INTERMEDIATE

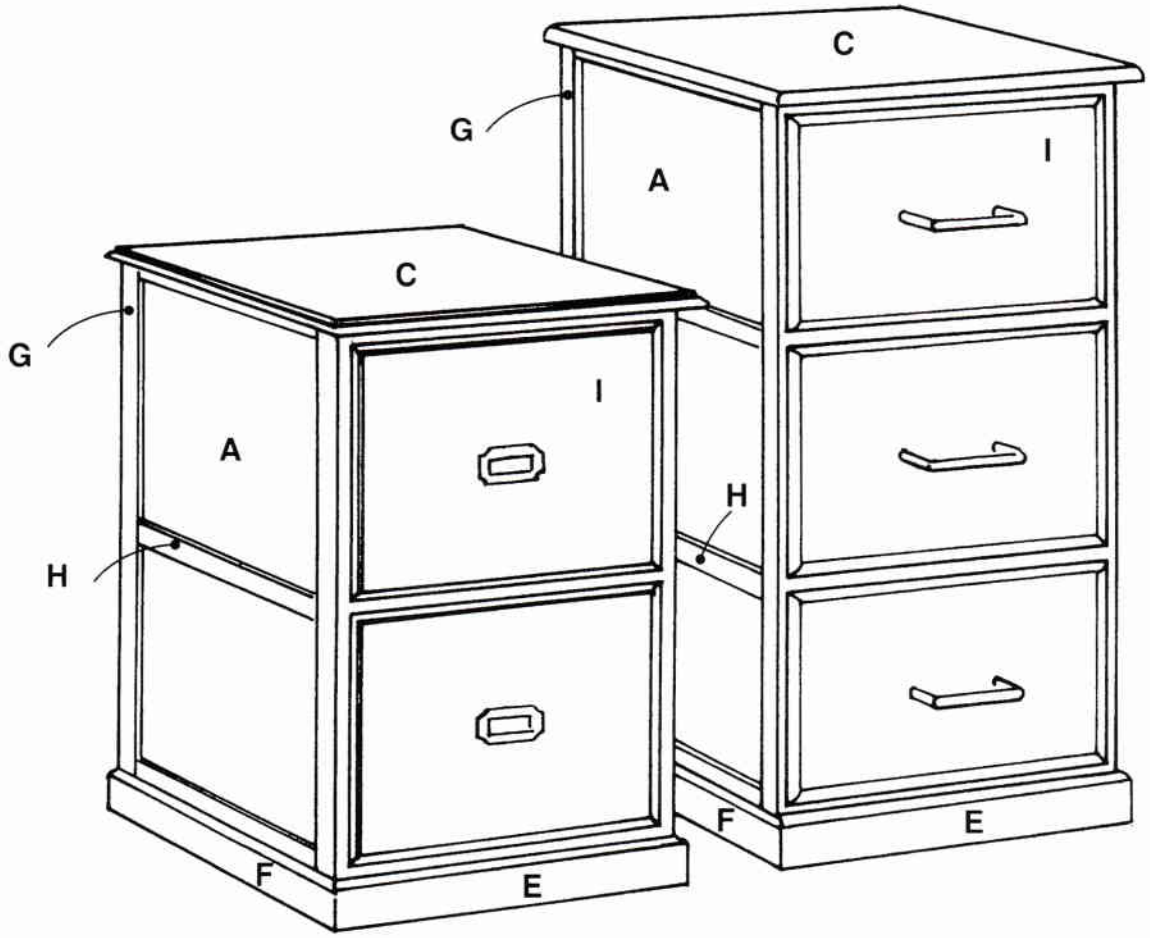
PROJECT NO. 12

Wooden Filing Cabinets

A filing cabinet is a most useful piece of furniture, but the commonly available metal cabinets are usually unattractive, and best consigned to the back room.

On the other hand, our two or three-drawer cabinets in solid timber and matching veneer will enhance any decor. The two-drawer unit has sufficient appeal to function as an unobtrusive side cabinet, while the three-drawer cabinet is more suitable for the home office.

A Triton Extension Table, plus a Triton Router & Jigsaw Table and your router, will speed up your construction, but they are not essential. With some modifications to procedures these cabinets can be built using just your Workcentre, power saw and some hand tools.



Tool Requirements

1. ESSENTIAL Triton Workcentre and your power saw; electric drill and Triton Woodbits; countersink; Routing and Bevel Cutting Platform (see Jig Guide); at least two bar or pipe clamps to span 450mm.; hammer; nail punch; hacksaw; screwdriver; measuring tape; sandpaper; household iron for veneer strips

2. USEFUL Triton Extension Table; Triton Roller Support Stand; Triton Router and Jigsaw Table and your router; straight-cut or rabbeting bit and decorative edge bit; Forstner drill bit and matching plug cutter; extra clamps; veneer trimming tool; belt or orbital sander.

Issue No.1, December 1991

Construction Details

Component Specifications

All dimensions are in mm.

TWO DRAWER FILING CABINET

Part	Description	Quantity	Width	Thickness	Length
A	Cabinet side	2	430	19	722
B	Cabinet top & shelves	3	427	19	444
C	Cabinet false top	1	450	19	520
D	Cabinet back	1	464	3	637
E	Cabinet plinth front	1	90	19	520*
F	Cabinet plinth side	2	90	19	449*
G	Framing strip long	4	25	5	632*
H	Framing strip short	6	20	5	380*
I	Drawer false front	2	300	19	472
J	Drawer front & back	4	270	9	402**
K	Drawer side	4	175	9	420
L	Drawer bottom	2	420**	3	420
M	File hanging rods	4	6.25 dia round		430

THREE DRAWER FILING CABINET

Part	Description	Quantity	Width	Thickness	Length
A	Cabinet side	2	430	19	1031
B	Cabinet top & shelves	4	427	19	444
C	Cabinet false top	1	450	19	520
D	Cabinet back	1	464	3	946
E	Cabinet plinth front	1	90	19	520*
F	Cabinet plinth side	2	90	19	449*
G	Framing strip long	4	25	5	941*
H	Framing strip short	8	20	5	380*
I	Drawer false front	3	300	19	472
J	Drawer front & back	6	270	9	402**
K	Drawer side	6	175	9	420
L	Drawer bottom	3	420**	3	420
M	File hanging rods	6	6.25 dia round		430

* Do not pre-cut. These components are measured and cut during construction.
** Depends on type of drawer runner used. See General Point 1.

General Points

1. The cabinets described are identical except for the height and the number of drawers. The dimensions given are for standard foolscap file holders, and we used standard kitchen cabinet drawer runners. These do not open the drawers completely clear of the cabinet, but access to the rear files is adequate if they are not packed too tightly.Double-extension runners are available, but can be expensive. Note also that our dimensions are correct only for drawer runners 12mm thick.

2. The framing strips on the sides of the cabinets are optional; their main function is decorative, and to hide the screw holes, which alternatively can be filled or plugged if desired. **(See figure 1)**. The material is a readily available flat, round-edged moulding strip. One or both edges are ripped off during construction as required.

3. If you do not have an Extension Table, some assistance and/or a Triton Roller Support Stand will be required when cutting the large sheets.

Material Shopping List

1.WOOD It is best to shop for the veneered particle board first, then select the solid timber for the best colour and grain match. We found that furniture grade kiln-dried Victorian Ash (drawer false fronts and false top), together with Ash edging veneer and moulding strips, matched well with Tasmanian Oak veneered particle board.

Any interior grade of plywood will be satisfactory for the drawers and back. Note that although we have specified 1800 x 900 sheets (smallest size sold commercially), smaller offcuts may do; see the cutting diagrams Figures 2 & 3 for details and check with your supplier.

TWO DRAWER FILING CABINET

19mm veneered particle board 1 @ 1800 x 900mm
3mm Interior Ply 1 @ 1800 x 900mm
9mm Interior Ply 1 @ 1800 x 900mm
Solid Wood to match 150 x 19mm 1 @ 2.1m and 1 @ 1.5m; 90 x 19mm 1 @ 1.5m
Round-edge moulding strip 32 x 5mm 1 @ 2.7m and 1 @ 2.4m
Iron-on edging veneer – approx. 3.0m

2. FASTENING
40mm Particle Board Screws – 18
8g x 30mm Round Head Screws – 12
8g x 25mm Round Head Screws – 14
Washers to suit – 20
25mm nails; 12mm brads or panel pins; PVA glue

3. OTHER
2 Drawer Handles & hardware; 2 pairs 400mm Drawer Slides; 6.25mm bright steel rod – 1.8m

THREE DRAWER FILING CABINET

19mm veneered particle board 1 @ 2100 x 900mm
3mm Interior Ply 1 @ 1800 x 900mm
9mm Interior Ply 1 @ 1800 x 900mm
Solid Wood to match 150 x 19mm 1 @ 2.1m and 1 @ 2.4m; 90 x 19mm 1 @ 1.5m
Round-edge moulding strip 32 x 5mm 2 @ 2.1m and 2 @ 1.8 m
Iron-on edging veneer – approximately 4.2m

2. FASTENING
40mm Particle Board Screws – 24
8g x 30mm Round Head Screws – 12
8g x 25mm Round Head Screws – 21
Washers to suit – 27
25mm nails; 12mm brads or panel pins; PVA glue

3. OTHER
3 Drawer Handles & hardware; 3 pairs 400mm Drawer Slides; 6.25mm bright steel rod – 2.7m

FINISHING
Polyurethane and Danish Oil both give good results.

With the Workcentre in the wide-rip table saw mode, rip the veneered particle board to size, using the cutting diagrams **(Figure 2 or 3)** as a guide. The top and shelf components can be trimmed to size in the wide rip mode, or crosscut later. It is also convenient to cut the remainder of the sheet material at this stage. Refer to the component specification list and the cutting diagrams.

If you do not have an Extension Table you will not be able to rip the back **(D)** to 464mm wide. You must

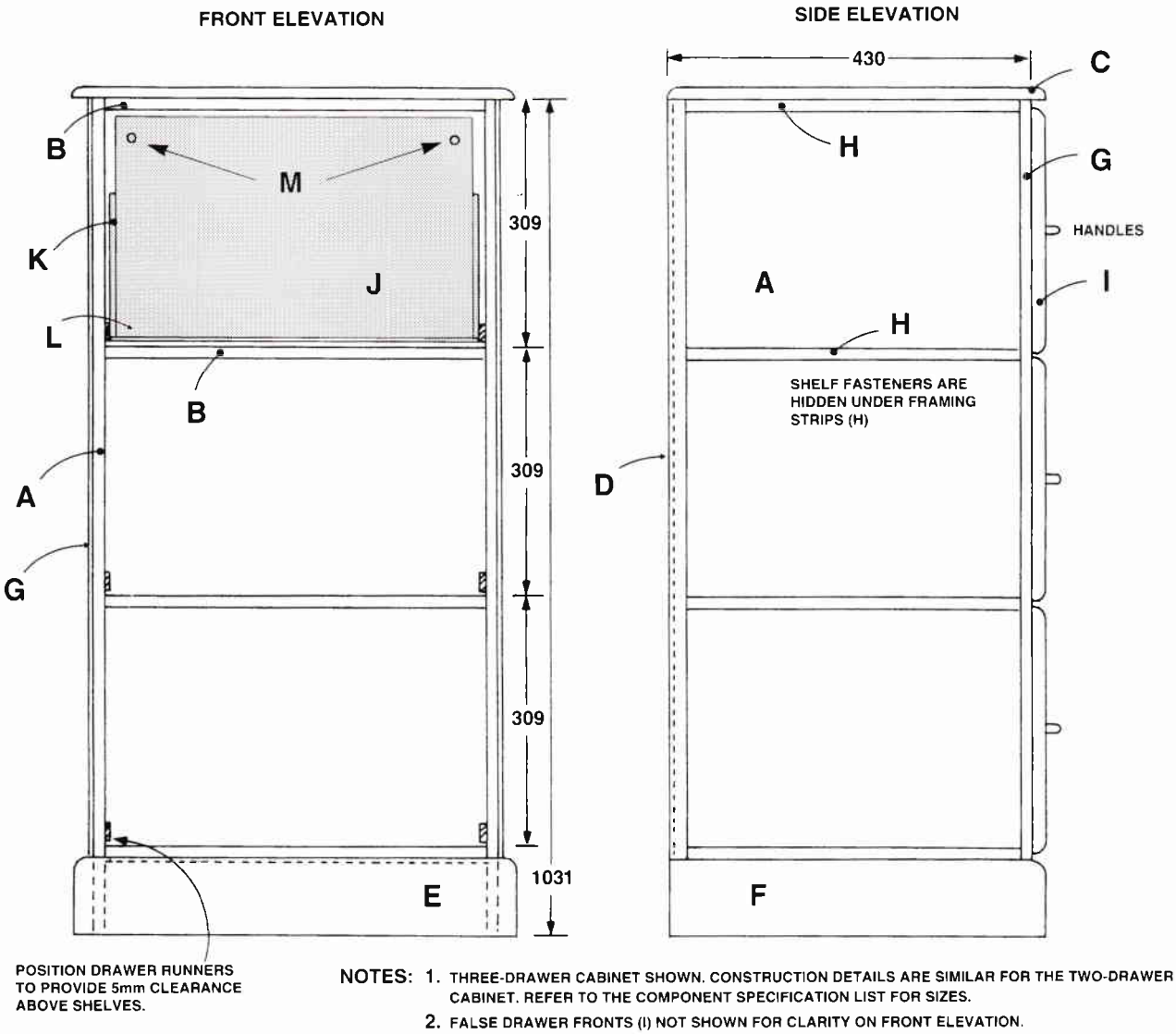


FIGURE 1

therefore set the fence to rip 433mm off the 900mm wide material. Allowing for a 3mm saw kerf this should leave you with a 464mm wide sheet.

When crosscutting this 464mm wide piece to length, you may find it is just too wide to fit between the workstops and the sawblade, depending on the size of your saw. You could either plunge cut it in the crosscut mode (see Instruction Manual), or rip it in the table saw mode using the Extension Table.

2 A 10mm x 3mm recess for the plywood back must now be cut in the rear edges of the cabinet sides **(A)** as per **Figure 4**. This can be done with a lowered sawblade in the wide rip mode, or using your router, fitted with a straight cut or rabbeting bit, in the Router and Jigsaw Table.

Wooden extension fences are needed on the Router Table, set in line with one another. Adjust the fence so that 3mm of the bit diameter protrudes in front of the fence. The height of the bit is set at 10mm above the table, and the rebate made with one pass of the cabinet side **(A)**, with its inside face flat on the table.

If only one of the veneered faces is of good quality, remember that the rebates are mirror imaged. **(Figure 4)**

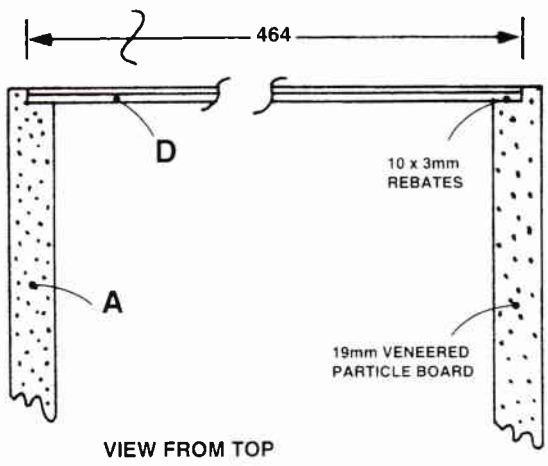


FIGURE 4

Construction Details

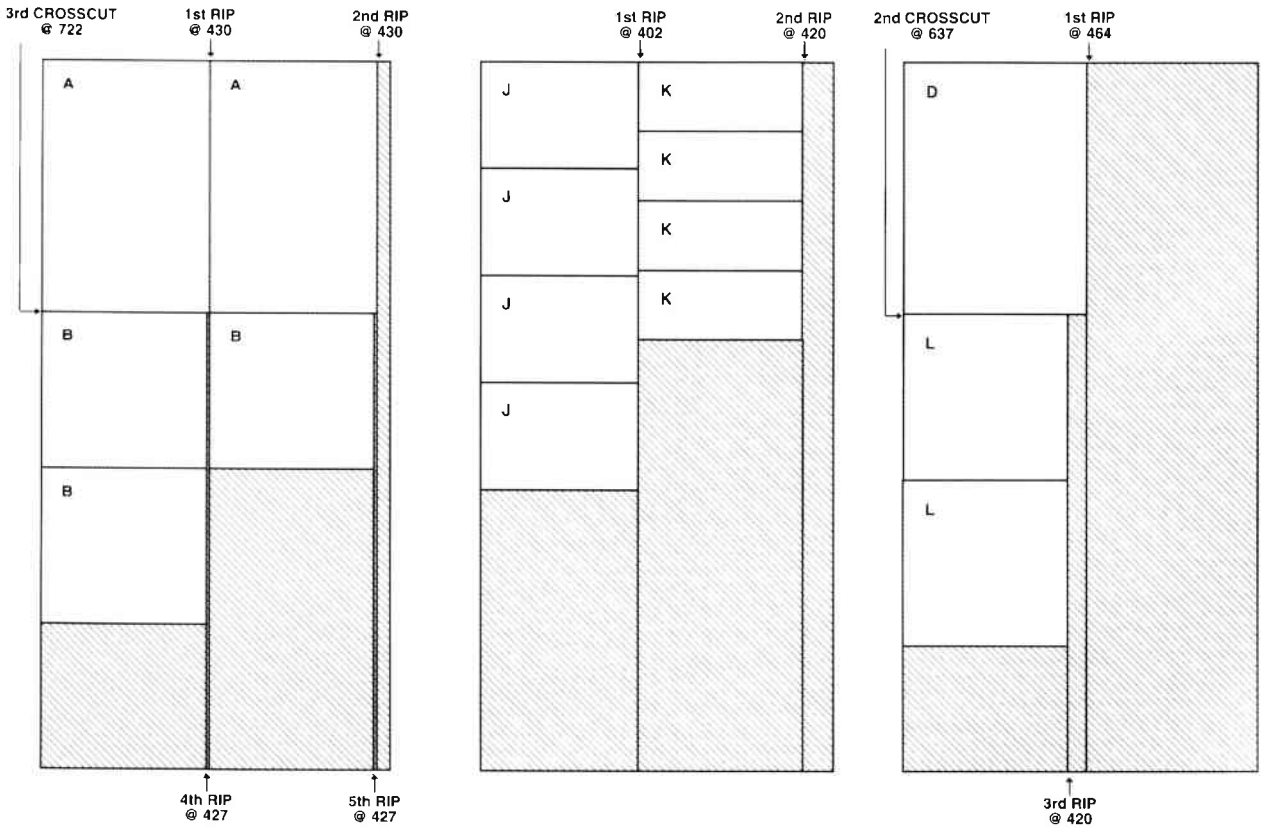


FIGURE 2: CUTTING DIAGRAM FOR 2 DRAWER CABINET

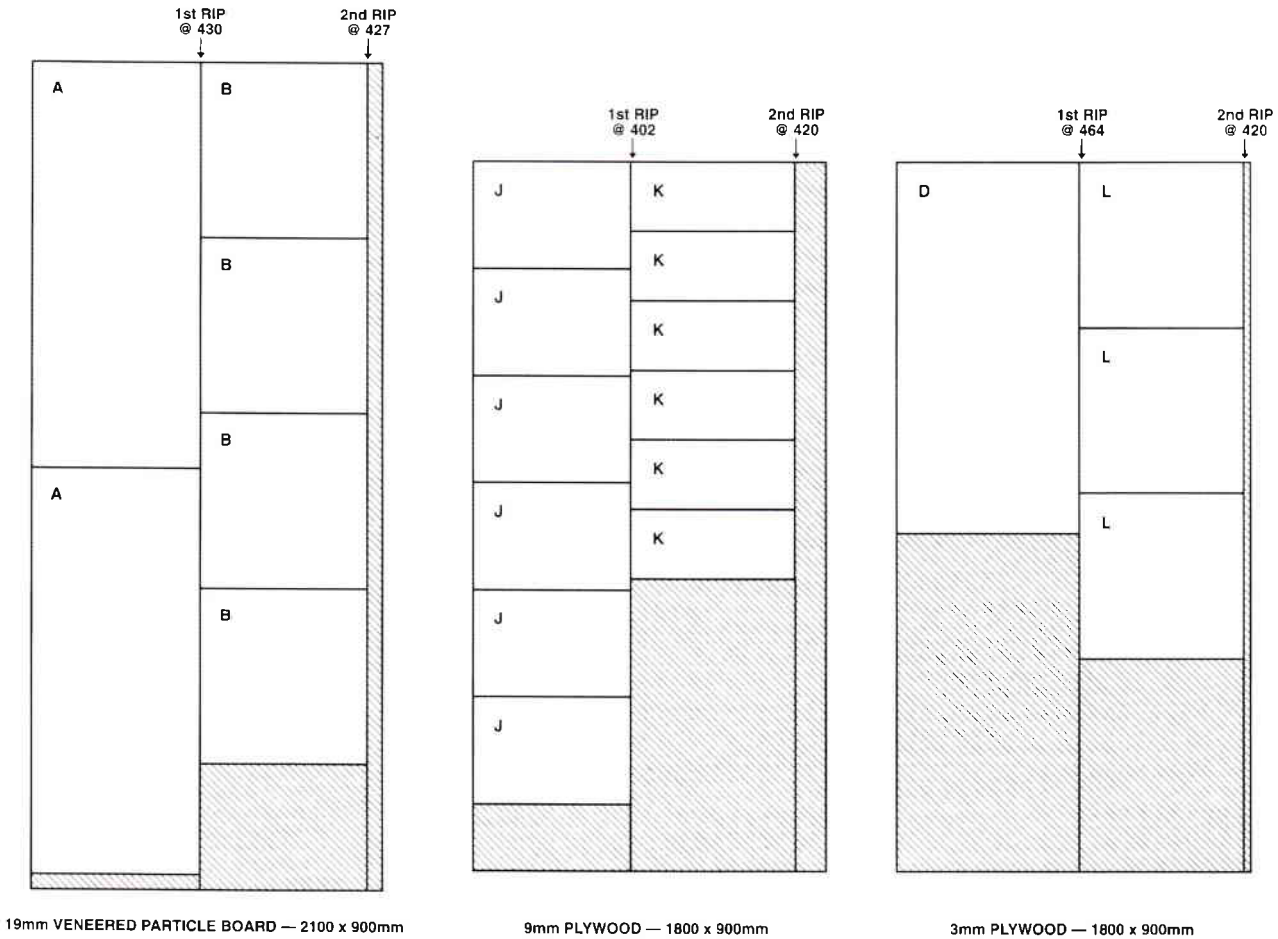


FIGURE 3: CUTTING DIAGRAM FOR 3 DRAWER CABINET

3 Draw horizontal lines 309mm apart, starting from the top, on the inside faces of the cabinet sides **(A) (Figure 1)**. These lines mark the position of the upper faces of the particle board top and shelves. Drill clearance holes for the shanks of three particle board screws, for each shelf and the top, on each of the sides. These screw holes are placed on the centreline of the shelf thickness, 9.5mm down from the top and 9.5mm below each of the marked lines **(see Figure 1)**.

Drill from the inside face, so that any breakout as the drill exits will be either removed in countersinking or covered by the framing strips. Countersink all the holes from the outer face.

4 It is most convenient to screw the fixed drawer runners to the cabinet sides at this stage. Fit the runners so that a gap of 5mm remains between each drawer runner and the shelf below. **(Figure 5)**.

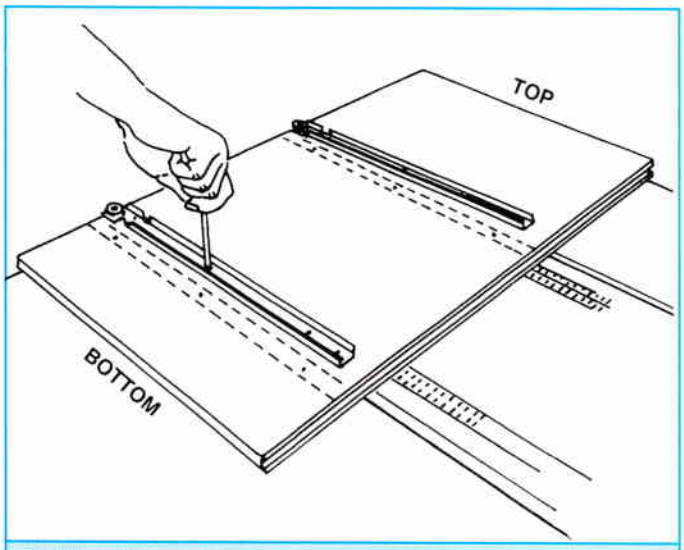


FIGURE 5

Note that the false drawer fronts are larger than the openings in the cabinet, and close flat against the front edges of the cabinet frame. Your drawer runners should incorporate latches or stops; follow the instructions provided with the runners and fit them so that the actual drawer will come to rest flush with the front of the cabinet. (Drawer runners may need to be slightly inset.)

5 Glue and screw the top and shelves to the cabinet sides. This is most conveniently done by standing up a cabinet side **(A)** on its front edge, holding the top or shelf **(B)** with its upper face aligned with the pencil line, and drilling the screw pilot holes **(Figure 6)**. After coating the edges with glue, use particle board screws to fasten.

After the top and shelves have been attached to one side, turn the cabinet over to rest on the outside face of side **(A)**, with the shelves facing up, and place the other side **(A)** on top.

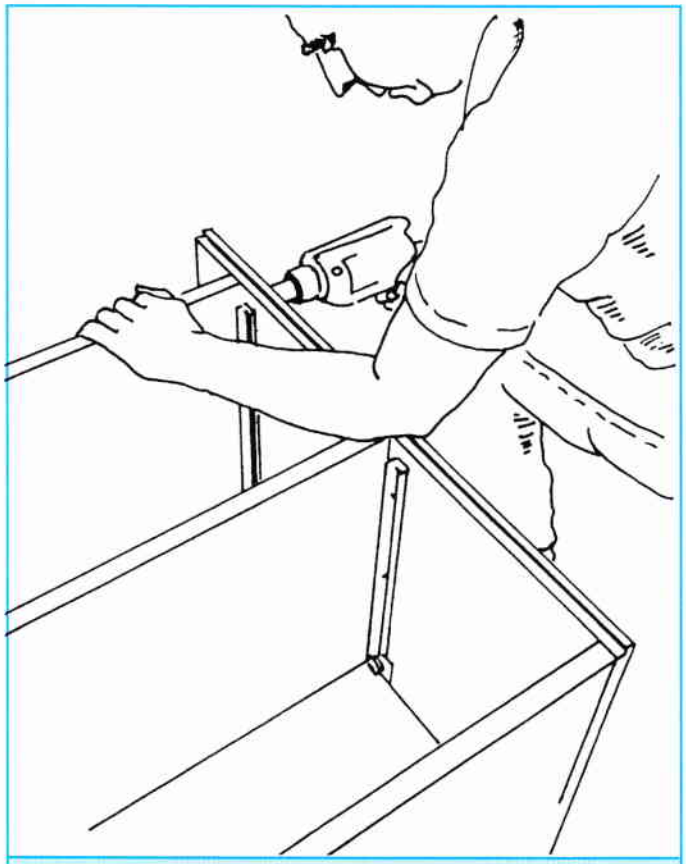


FIGURE 6

Align the top and shelves with the pencil marks as before and drill pilot holes into their edges. Coat the edges with glue and again fix with particle board screws.

Note that the shelves and top must be flush with the front of the sides, and therefore flush with the 3mm rebate in the back edges of sides **(A)**. Ensure that the cabinet remains square while the glue sets. The best way to do this is to quickly carry out the next step and fit the back **(D)**.

6 If you have pre-cut the back **(D)**, it is a simple matter to fit it in the rebates, using glue and 12mm panel pins. The back does not reach further than the bottom of the lower shelf, as it would be vulnerable to handling and transit damage if it were to be made full length.

7 The iron-on veneer should now be applied to the exposed front edges of the particle board. This is best done with the cabinet lying on its back, and it may be necessary to trim the veneer exactly to width after fitting, using either a special veneer trimming tool sold for the purpose or some other method, such as a utility knife and sandpaper.

At this stage the cabinet should look like one of those in **Figure 7**.

Construction Details

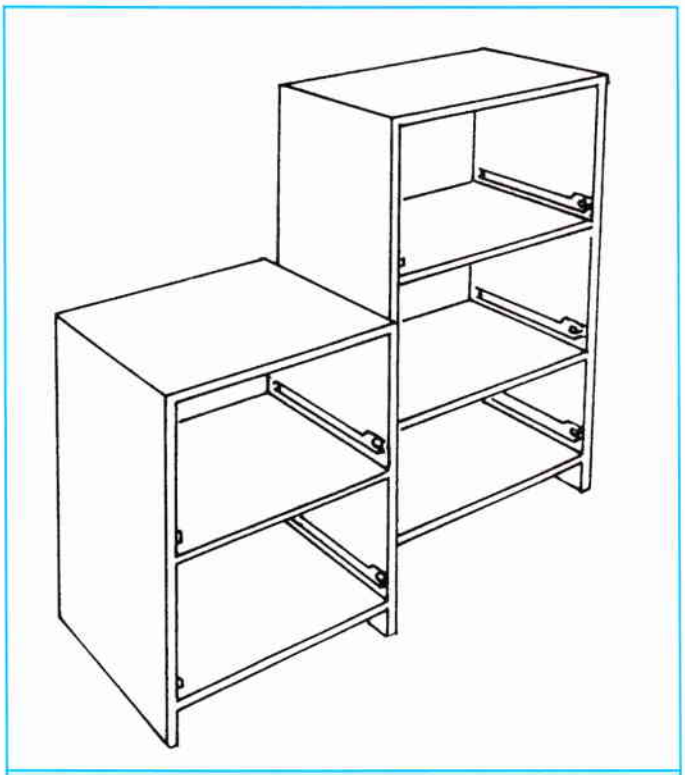


FIGURE 7

8 Next the decorative framing strips are added. As well as giving a "panelled" effect the strips hide the fastening screws. Pre-cut the pieces approximately to length, a little oversize. For the two-drawer cabinet, components **(G)** are cut from the 2.7m length of moulding strip, and components **(H)** from the 2.4m length.

For the three-drawer, cut components **(G)** from the two 2.1m lengths and components **(H)** from the 1.8m lengths. Remove one rounded edge from the moulding material by ripping off about 5mm, with a lowered sawblade for safety and to achieve the best finish. A push stick is essential. Follow the safe procedures for narrow ripping as outlined in your Operating Manual.

Put aside the four long pieces **(G)**, which only have their inside round edges removed, and remove the other rounded edge from the remainder of the material (the short framing strips **(H)**). They should end up about 20mm wide.

The pieces are fitted around the edges of the cabinet side and across the position of the screw holes, as shown in the illustrations. The rounded edges of components **(G)** are to the outside. Cut them carefully to length and fix with glue and panel pins. Punch the pins with a fine nail punch and fill the holes with an appropriate filler.

9 Cut the solid timber to length for the false top **(C)** and the false drawer fronts **(I)**. This is best done in the crosscut mode using a length stop. For the two-drawer cabinet cut the required three 520mm pieces for the false top **(C)** from the 2.1m length. From the offcut and the 1.5m length cut the four 472mm pieces for the false drawer fronts **(I)**.

Similarly, for the three-drawer unit, cut three 520mm pieces from the 2.1m length, and the six 472mm pieces from the offcut and the 2.4m length.

Edge-glue and clamp the components, using bar or pipe clamps and ensuring that they remain flat. **Figure 8** shows a number of components being clamped simultaneously; note that extra clamps or blocks may be necessary to keep the components flat whilst drying. The false top is made from three widths of material, and the drawer false fronts from two.

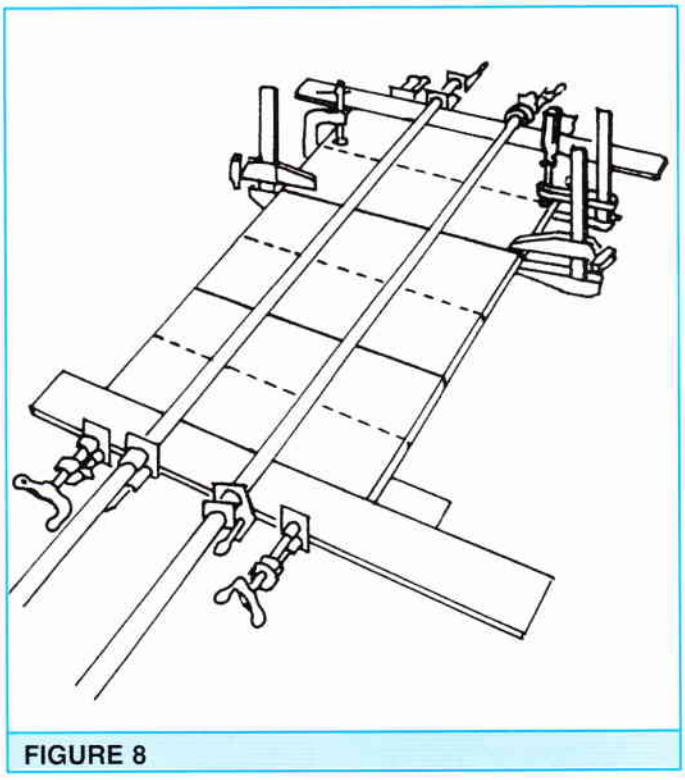


FIGURE 8

If the stock is slightly oversize it may be necessary to trim the completed components to size, using the wide rip mode.

10 Now make the decorative edges on these glued-up components, and also on the material for the plinth. If you have a router and the accessory Router & Jigsaw Table, a Roman Ogee or a large radius rounding over bit, both give good results. Care should be taken when routing the end grain to avoid splintering.

Also, if necessary, belt sand or plane the glued components flat, particularly the rear face of the false drawer fronts, which must close flat against the cabinet.

11 The underside of the false top **(C)** and the rear faces of the false drawer fronts **(I)** must be given one or two coats of the intended finish to prevent subsequent warping. It is advisable to apply finish to both sides of your workpieces at this stage, for the same reason.

The false top can be fitted to the cabinet now, using six 30mm x 8g screws from inside the cabinet.

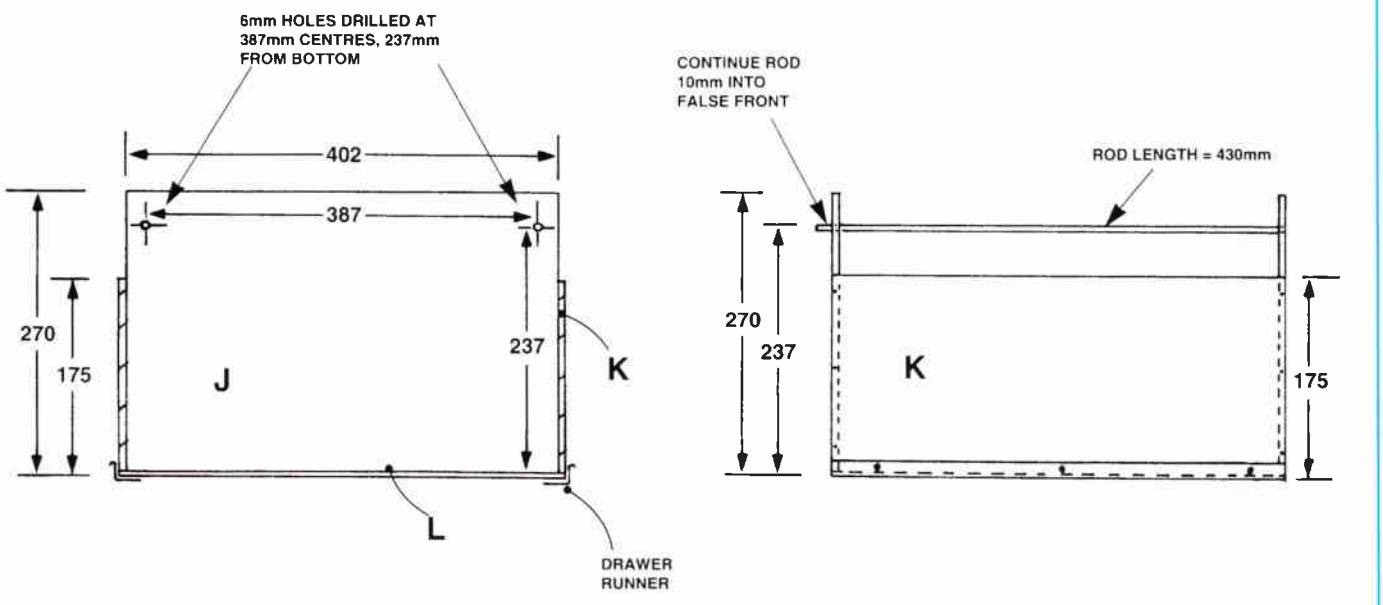


FIGURE 9

Drill oversize clearance holes (say 6mm) in the cabinet top **(B)** and pilot holes in the underside of the false top **(C)**. The top is fitted flush with the rear of the cabinet and overhanging equally at the front and sides. Use large washers under the screw heads. This "slot-screwing" allows the solid timber components to move during humidity changes without warping or splitting.

12 The cabinet is completed by adding the plinth. Check measure and carefully cut the front piece **(E)** to size noting that there is a mitre on each end. Check your saw angle by cutting a piece of scrap first, and "creep up" to the line in small increments until the size is right (check against the front of the cabinet). If unclear about 45 degree bevel cuts, check with your Operating Manual. You will need a bevel cutting platform (see Jig Guide for details).

Countersink the holes and screw component **(E)** into position, using two screw heads with matching wooden plugs, glued in place. If you don't have a plug cutter, matching wood putty will serve the same purpose.

Cut and fit the two sides **(F)**. It is easiest to cut the 45 degree bevel first on a piece of material slightly too long, and when satisfied with the fit of both pieces, trim the back ends off to length when you reset the saw blade angle. Components **(F)** are fitted by screwing from the inside of the cabinet, using round headed screws, 30mm x 8g.

13 The next step is to make the required number of drawers. If you have a drill press, it is easiest to drill all the holes for the file hanging rods simultaneously by stacking the components **(J)** and clamping firmly together. Mark out the positions of the holes on the top component and use a 6mm Woodbit to drill the holes through the stack. Locations of the holes are shown in **Figure 9**.

If you are using a hand-held drill, it is safer to just mark out and drill each piece separately.

Glue and nail the drawer sides **(K)** on to the outside edges of components **(J)**, flush with the bottom edge, ensuring that the holes for the rods are uppermost. **(Figure 10)** Square the drawers by nailing on the 3 ply bottoms **(L)**, using glue and 12mm panel pins or brads. Set the drawers aside to dry, clamping or weighting if necessary to avoid twisting.

14 Attach the other half of the drawer runners to the sides of the drawers, and test the fit in the cabinet. Most drawer runners have some adjustment built-in to correct any minor misalignment. Fit the runners so that the front of the drawer when closed is flush with, or slightly inside, the front face of the cabinet frame. The built-in latches or stops will then hold the false drawer front snugly against the cabinet.

Close the drawers and mark their centre in relation to the cabinet by drawing diagonals from the corners of the cabinet opening, and marking where they cross on the drawer front. **(Figure 11)**

Drill an oversize hole at this position (say 8mm) for initial fitting of the false front, and to allow minor adjustment.

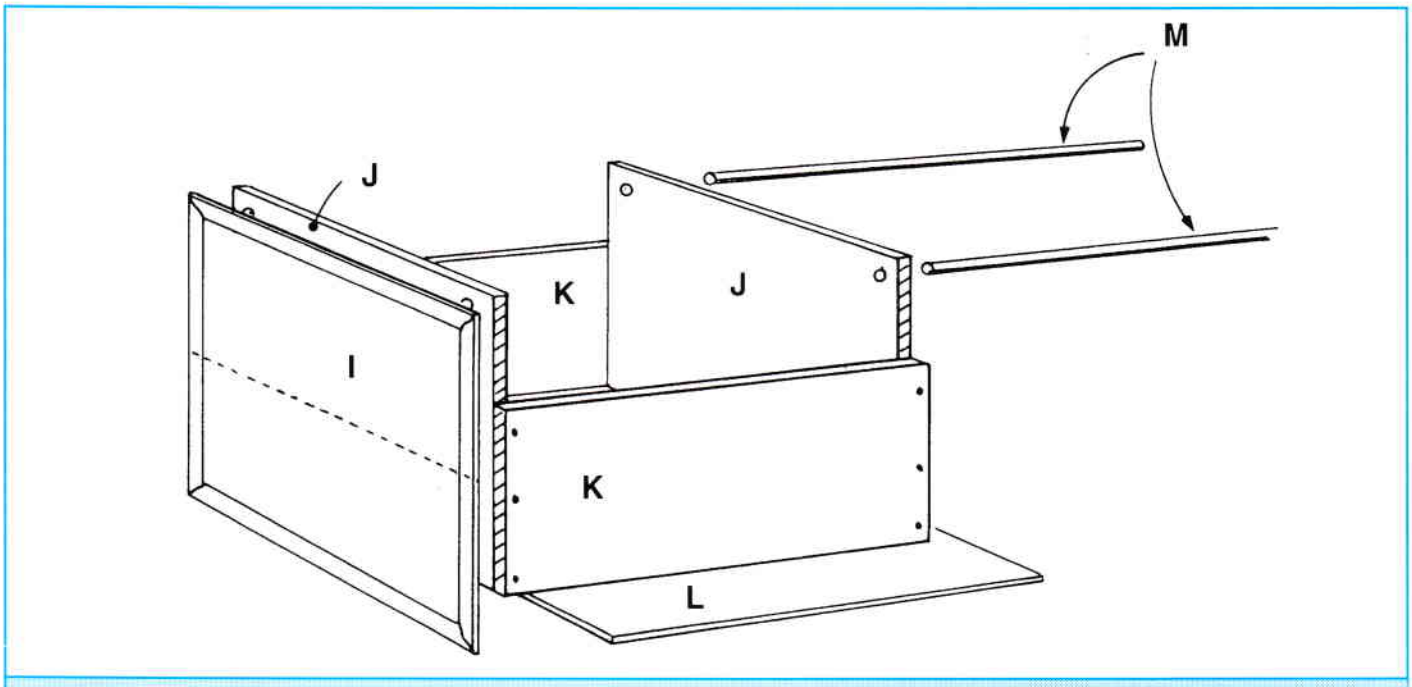


FIGURE 10

15 Fit the false fronts as follows; mark corner-to-corner diagonals on the rear face of the false fronts **(I)**, and where they intersect, drill a pilot hole for the 25mm screw. Take care not to break through the front face — a depth stop on the drill bit helps. Fix the false front **(I)** to the drawer front component **(J)** using a large washer under the screw head. Tighten just enough to hold it in place, close the drawer and move the false front slightly as necessary in the oversize hole until it is aligned equally at the top, bottom and sides — a 5mm overlap all round is correct.

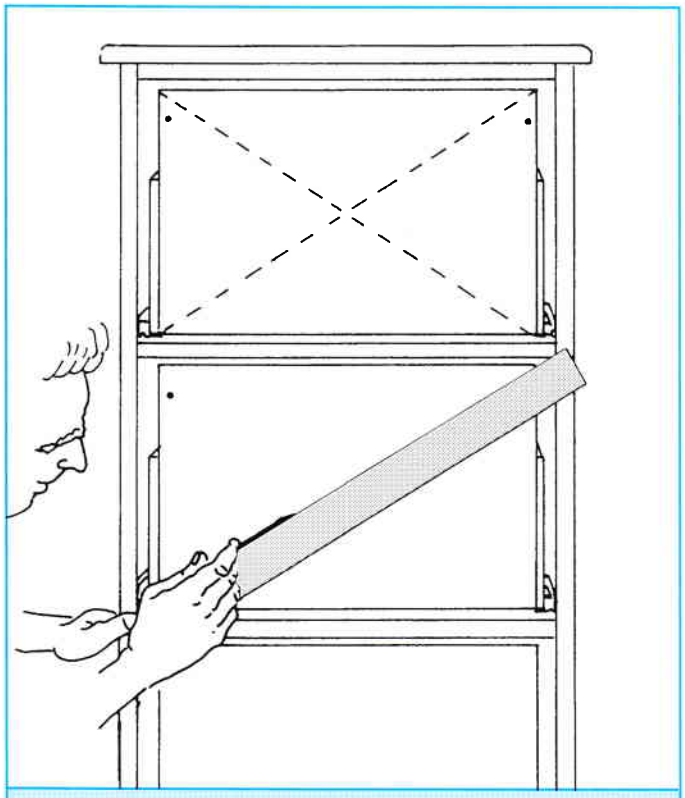


FIGURE 11

Tighten the central screw. When satisfied, remove the drawer and working from inside, drill 6mm clearance holes and pilot holes using a depth stop to avoid breaking out at the front face, for 7 more screws. The reason for the generous size of the clearance holes in the plywood drawer inner is to permit any inevitable slight movement of the false front due to humidity changes. Fit washers under the heads of the screws, and refit the drawers to check that nothing has moved.

Drill for the handle too at this stage. Depending on the handles you have bought, you may find it necessary to obtain longer handle screws, or to drill oversize clearance holes in the drawer inner **(J)**, as most handles are designed for 19mm thick material.

16 Using a 6mm Woodbit, drill through the file rod hole in the drawer front **(J)**, 10mm into the wood or the false front **(I)**. See **Figure 9** for details.

Cut with a hacksaw two 430mm lengths of file hanging rod for each drawer and pass them through the rear holes, the front holes, and into the false front until the rods are flush at the rear. A little glue may be used if desired, but a hammer is usually necessary to tap the rods fully home.

17 The cabinet is now complete except for final sanding and finishing. We used Cabot's Danish Oil on both our cabinets for a natural, satin finish. Fit the handles, and if you wish, contents label plates and even a lock.

A little wax on the drawer runners makes for very smooth operation.