

# Finish Storage Cabinet

*This cabinet does more than store your finishes — it's really a finishing workstation.*

**W**hen Ken (our design director) first showed me this finish storage cabinet, I thought the doors were on wrong. They appeared to open in opposite directions — and they do.

It wasn't until I opened the upper door of the cabinet that I realized what he'd done, see photo A below. Inside the door was a drop-down work table that rests on the bottom door when it's open, see photo at right.

Ken also added two other features I liked. A removable lazy Susan that makes it easy to rotate a project when applying a finish, see photo B. And a set of shelves that rest on adjustable metal shelf standards, see photo C.

**CONSTRUCTION.** The design of this cabinet is similar to that of a simple bookshelf. The only difference is a set of doors are added to protect supplies from sawdust.

**SIDES.** To build the cabinet, I began by cutting two *sides* (A) from  $\frac{3}{4}$ "-thick plywood, see Fig. 1 on opposite page and the cutting diagram on page 19.

Next, to accommodate a set of metal shelf standards that are added later to support the shelving, two  $\frac{1}{2}$ "-wide grooves are cut on the inside face of each workpiece, see Fig. 1c.

Then a rabbet is cut at both ends of each side piece to receive a *top* and *bottom* (B), see Fig. 1. At the same time, a  $\frac{1}{2}$ "-deep dado is cut in the center to accept a center divider (also added later).

**RABBET.** Before you can assemble the case, there's one more thing to do. A rabbet for a  $\frac{1}{4}$ "-thick plywood back is cut on the inside face of all four workpieces, see Figs. 1 and 1a.



**A. Work Table.** This drop-down work table is a convenient place to finish a project where supplies are stored.



**B. Lazy Susan.** When the lazy Susan is not being used with the work table, it stows away inside the cabinet.



**C. Adjustable Shelving.** Metal shelf standards allow you to adjust the shelving for your storage needs.

**BACK.** After gluing and screwing the top and bottom to the sides, you're ready to glue and nail the back (C) in place, see Fig. 1.

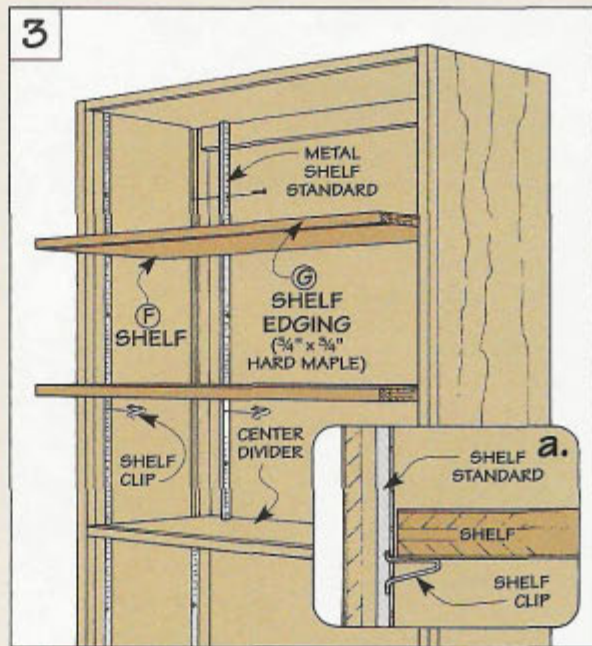
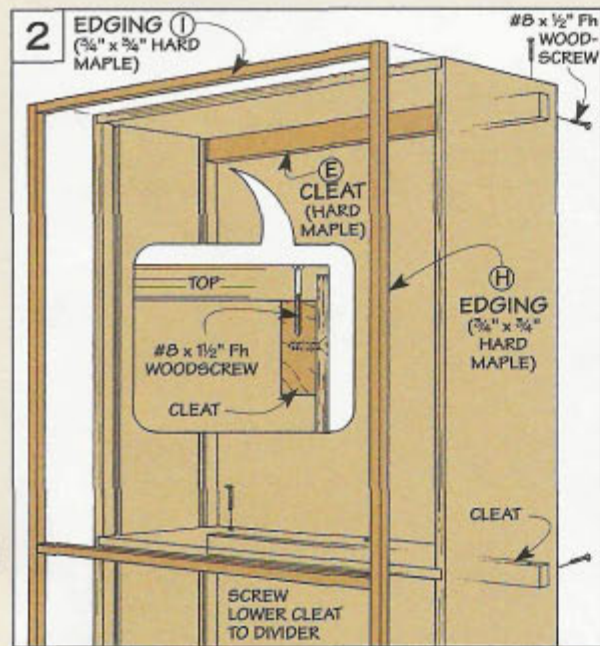
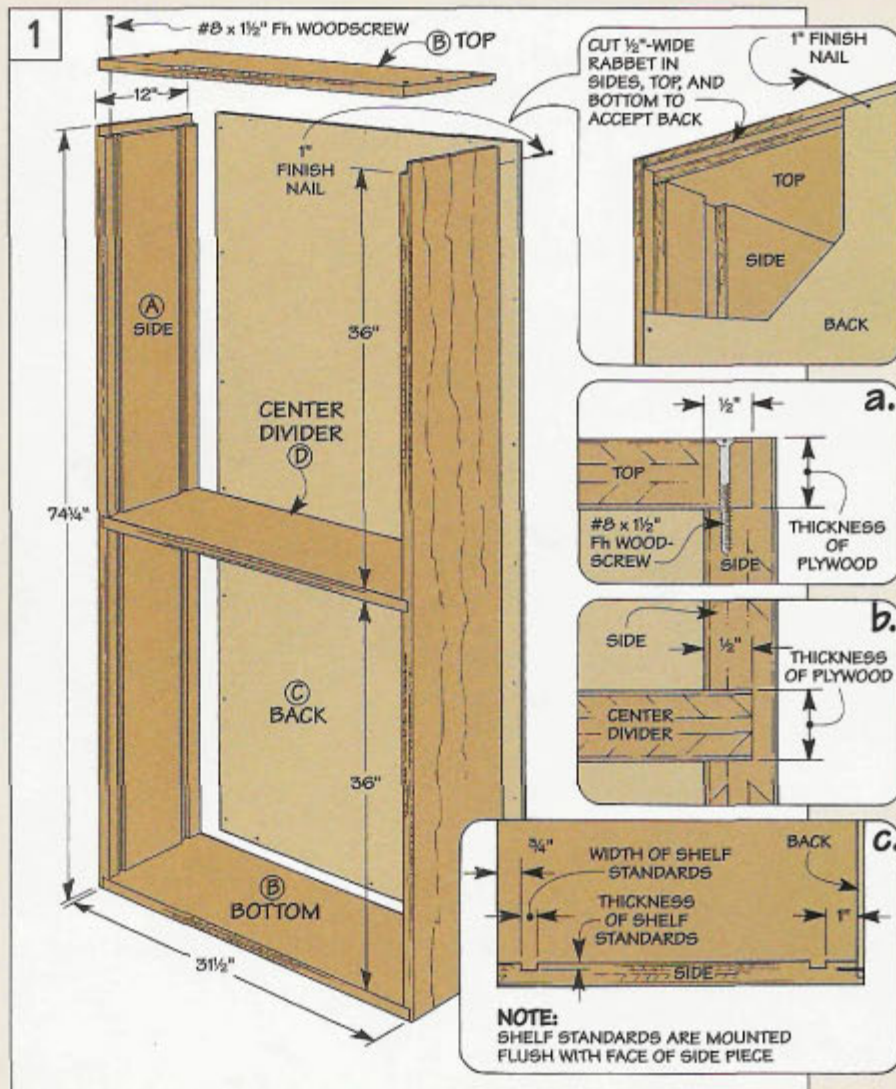
**CENTER DIVIDER.** Next, to divide the upper and lower sections of the case, I cut a center divider (D) to fit between the dados cut earlier in the sides, see Fig. 1. When gluing and clamping the divider in place, make sure it's flush with the front of the case.

**CLEATS.** Then to support the weight of the cabinet when it's screwed to the wall, I added a pair of cleats (E) that fit between the sides, see Fig. 2. These pieces are glued and screwed to the back, and either the top or center divider, see detail in Fig. 2. With them in place, I installed the shelf standards.

**SHELVES.** To determine the length of the shelves (F), measure the opening and subtract  $\frac{1}{8}$ ". The width of each shelf equals the depth of the case, minus  $\frac{1}{4}$ " to allow for a work table added later. (In my case,  $10\frac{1}{2}$ " x  $30\frac{3}{8}$ ".)

Once they're cut to size, cover the front edge of each shelf with edging (G), see Fig. 3.

**EDGING.** To complete the case, I covered the exposed plywood edges with edging (H, I), see Fig 2.



# Doors

With the case complete, you can turn your attention to the doors.

**DOOR PANELS.** Like the case, the exposed edges of the plywood doors are covered with hard maple edging. But before cutting the door panels to size, first measure the opening for each door (they should be the same). Then subtract 1½" from each dimension to allow for the maple edging (30½" x 35¾"), see Fig. 4.

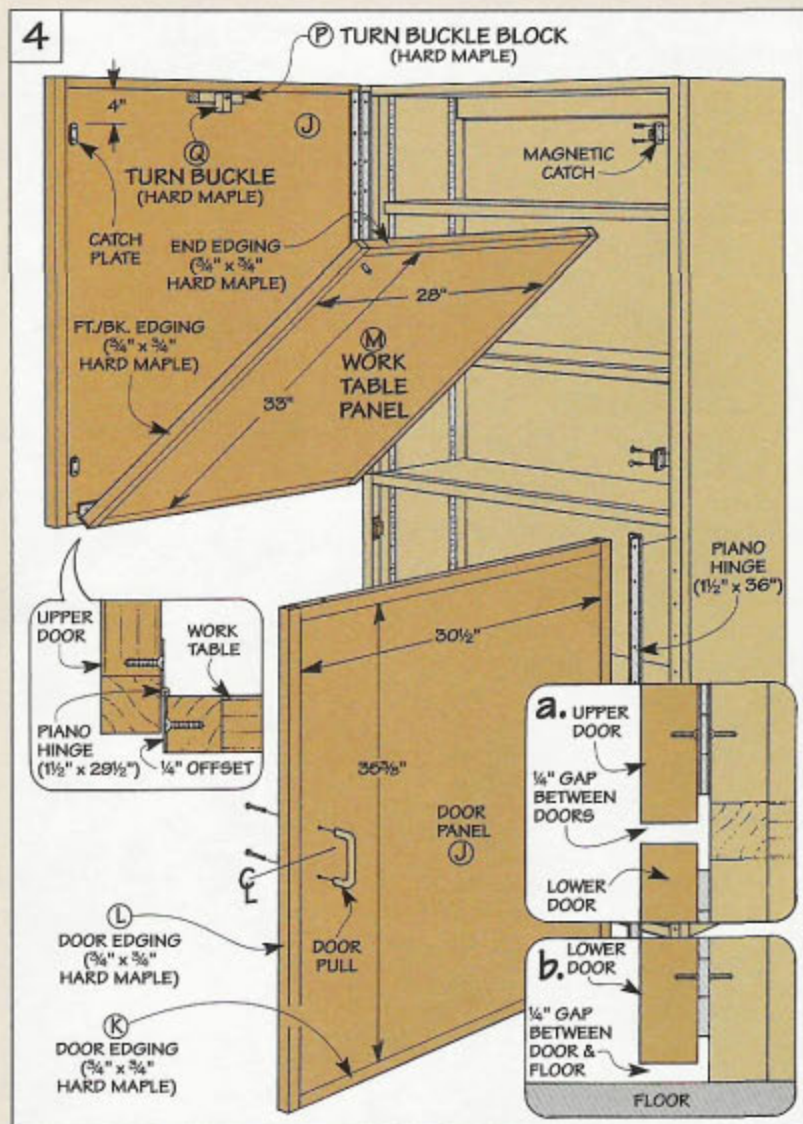
Once you've cut the panels (J), the edging (K, L) can be glued in place, see Fig. 4.

**MOUNTING DOORS.** The lower door is mounted on the right side of the case. But because the lower door is used to support the drop-down work table, the top door is mounted on the left side. To support the weight of each door, piano hinges are used to mount the doors on the case, see Fig. 4.

Note: When mounting the lower door, allow for a ¼" gap between the door and the floor, see Fig. 4b. When mounting the upper door, allow for a ¼" gap between the doors, see Fig. 4a.

**PULLS & CATCHES.** Now door pulls and magnetic catches can be mounted, see Figs. 4 and 5. Mounting these pulls is fairly straightforward. (I used 3¾" maple pulls.)

But when mounting the catches (and plates), it's important to leave a ⅜" gap between each door and the case, see Figs. 5 and 5a. This compensates for the thickness of the hinge and allows



air to circulate inside the case.

**WORK TABLE.** Now you can move on to the drop-down work table that's mounted to the back of the upper door. Like the doors,

the work table consists of a plywood panel (M) with the exposed edges covered with maple edging (N, O), see Fig. 4. And again, a piano hinge is used to mount the

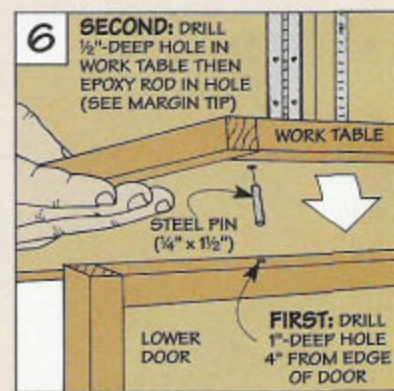
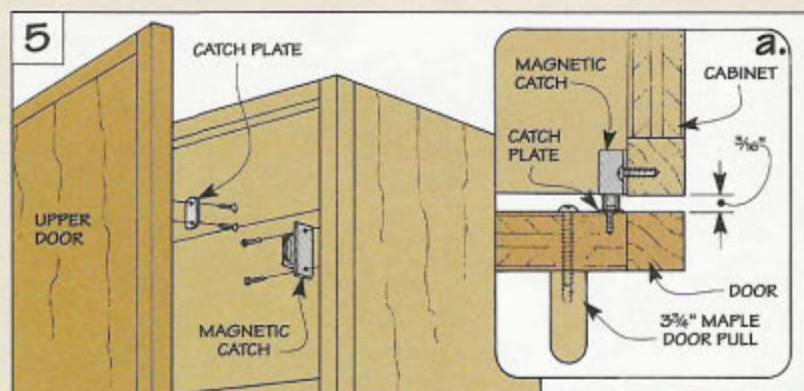
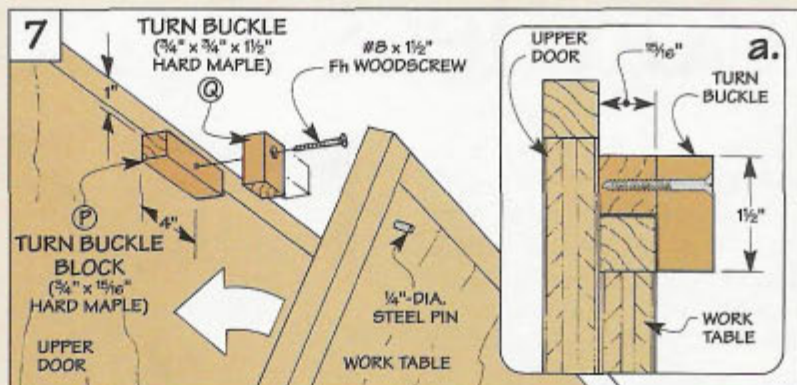


table to the upper door, see Fig. 4.

Next, to lock the table to the lower door, a steel pin is epoxied in a hole that's drilled in the bottom of the work table, see Fig. 6. Then a hole is drilled in the door to receive the pin, see margin tip.

Finally, a *turn buckle block* (P) and *turn buckle* (Q) used to lock the work table to the back of the upper door can be mounted to the door, see Fig. 7.



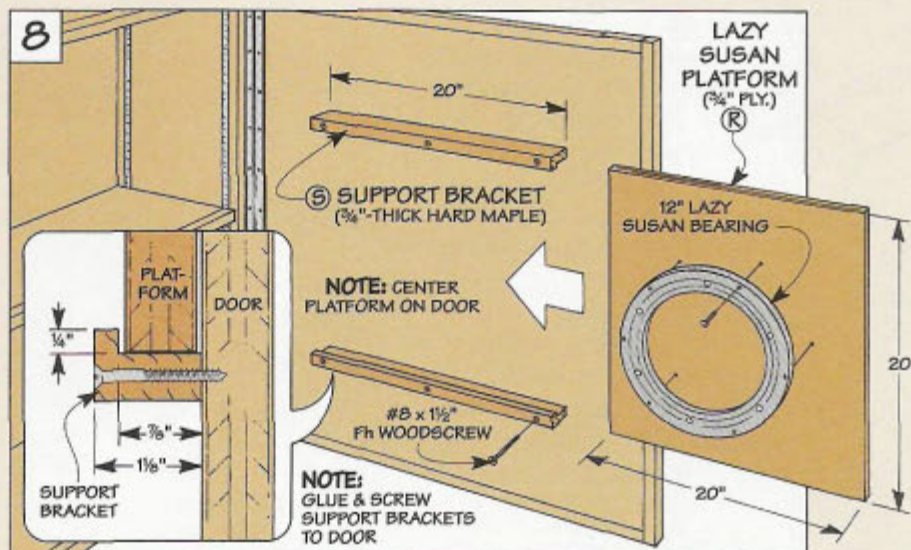
A dowel center makes it easy to locate the hole for the steel pin in the bottom of the work table.

## Lazy Susan

At this point, you could use the storage cabinet just as it is. But to make it easier and more efficient to finish all the sides of a project, I built a lazy Susan for the flip-down work table, refer to photo C on page 16.

It consists of a 3/4-inch-thick plywood *platform* (R) that's screwed to a lazy Susan bearing I purchased from a local hardware store (around \$20), see Fig. 8.

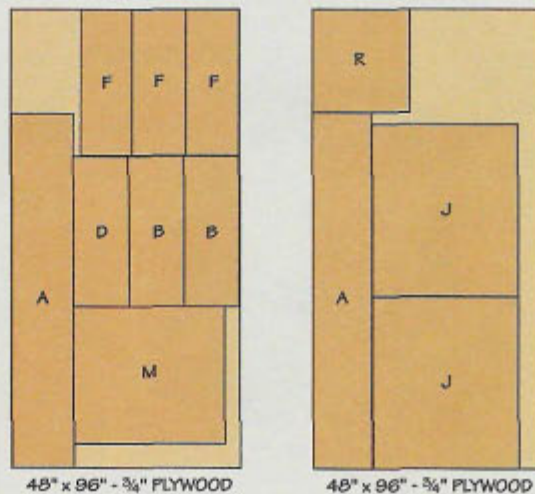
To store the lazy Susan when it's not in use, a pair of L-shaped *support brackets* (S) (hard maple) are glued and screwed to the back of the lower door, see detail.



## Materials

A Sides (2)	12 x 74 1/4 - 3/4 ply.
B Top/Bottom (2)	12 x 31 1/2 - 3/4 ply.
C Back (1)	31 1/2 x 73 3/4 - 1/4 ply.
D Center Divider (1)	11 3/4 x 31 1/2 - 3/4 ply.
E Cleats (2)	3/4 x 2 - 30 1/2
F Shelves (3)	10 1/2 x 30 3/8 - 3/4 ply.
G Shelf Edging (3)	3/4 x 3/4 - 30 3/8
H Vertical Edging (2)	3/4 x 3/4 - 74 1/4
I Horizontal Edging (3)	3/4 x 3/4 - 30 1/2
J Door Panels (2)	30 1/2 x 35 3/8 - 3/4 ply.
K Horiz. Door Edging (4)	3/4 x 3/4 - 30 1/2
L Vert. Door Edging (4)	3/4 x 3/4 - 36 7/8
M Work Table Panel (1)	28 x 33 - 3/4 ply.
N End Edging (2)	3/4 x 3/4 - 28
O Ft./Bk. Edging (2)	3/4 x 3/4 - 34 1/2
P Turn Buckle Block (1)	3/4 x 15/16 - 4
Q Turn Buckle (1)	3/4 x 3/4 - 1 1/2
R Lazy Susan Platform (1)	20 x 20 - 3/4 ply.
S Support Brackets (2)	3/4 x 1 1/8 - 20

## PLYWOOD CUTTING DIAGRAM



## Hardware

- (4) 36" Shelf Stndrds. w/screws
- (12) Shelf Clips
- (2) 1 1/2" x 36" Piano Hinges w/screws
- (2) 3 3/4" Maple Door Pulls
- (4) Magnetic Door Catches w/plates
- (1) 1 1/2" x 29 1/2" Piano Hng. w/screws.
- (1) 12" Lazy Susan Bearing w/screws
- (25) #8 x 1 1/2" Fh Woodscrews
- (6) #8 x 1/2" Fh Woodscrews
- (1) 1/4" x 1 1/2" Steel Pin
- (48) 1" Finish Nails

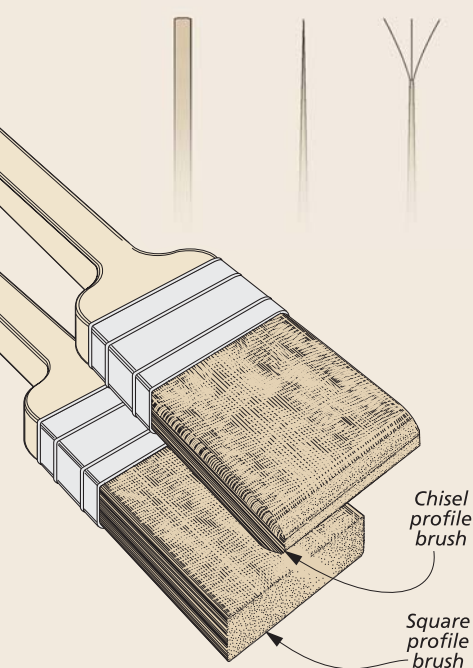
# 4 Finishing Brushes

no shop should be without

A flawless, brushed-on finish starts with the right tool. And all you need is a small collection of brushes to handle any type of finish on any project.

## BRISTLE TIPS

Square Taper Flagged



Sometimes the quality of the job is only as good as the quality of the tools you use. And I've found this is especially true when applying a brushed-on finish. To lay down a smooth, even finish, you need to use the right brush.

**BRISTLE BASICS.** Before you can choose a tool for a job, it helps to know a little bit about the business end of a brush — the bristles.

The bristles on a brush come in two basic types — natural or synthetic. Natural bristles are simply the hairs from animals. A lot of types of animal hair is used for this purpose, but the most common and useful for finishing are the soft, white bristles that come from hogs — called white China (photo above). These bristles have the ability to hold a large amount of finish and release it evenly. They're your best bet for solvent-based finishes like varnish, lacquer and shellac.

Your other choice is synthetic bristles. These are made from polyester and nylon. The advantage to synthetic bristles is that they won't absorb water and become floppy

like natural bristles. This makes them ideal for use with today's water-based finishes.

**BRISTLE SHAPE.** The bristles on a brush come in different shapes as shown at left. They can be straight or tapered along their length and sometimes the ends of the bristles are split or "flagged." A tapered bristle is strong at the base but flexible at the tip. The split ends of flagged tips, usually found on natural bristles, hold more finish and spread it smoother. Synthetic bristles can be straight or tapered and generally lack flagged tips.

**BRUSH SHAPE.** The profile of a brush can be squared off or chiseled (tapered) as shown in the lower drawing at left. Simply put, chiseled brushes work better. The taper of this type of brush allows more bristles to contact the surface for a smoother finish.

What it comes down to is there isn't one brush that will handle every job. But, with just the small collection of brushes shown on the following page, you can handle almost any finishing task that comes along.

## 1 Wide China Bristle

Whenever I'm faced with brushing a varnish, lacquer, or shellac on a large project, I get out a 2½"-wide, white China bristle brush like the one shown at right. It's the perfect tool for applying all types of solvent based finishes to large, flat surfaces with professional results.

Brushing big projects is a challenge. Any brush marks or lap marks on a tabletop or cabinet can stick out like a sore thumb. So your

goal is to apply a full, even coat of finish before it starts to tack up.

To do this, you need a brush that holds a large amount of finish and then releases it on the surface as smoothly and evenly as possible. And this is exactly what this type of brush is designed to do. The width of the brush allows me to cover a lot of ground quickly and the soft, flagged tips lay down the finish ever so smoothly.



- ▲ A wide, white China bristle brush is your best bet for laying out a brush mark-free finish on large surfaces. The soft, flagged tips will hold a lot of finish and then release it evenly as you brush.

## 2 Small Angled China Bristle

One of the keys to great results from a brushed-on finish is to lay on the right amount of finish and to do it smoothly. On smaller projects or projects with a lot of detail, this isn't always easy. You have narrow edges, corners and molded profiles that have to be covered without leaving brush marks, drips and runs.

That's why I keep a 1½"-wide China bristle angled sash brush in the finishing cabinet. This brush's

size and shape give it a few advantages over its big brother above.

You can see that it's narrower in width but it's also quite a bit thinner. This means it will hold less finish and so gives you a good handle on the amount of finish you apply — exactly what's needed for smaller work. And the angled end of a sash brush lets you get into tight areas where a square-ended brush would just make a mess.



- ▲ A small, white China angled sash brush can save the day when you need to do a good job of brushing fine details. This brush allows you to precisely apply an even coat of finish in spots a larger brush can't handle.

## 3 Synthetic Bristle Sash Brush

If you're like me, you find yourself opening a container of clear water-based finish more and more often. These finishes can offer some nice advantages. They're fast drying, "crystal" clear, pretty durable and easy to clean up. You can put a quality finish on a large project in a short amount of time.

But when it comes to applying water-based finishes, a good quality synthetic bristle brush is a must.

Unlike natural bristles, synthetic bristles are waterproof. They'll hold their shape in water-based finishes and allow you to lay down the finish with perfect control.

My choice here is a 2" or 2½"-wide angle sash brush as in the right photo. This size brush does double duty. Its width allows you to cover large areas quickly and the angled shape lets you easily cut in edges and get into the corners.



- ▲ Look for a synthetic bristle, angled sash brush for use with water-based finishes. You'll find a good one at a paint or home improvement store for about \$12 to \$15.

## 4 Artist Brush Assortment

You might think the collection of artist's brushes shown in the photo at right would be out of place in a woodworking shop. But once you pick up a few, you'll consider them indispensable.

I put these brushes to use in a couple ways. A larger, flat artist brush, like the top brush in the photo, is handy for brushing finish on small projects and getting into

tight spaces. It can make an easy job of small knobs and moldings, and fine details. And its synthetic bristles make it versatile.

The small, round brushes (lower in photo) earn their keep when any kind of touchup work needs to be done. I use them for spot staining, touching up scratches or dimples in a finish — any time a super-fine touch is needed. **W**



- ▲ Small artist's brushes can take on a number of finishing duties. They can be purchased in sets for under \$10 at hobby and art supply stores.