted to built-in foot lifts enable the operator to roll the saw to any part of the shop.

Construction should begin with the saw-base frame, Fig. 3. Building the base requires care in cutting and fitting as it must be strong and rigid to support the motor and arbor assembly. Use well-seasoned, selected oak for legs and rails. Rabbet the legs on adjacent sides as in Fig. 4 to take side and end panels flush. Both top and bottom rails are mortised into the legs, but note that the upper side rails are 4½ in. wide and that the end ones are 3 in. The tenons are glued and keyed with screws, and after the joining is completed, steel gussets are mortised into the

An accurate scale with pointer shows all angles from 0 to 45 deg. Here blade is tilted to full 45-deg. angle



By Elman Wood

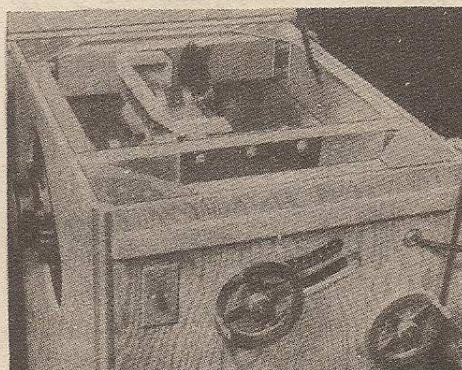
Part I

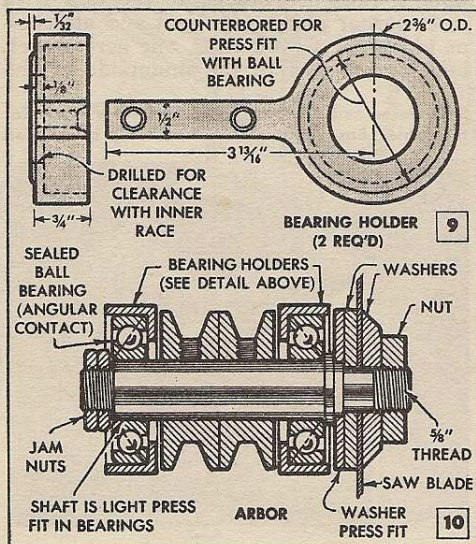
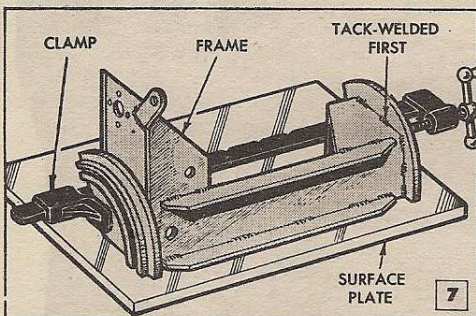
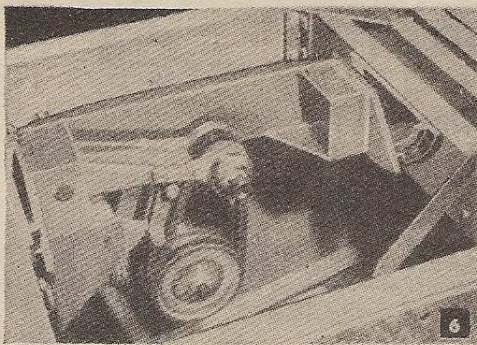
Hinged side and back extensions increase the size of the table so that the ripping fence can be set 25 in. from the saw blade. Rips to the center of 48-in. plywood panel



top rails across the four corners, and the bottom rails are braced to the legs with steel corner plates cut, bent and attached as in Fig. 5. Caster rails, one across each end, are hinged to the underside of the

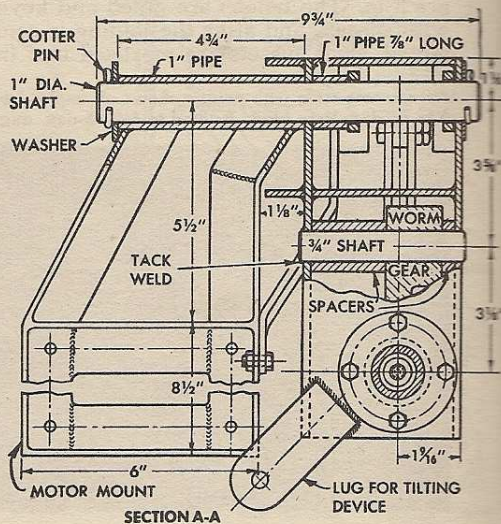
Saw frame and arbor assembly completed ready for the table. Base is painted before table is installed





frame rails as in Figs. 3 and 5. The plywood bottom and the rear and right-side panels can now be installed, but the front and left-side panels are omitted at this stage as it is necessary to determine later the location of the handwheels and the size of the opening for the motor.

The arbor frame, shown in front and rear views in Fig. 1, comes next. This consists of a number of parts cut from steel plate and welded together to form the unit shown. This frame swings on trunnions made as detailed in Fig. 2. Each trunnion consists of an inner and outer segment, the two trunnions requiring four segments in all. These four segments are obtained from $\frac{3}{4}$ -in. mild-steel plate turned first to the form of disks, which are then cut into segments as indicated in Fig. 2. Inner segments are welded to the arbor frame while the outer ones are attached to the steel-faced cross members in Fig. 3. In installing a trunnion-mounted saw arbor there are two precise requirements: The center line of the blade must coincide exactly with the center line of the outer trunnion segments and the center of rotation of the trunnions must be at that point where the plane of the blade intersects that of the saw-table top. Fig. 6 shows the arbor and arbor frame in position and Fig. 7 shows the first step in positioning the inner trunnion segments on the arbor frame. Use a surface plate or other flat surface and make sure that the parts are exactly in line before welding. This done, measure the length of the arbor frame, plus the four trunnion segments. This gives you the distance between the two trunnion-support members, Fig. 1. Face the members with steel plates as



shown and drill the bolt holes. While the members are temporarily in position determine the center line of the saw base and scribe it on both members for guidance in locating the trunnions. Then slip the arbor frame and trunnions between the supports. The arbor frame should fit snugly but should swing on the trunnions with only a slight frictional drag. With all parts located on the center line of the saw base, clamp the outer trunnion segments to the cross members and lift out the whole assembly. Using each trunnion segment as a drilling jig, drill holes and bolt the segments to the cross members.

Next come the arbor bearing holders shown in detail in Fig. 9, and in section in Fig. 10, with the arbor, pulley and bearings in place. Holders are rough-cut from $\frac{3}{4}$ -in. steel plate with a cutting torch or metal-cutting bandsaw and are recessed and bored through to suit the bearings as in Fig. 8. Bearings should be a fairly tight press fit in the recesses. The arbor or spindle is machined from steel and finish-ground to final dimensions. Note that it is flanged at the saw-blade end to form a seat for the press-fitted spacing washer. The spindle is shouldered and threaded at the left-hand end for jam nuts for pre-loading the bearings. Pulleys are locked on the spindle with socket-head setscrews, the ends of the setscrews seating on a flat, milled or filed on the saw spindle. Dimensions of the spindle through the bearings, Fig. 9, and also the bearing-recess diameter in Fig. 10, have been

