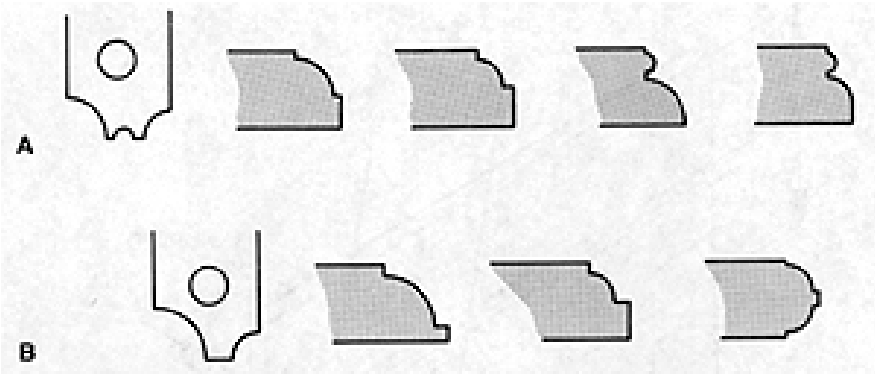

Figure 5-6. As shown here, combination knives can be used to create various shapes. (A) 3/16" and 3/8" quarter-round and 1/4" bead. (B) Combination 1/4" and 1/2" quarter-round.

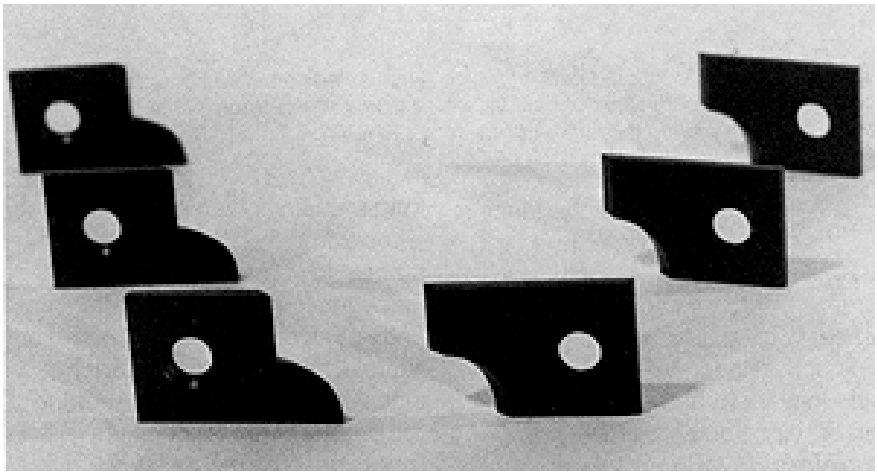

Figure 5-7. A tupical knife set. These two shapes produce the edges that are required for a drop leaf table joint. One set shapes the table's edge, the other makes a matching form on the drop leaf.

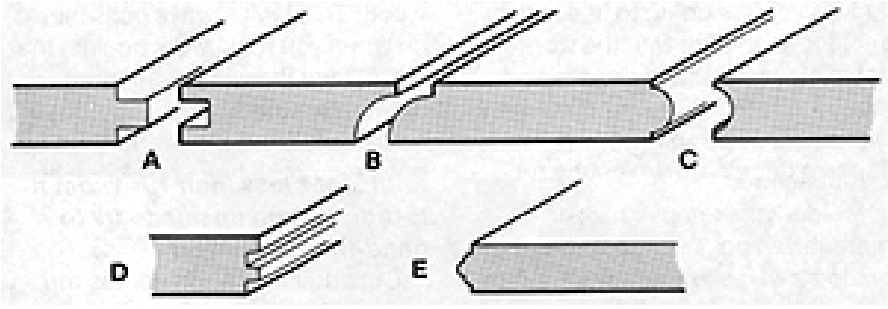

Figure 5-8. Molder knives that produce these joints are purchased in sets: (A) tongue-and-groove; (B) drop leaf table; (C) flute and nosing. Examples of full profile cuts: (D) glue joint and (E) cloverleaf.

Other examples of partial-cut knives are shown in Figure 5-6. The different shapes that each knife will produce depend on how you set up for the cut and, sometimes, how many passes you make.

Knives, like the drop leaf table joint shown in Figure 5-7, are also available in matched sets. In this case, one set of knives forms the edge of the table, and the remaining set makes the matching cut on the hinged leaf of the table. Examples of three matching joints and two full-profile cuts are shown in Figure 5-8.
Knives may also be used in combination; that is, different knives may be used on the same piece of wood to produce a particular shape (Figure 5-9). The possible results are limitless, and with a good assortment of knives you could closely duplicate any molding shape that is displayed in any lumberyard.

Mounting the Knives—The molder head has three slots equally spaced around its perimeter. Each of the slots has its own prevailing torque setscrew which bears against a steel ball that will seat in the beveled knife hole when the setscrew is tightened. **Warning: Be sure the slots in the molder head and the knives are clean. Any dirt that keeps the knives from seating correctly will cause inaccurate cuts and can be dangerous.**

Hold the molder head so the slot points toward you and loosen the knife retaining setscrew. Tilt the

molder head a bit so the ball moves out of the slot and then, approximately centering the knife, slip it into place. Just before the ball contacts the knife, move the knife side-to-side as you tighten the setscrew. This will center the ball in the hole. The knife will adjust itself to the ball and each knife will be aligned as you secure the setscrew. *Caution: Do not over-tighten the screws. This will damage the knife, making it difficult to remove*. Recheck the knives between jobs. Be sure the knives are correctly seated and that the set-screw is tight. The cutting edge of the knife is always on the side toward the setscrew. When the molder head is mounted on the spindle, the cutting edges will point toward the front of the worktable. Since the profile of the knife is not the profile cut in the wood, you should keep sample cuts of the knives you acquire. These can be overlaid on a drawing of the shape you intend to produce so you can decide which profile, or which part of a profile, should come into play. Many molder knife profiles are duplicates of classic forms. Therefore, these sample cuts can be used as templates when planning designs, not only for molder work, but also when you are planning projects for lathe turning.

Molding Operations

Warning: Since many molder operations are best done by providing bearing surface close to the cutting area, the first thing you need to do is makearip fence extension.

Construction details of the fence extension are shown in Figure 5-10. If the holes for the bolts are counterbored on each side of the fence, you can secure it to either side of the rip fence, so you will be able to work with the fence on the left or right side of the table. Warning: Never position a feather board over the molder head. Position feather boards in front of or behind the molder head.

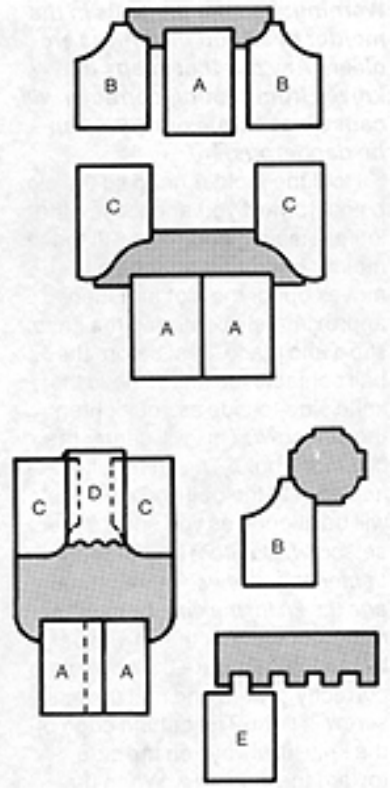

Figure 5-9. These shapes are typical of advanced work you can do with the molder head accessory. The shapes of different knives combine to produce the final form. Work like this should be planned in advance, on paper, suing the knives as templates: (A) 1" jointer; (B) combination 1/2" and 1/4" quarter-round; (C) ogee; (D) three-bead; (E) groove (part of the tongue-and-groove set).

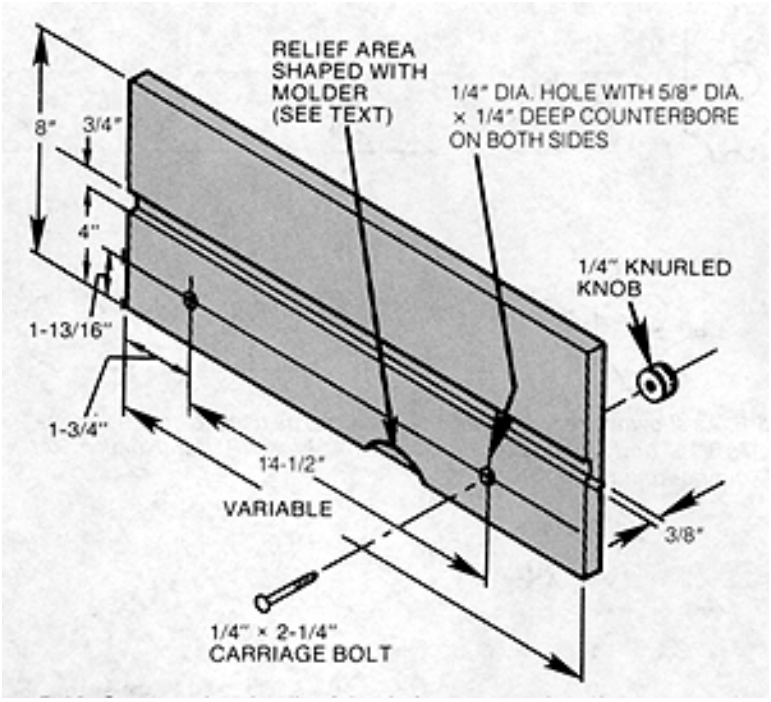

Figure 5-10. Construction details of the rip fence extension. If you counterbore for the bolt heads on both sides of the fence, you'll be able to attach it on either side of the rip fence for use on the left or right side of the table.