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## Wall Cabinet

*I built this cabinet for my kitchen to provide both storage and visual interest on a very blank wall. I saved space—and materials—by allowing the wall to serve as the cabinet's back. The project is built in sections and then attached to the wall. The center shelves can be altered in length to fit just about any space you wish. If you have a smaller wall (perhaps in a bathroom), build only one of the end cabinets.*



### **Materials and Supplies**

- 24 linear feet of 1 x 3 pine
- 63 linear feet of 1 x 4 pine
- 50 linear feet of 1 x 6 pine
- 4 shutter doors, each measuring 15-1/4" x 23"

## **Hardware**

- Approximately 150 #6 x 1-1/4" screws
- Approximately 50 3d finishing nails
- 4 door latches
- 4 decorative door pulls
- 8 flush-mounted hinges
- 18 molly bolts (or other appropriate hardware to attach the project to the wall)

## **Cutting List**

Code	Description	Qty.	Material	Dimensions
A	Top/Bottom	4	1 x 6 pine	37-1/2" long
B	Side	4	1 x 6 pine	28-1/2" long
C	Shelf	4	1 x 6 pine	36" long
D	Vertical Trim	4	1 x 4 pine	30" long
E	Center Vertical Support	2	1 x 4 pine	28-1/2" long
F	Horizontal Trim	4	1 x 4 pine	30-1/2" long
G	Long Base	4	1 x 4 pine	30" long
H	Short Base	4	1 x 4 pine	3-1/2" long
I	Base Top	2	1 x 4 pine	31-1/2" long
J	Center Shelf	3	1 x 6 pine	58" long
K	Center Shelf Trim	3	1 x 4 pine	58" long
L	Side Support	6	1 x 3 pine	5-1/2" long
M	Back Support	3	1 x 3 pine	56-1/2" long
N	Wall Support	2	1 x 3 pine	32" long

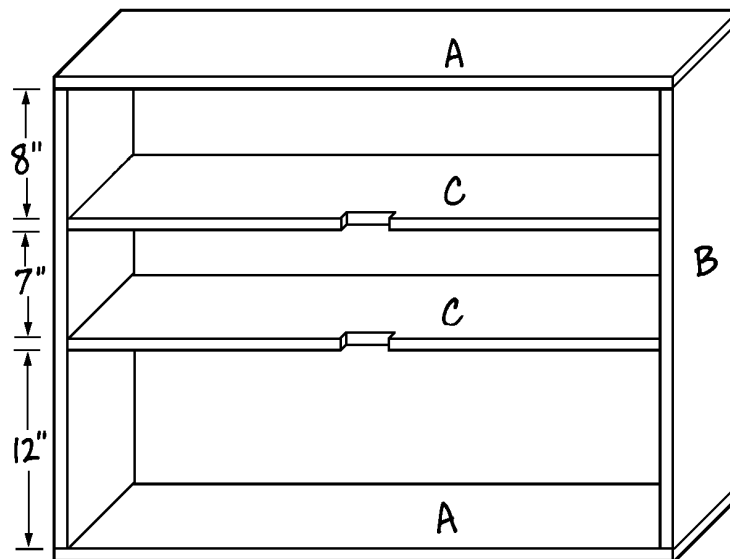
## **Notes on Materials**

To save time and to avoid having to build cabinet doors, I purchased pre-made shutter doors, which are available at most building-supply stores. If you can't find shutters in the specified size, it's usually possible to cut them down to fit. If all else fails, simply alter the dimensions of the cabinet to accommodate the shutters you find.

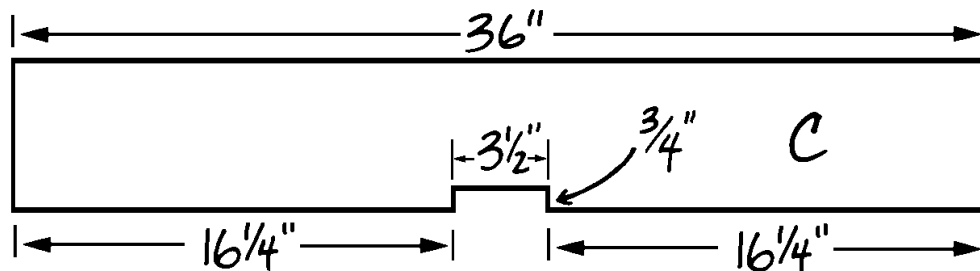
## **Making the Cabinet Frame**

1. Cut four 37-1/2"-long top/bottom pieces (A) from 1 x 6 pine.

2. Cut four 28-1/2"-long side pieces (B) from 1 x 6 pine.
3. Place two of the top/bottom pieces (A) on a level surface, on edge, parallel to each other, and 28-1/2" apart. Fit two of the side pieces (B) between the ends of the top/bottom pieces (A), as shown in *Figure 1*. Glue the pieces together and insert three 1-1/4" screws through the top/bottom pieces (A) into the ends of the sides (B) at each joint.



*Figure 1*



*Figure 2*

4. Cut four 36"-long shelves (C) from 1 x 6 pine.
5. A slot must be cut into each of the four shelves (C) at the center front to accommodate the center vertical support (E). Using *Figure 2* as a guide, cut a slot 3-1/2" wide and 3/4" deep in the center front of each shelf (C).
6. Use 1-1/4" screws and glue to attach two of the shelves (C) inside the assembly, spacing shelves as desired. *Figure 1* shows the spacing that I chose for mine.
7. Repeat Steps 3 through 6 to construct a second cabinet frame using the remaining two top/bottom pieces (A), two sides (B), and two shelves (C).

## Adding the Trim

1. Cut four vertical trim pieces (D) from 1 x 4 pine, each measuring 30" long.
2. Glue one vertical trim piece (D) to the left side of the cabinet, as shown in *Figure 3*, and secure it with 1-1/4" screws inserted through the vertical trim piece (D) and into the edge of the side (B). Space the screws about 6" apart.

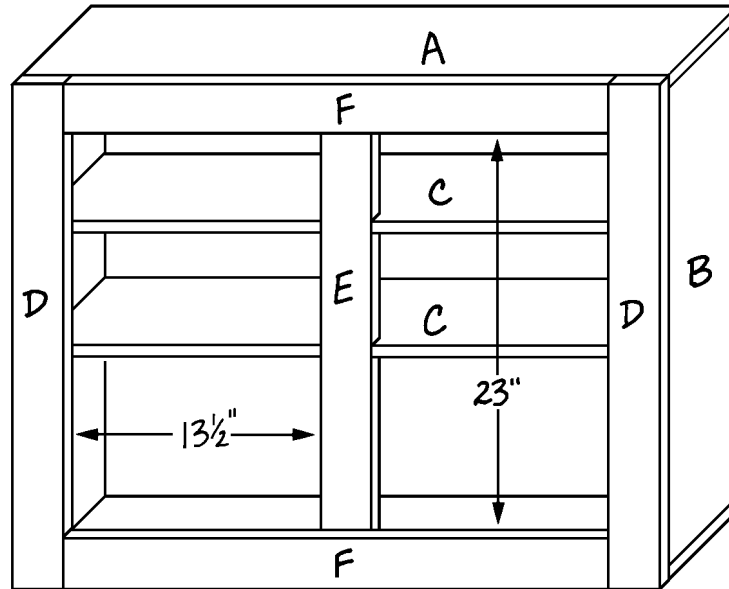


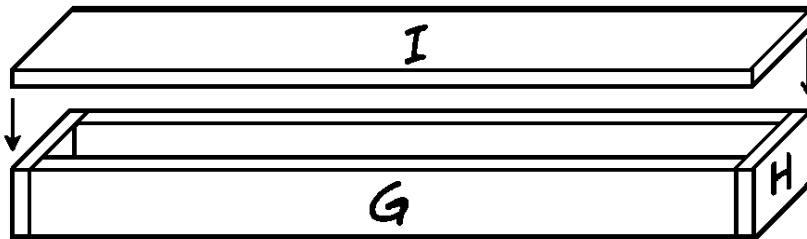
Figure 3

3. Repeat Step 2 to attach a second vertical trim piece (D) to the right side of the cabinet, as shown in *Figure 3*.
4. Cut two 28-1/2"-long center vertical supports (E) from 1 x 4 pine.
5. Fit one center vertical support (E) into the slots in the center front of the shelves (C), as shown in *Figure 3*. Glue the support in place and insert two 1-1/4" screws through the top/bottom (A) and into the end of the center vertical support (E) at each joint. Then drive two 3d finishing nails through the center vertical support (E) and into the slot in the center front of each shelf (C). Note that the spacing between the vertical pieces (D and E) should be exactly 13-1/2".
6. Cut four 30-1/2"-long horizontal trim pieces (F) from 1 x 4 pine.
7. Glue two of the horizontal trim pieces (F) flush with the top and bottom of the cabinet, between the vertical trim pieces (D), as shown in *Figure 3*. Then insert three 1-1/4" screws along each horizontal trim piece (F) to secure it to the edge of the top/bottom piece (A). Note that the opening between the top and bottom horizontal trim pieces (F) should be exactly 23".

8. Repeat Steps 1 through 7 to attach two vertical trim pieces (D), one center vertical support (E) and two horizontal trim pieces (F) to the remaining cabinet frame.

### ***Constructing the Cabinet Base***

1. To stabilize the cabinet and lift it off the floor, we built very simple base units and attached them to the bottoms of the two assembled cabinets. Cut two long bases (G) from 1 x 4 pine, each measuring 30" long.
2. Cut two short bases (H) from 1 x 4 pine, each measuring 3-1/2" long
3. Cut one 31-1/2" long base top (I) from 1 x 4 pine.
4. Place the two long bases (G) on a level surface, parallel to each other, on edge and 2" apart. Glue the two short bases to the ends of the two long bases (G) as shown in *Figure 4*, and insert two 1-1/4" screws through the short bases (H) and into the ends of the long bases (G) at each joint. You should end up with a rectangular base frame measuring 31-1/2" x 3-1/2".
5. Glue the base top (I) to the top edges of the base frame, as shown in *Figure 4*. Then drive 3d finishing nails through the base (I) and into the edges of the base frame, spacing the nails about 4" apart.



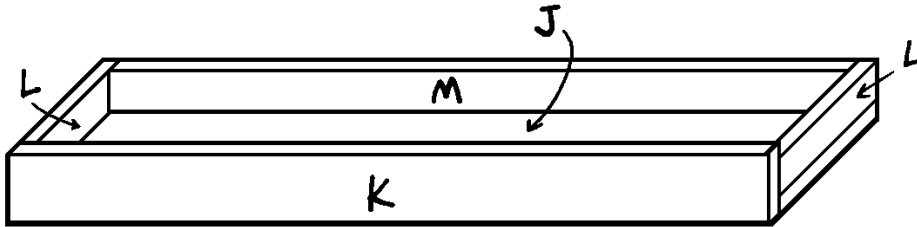
*Figure 4*

6. Turn the cabinet upside down and place the completed base on its bottom, with the base top (I) against the cabinet bottom. Position the base so that the cabinet overlaps it by 2-3/4" in the front and by 3" on each side. Note that the rear of the base should be flush with the back edge of the cabinet bottom.
7. Repeat Steps 1 through 6 to build and attach a second cabinet base to the remaining cabinet.

### ***Constructing the Center Shelves***

1. The center shelves are constructed separately and then attached to the wall between the assembled cabinets. Each shelf unit is constructed in an identical manner. Our completed shelf units measure 58" long, but you can adjust them to exact length that you require between your two cabinets. Cut three 58"-long center shelves (J) from 1 x 6 pine.

2. Cut three 58"-long center shelf trim pieces (K) from 1 x 4 pine
3. Cut six 5-1/2"-long side support pieces (L) from 1 x 3 pine.
4. Cut three 56-1/2"-long back support pieces (M) from 1 x 3 pine.
5. Place one center shelf piece (J) on a level surface and glue one shelf trim piece (K) onto it, flush with one long edge, as shown in *Figure 5*. Insert 1-1/4" screws, spaced approximately 6" apart, through the center shelf trim (K) and into the edge of the center shelf (J).



*Figure 5*

6. Glue the side support pieces (L) so that their outer faces are flush with the ends of the center shelf (J), as shown in *Figure 5*. Note that the center shelf trim (K) overlaps the ends of the side supports (L) and that the side supports (L) are narrower than the center shelf trim (K). Insert two 1-1/4" screws through the center shelf (J) into the edge of each side support (L).
7. Glue one back support (M) to the remaining long edge of the center shelf (J) between the two side supports (L), as shown in *Figure 5*. Insert 1-1/4" screws through the center shelf (J) and into the edge of the back support (M), spacing them about 6" apart.
8. Repeat Steps 5 through 7 twice to construct two more shelf units.

## ***Finishing***

1. Fill any holes or crevices with wood filler.
2. Pre-fit the shutter doors in their openings, and plane or sand any surface that doesn't permit smooth opening of the doors. Then sand all surfaces of the cabinet, shutter doors, and center shelf units thoroughly.
3. Paint and/or stain each of the pieces the color of your choice. I chose an off-white to match the color of my wall.
4. Follow the manufacturer's instructions to attach the hinges to the painted shutter doors, spacing them exactly the same on all four doors. Then attach the hinges to the cabinet.
5. Attach a door pull to the front of each shutter door. Make certain that the pulls are positioned in exactly the same place on each door.

6. Attach the door latches to the inside of each of the four doors, following the manufacturer's instructions.

## ***Final Assembly***

1. The final assembly will probably require the assistance of a helper or two. Measure the length of the two cabinets and the shelves and mark their positions on the wall
  2. The cabinets are mounted by attaching wood strips to the wall and positioning the cabinets so that the undersides of their top rest on the strips. Start by cutting one 32"-long wall support (N) from 1 x 3 pine. Position the wall support (N) on the wall,  $\frac{3}{4}$ " lower than where the upper surface of the cabinet will be. Note that the wall support (N) is shorter than the cabinet top; this will allow you to shift the cabinet back and forth to center it over the support. Level the wall support (N) carefully and attach it to the wall using molly bolts or other secure methods.
  3. Lift the cabinet and place it on top of the wall support (N) that is now attached to the wall. To secure the cabinet, drive four or five evenly spaced 3 d finishing nails through its top (A) and into the wall support (N). Recess the nail heads, carefully fill the nail holes, sand gently, and touch up the spot with paint or stain.
  4. Position one shelf unit flush with the top of the mounted cabinet. Level it carefully and attach it to the adjoining cabinet side by inserting two 1-1/4" screws through the side support (L) and into the cabinet side (B). Attach the shelf to the wall using four evenly spaced molly bolts, or other secure methods, bolting through the back support (M) into the wall.
  5. Position the second shelf unit as desired and attach it to the cabinet and wall as before. Then attach the third shelf unit, making sure that it will be flush with the bottom of the adjoining cabinet.
  6. Position the remaining cabinet on the opposite end of the shelf units. Repeat steps 2 and 3 to attach the cabinet to the wall, and then attach the shelf units to the cabinet side (B) by following the procedure outlined in Step 4.
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