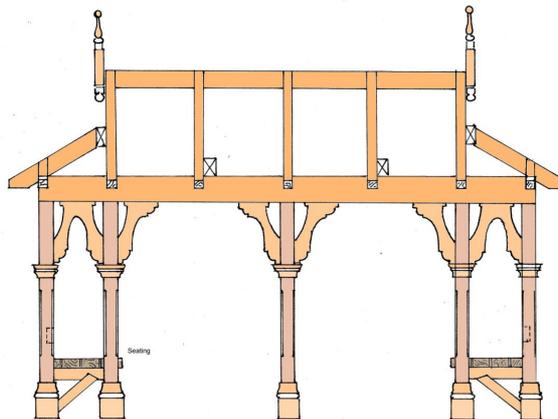


Making Strong

Wood Joints

Here are tips and instructions on how to make strong and inconspicuous joints in wood. Read these instructions carefully to help save you time and money. In this document you will find:

- Making Corner Joints
- Joining a Top Piece of Wood to a Side Piece
- Joining One Board in the Center of Another



MAKING CORNER JOINTS

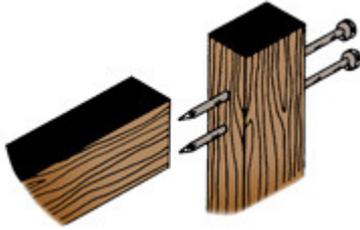


FIG. 1 - A simple butt joint is formed by nailing or screwing two ends together.

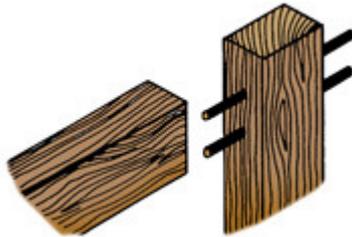


FIG. 2 - Use a drill to start the holes for a dowel joint.



FIG. 3 - The end lap joint provides a great deal of strength.

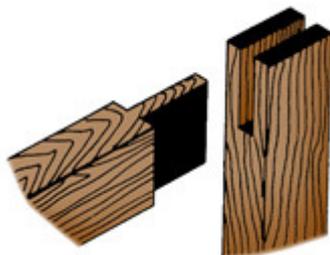


FIG. 4 - The through mortise and tenon joint is easy to make with a power saw and a dado head.

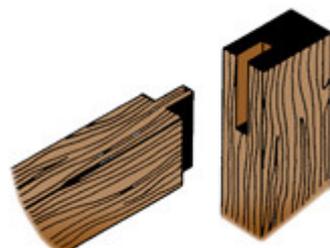


FIG. 5 - Use a mortising chisel on a drill press to make an open mortise and tenon joint.

- On almost any woodworking job, you occasionally need to make a strong corner joint. But there are many types of corner joints. Which type is best for the job you are undertaking?
- The simple butt joint is most commonly used (Fig. 1). This joint is formed by nailing or screwing the end of one piece of wood to the end of the other. While this is simple, fast and effective, the butt joint cannot be used on many types of end joints.
- A simple butt joint leaves the heads of the screws or nails exposed. Of course, the heads can be countersunk and covered with water putty or wood filler if desired.
- The dowel joint is basically the same as the butt joint except dowels are used to hold the two pieces of wood together instead of screws and nails (Fig. 2).
- You can make the dowel joint by drilling holes completely through one piece of wood and into the other. Dowels are driven into these holes, completely through one piece of wood and deeply into the other. Then glue the dowels firmly into position to provide strength and prevent slippage.
- Construct blind dowel joints by drilling the holes only partway into each piece of wood. Then drive the dowels into these holes and glue them into position. The dowels are not visible.
- While dowel joints have the advantage of being inconspicuous, they do not provide the structural strength of a simple butt joint.
- The end lap joint is made by sawing halfway through each piece of wood and then knocking out or sawing away half of this area (Fig. 3).
- Now you can put the two pieces of wood together with screws, nails, corrugated nails, etc.
- The end lap joint provides a great deal of strength, but the heads of the nails, screws or corrugated nails are exposed.
- The through mortise and tenon joint is easy to make with a power saw and a dado head (Fig. 4). A through mortise and tenon joint is suitable for various woodworking jobs.
- To form this joint, saw a slot into one piece of wood. The end of the other piece of wood is then notched out to fit the slot in the first piece (Fig. 4).
- Insert the notched piece of wood into the slotted piece of wood and glue, nail or screw the piece into position.
- When making a through mortise and tenon joint, be sure to measure the areas to be notched and slotted before making any cuts.
- You can make an open mortise and tenon joint by cutting the slot or mortise only partway into one piece of wood. Then create a notched-out area on the other piece that fits into the slotted area in the first piece of wood (Fig. 5).

JOINING A TOP PIECE OF WOOD TO A SIDE PIECE



FIG. 9 - You need a power saw to make a lock miter joint.



FIG. 10 - The mitered rabbet joint is similar to the lock miter joint.



FIG. 11 - You can use ordinary hand tools to make a rabbet joint.



FIG. 12 - Only the skilled craftsman should undertake a box corner joint.



- In working with wood, all joints are not corner joints. You occasionally need to join a top piece of wood to a side piece.
- Again, the standard butt joint is the most commonly used (Fig. 1).
- The standard butt joint can be nailed or screwed together if appearance is not important. This provides a strong joint and is completely satisfactory for ordinary jobs.
- If you are an experienced handyman, you might want to use the lock miter joint for joining a top or bottom to side pieces of wood (Fig. 9). You need a power saw to make the lock miter joint.
- Accuracy is important when sawing the lock miter joint. When sawed correctly and properly grooved, the lock miter joint is strong and inconspicuous.
- The mitered rabbet joint is similar to the lock miter joint, and it too must be made with power equipment (Fig. 10). Accuracy in sawing and rabbeting is important.
- The two pieces of wood on a mitered rabbet joint can be held together with screws, nails, adhesives or dowels.
- Regardless of how the mitered rabbet joint is secured, it provides an excellent joint with a professional look and a great deal of strength.
- The regular rabbet joint is much easier to make than the mitered rabbet joint. Although power equipment is helpful, you can make a regular rabbet joint with ordinary hand tools (Fig. 11).
- The rabbet can be cut into either the side piece or the top piece when two pieces of wood are joined with a rabbet joint.
- The position of the rabbet cut depends largely on where you want the half-section of grained end to appear. With a rabbet joint, the grained end of one piece of wood is completely hidden.
- Rabbet joints are normally held together with adhesives, but you can use screws, nails and dowels. Again, it is a matter of how important the appearance is to you.
- The box corner joint is one that should be undertaken only by the skilled craftsman (Fig. 12). It requires sawing a groove in one piece of wood and a tongue or flange in the other.
- The box corner joint provides a strong joint that can be held together with adhesives, nails or screws. In most cases, adhesive alone is used.
- Use power equipment to construct the box corner joint. If you have the required skill and time, this is a very strong corner joint and leaves no end grain showing.

JOINING ONE BOARD IN THE CENTER OF ANOTHER

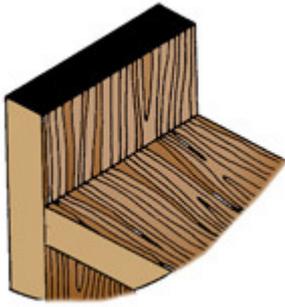


FIG. 15 - You can use nails, screws or adhesives to secure a butt joint.

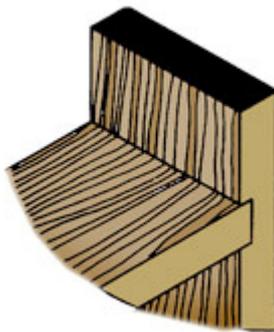


FIG. 16 - Make a dado joint by cutting a slot into one piece of wood to match the end of the other.

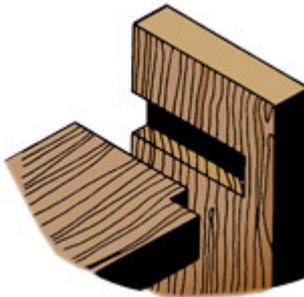


FIG. 17 - The stopped dado joint is a modified version of the regular dado joint.

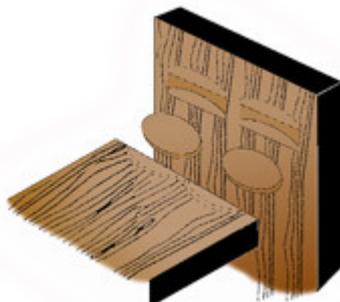


FIG. 18 - Careful planning, measuring and cutting result in attractive strong joints.

- Some woodworking jobs require a joint where the end of one board butts against the center of another. Again, you have a choice of several joints.
- The regular butt joint is again the most commonly used (Fig. 15). Secure this type of joint with nails, screws or adhesives.
- A butt joint provides a lot of strength, and if the heads of nails or screws are not objectionable, it will do the job well.
- To make a dado joint, cut a slot into one piece of wood to match the end of the other (Fig. 16). The dado joint is much stronger than the butt joint and creates a more professional appearance.
- You can cut a dado into the board with a dado head on a power saw, a regular handsaw, a dado plane or even a chisel and a mallet.
- Use wood screws, nails or dowels to hold dado joints.
- The stopped dado joint is a modified version of the regular dado joint (Fig. 17).
- The stopped dado joint is a little more difficult to make by hand, but is quite easy with the proper power tools.
- The stopped dado joint has a neater appearance than the regular dado joint because the front edge is uncut. Thus, the slotted area is not visible from the front side.
- Use ordinary wood adhesives, wood screws, nails or dowels to hold the two pieces of wood together in a stopped dado joint.
- The biscuit joint works quite well for joining one board to the center of another. For this joint, extra care must be taken to align the biscuit slots to ensure a straight center board (Fig. 18). Measure the work pieces carefully. Check the joint by assembling it without adhesive.

Happy Building!!!