

WOODWORKER'S JOURNAL

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In this plan you will be getting:

- Step by Step construction instruction.
- A complete bill of materials.
- Exploded view and elevation drawings.
- How-to photos with instructive captions.
- Tips to help you complete the project and become a better woodworker.



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Rolling Lumber Cart



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Rolling Lumber Cart



In a small garage or basement shop, floor space isn't the only real estate that can be in short supply — walls get filled up, too. If there isn't room for a wall-mounted lumber rack in your shop, here's a rolling lumber cart that offers more than 70 square feet of shelf space, a separate compartment for storing sheet goods and a roomy bin on top for cutoffs. Heavy-duty shelf standards and brackets keep it all high and dry.

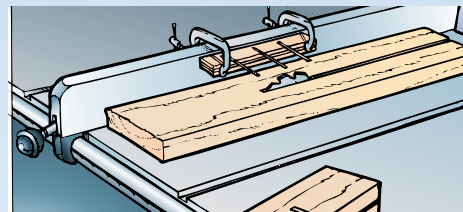
Starting with the Base

Get this project rolling by cutting the base parts (pieces 1 through 5) to size. Five cross brace assemblies reinforce the base and serve as attachment points for the uprights. Notice in the *Drawings* on pages 20 through 22 that the end and center cross brace assemblies are sandwiches of two 2 x 6s and blocking; the other two cross braces are just pairs of 2 x 6s. Build the thicker cross braces by gluing and screwing each base end (piece 1) to a cross brace (piece 3) with two sections of short blocking (pieces 4) in between. Make the thick center cross brace the same way, using two cross braces instead of a base end. Leave the center cavities of these assemblies open for now.

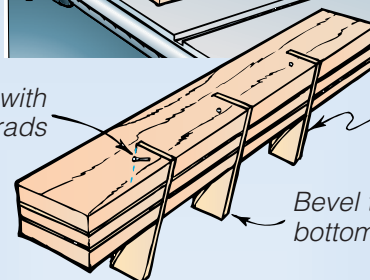
To make the other two narrower cross brace assemblies, first plow a pair of $\frac{3}{4}$ " x $3\frac{1}{2}$ " wide dadoes across the face of each cross brace to form bridle joints for housing the uprights. Follow the *Drawings* (next page) to locate these cuts. Fasten pairs of cross braces together with glue and screws, then rout a shallow recess along the top edge (of each) to install a plastic slide (pieces 15) in each one. Make the recesses $\frac{1}{8}$ " deep and $1\frac{1}{2}$ " wide so they

After machining your stock to overall size, use your table saw to form the dadoes on the uprights and the half laps on the cross braces.

Quick Tip



Tack in with small brads



Thin slats

Bevel the bottom edges

Shop Made Hold-downs

Hold-downs provide a good means of keeping lumber pressed tightly to a machine fence while cutting or routing. Here are a couple options for making inexpensive and effective hold-downs.

1. Simply slice a piece of $\frac{3}{4}$ " plywood with a bandsaw kerf at about a 30° angle. Then install a flexible-blade putty knife in the kerf with a dab of quick-setting epoxy. Clamp the hold-down to the table saw's rip fence at the desired height. Set the hold-down just low enough so the putty knife blade flexes against your workpiece to hold it securely.

2. Another option is to cut kerfs in a piece of $\frac{3}{4}$ " plywood wide enough to hold wooden slats about the thickness of paint stirring paddles. Make the slats project a few inches beyond the plywood so they'll flex reasonably easily. (Bevel the bottom edges of the slats so they make better contact with the wood.) Glue and tack the slats in the kerfs. This hold-down style can be made any length or width you need. Long hold-downs are especially useful for ripping longer boards on a table saw.





Drill counterbores to recess the lag bolt heads and washers that fasten the base sides and ends to the crossbraces. Clamp a straightedge to the table to keep the counterbores aligned.

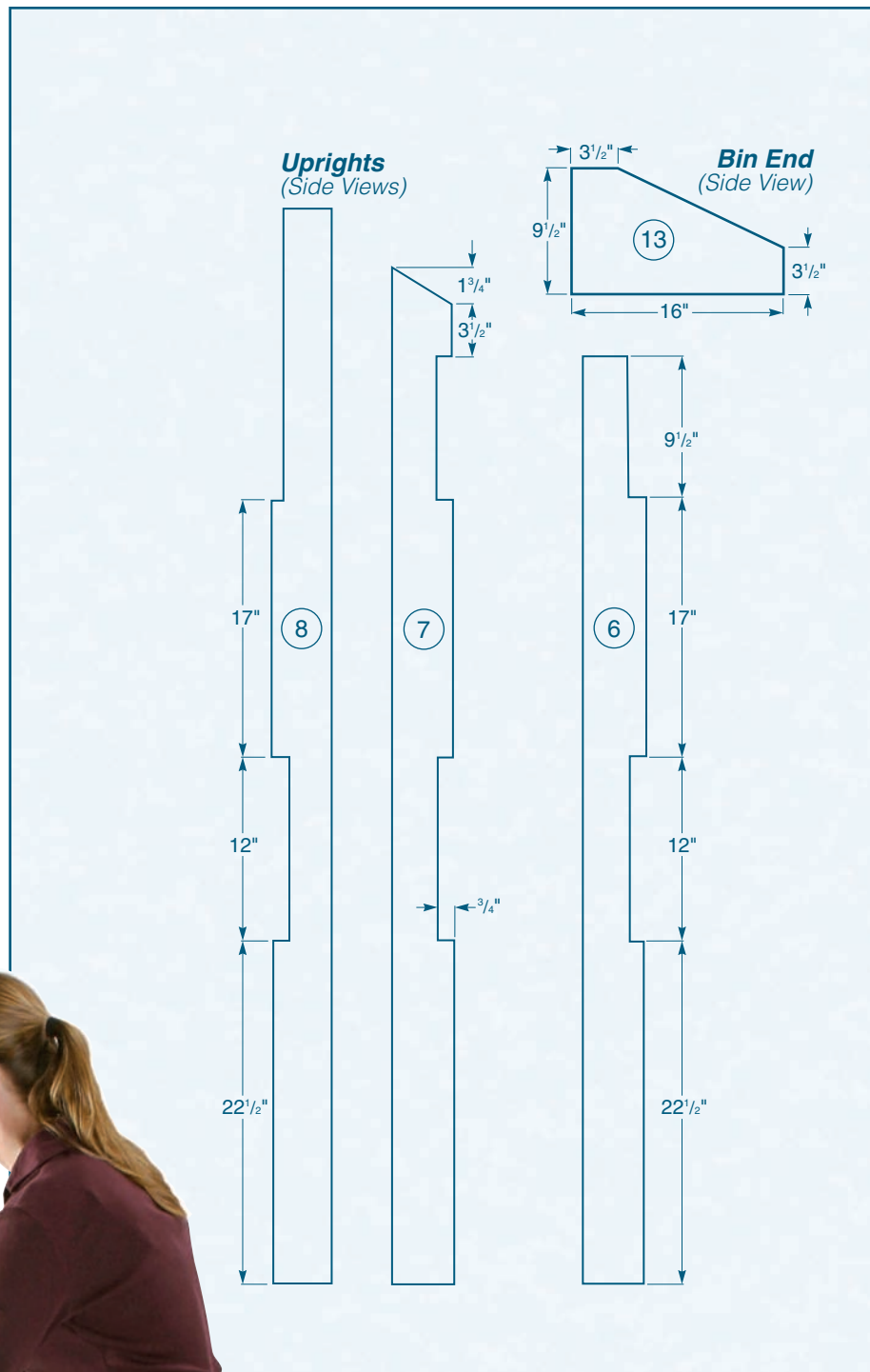
span the distance between the upright cutouts.

Assemble the base framework by attaching the five cross brace assemblies to the base sides (pieces 2) with $\frac{5}{16}$ " x 4" countersunk lag bolts and washers. Space the cross braces evenly along the base.

Making the Rack

When you get this rack all filled up (it's surprising how many great lumber deals you'll find once you have a good place to store it!), there's going to be some substantial weight involved. That's why we

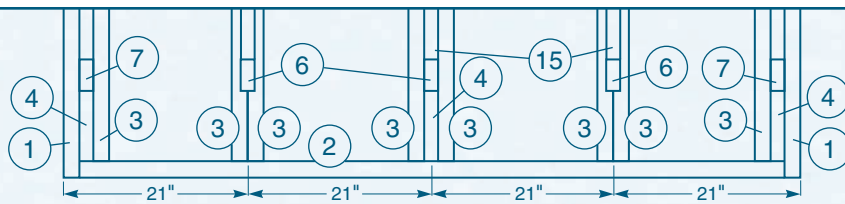
The tops of the outer uprights are angled, as shown in the drawing above. After cutting the angle, sand it



turned to cross braces and blocks — this is one project you won't want to be guilty of under-

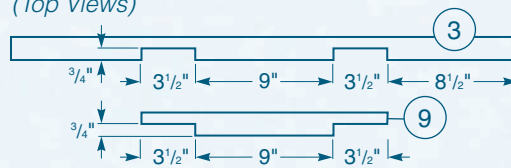
building.

Refer to the *Drawings* to lay out the ten uprights (pieces 6, 7 and 8). Cut them to size and shape. Cut the top cross braces (pieces 9) to length now, too. Use a dado blade for milling the long, $\frac{3}{4}$ " deep recesses in the uprights as well as the tongues

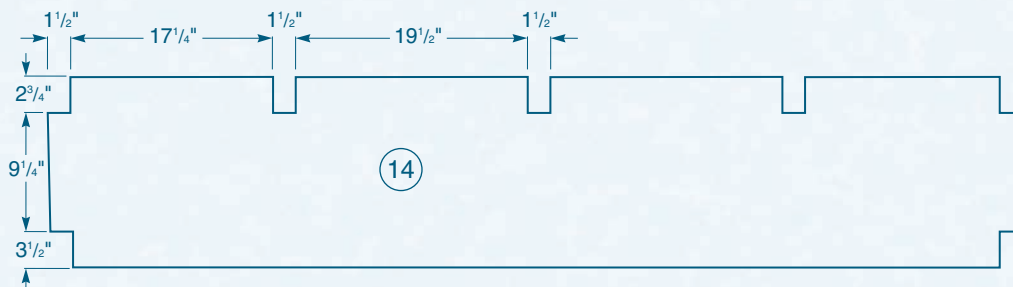


Base Assembly
(Top View)

Top and Base Cross Braces
(Top Views)



Cutoff Bin Bottom
(Top View)



on the ends of the top cross braces. When you're through dadoing, slide the uprights into their cutouts in the base to test the fit. You can turn to a small block plane if you find it necessary to refine the fit.

With the uprights in place, fill the voids in the center and end base cross braces with long blocking (pieces 5). Tap the blocking down below flush to form $\frac{1}{8}$ " deep recess between the uprights for more plastic slides. Glue and screw the blocking into place.

Install the top cross braces, including the pair that wraps around the center uprights. Attach all the cross braces to the uprights with carriage

bolts. Cut the wide and narrow upright braces (pieces 10 and 11) to size (we used plywood for these pieces) and attach them to the uprights with deck screws.

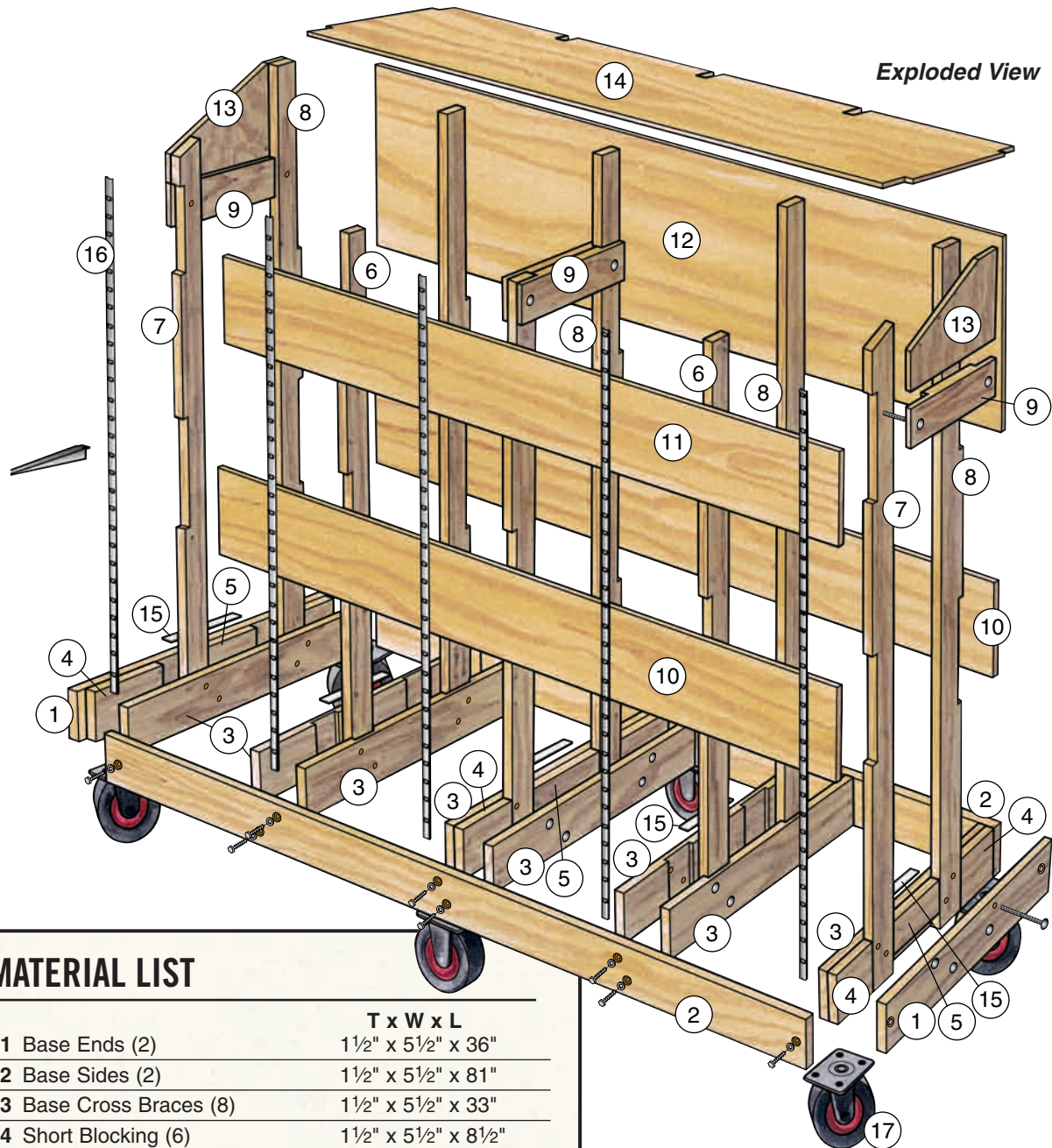
Assembling the Cutoff Bin

Making the cutoff bin is a snap. Cut the bin ends and back (pieces 12 and 13) to size and shape. Screw these parts to the uprights and to one another so the ends overlap the back at the corners. Take your time plotting and cutting the shape of the bin bottom (piece 14) so it fits snugly around all those protruding uprights. Chamfer the front edge to keep it from splintering later. Drop it into place and screw it to

Quick Tip

Magnetic Tool Holder

It seems that every stationary tool requires different wrenches or chuck keys to change bits and blades or to perform regular maintenance. One way to keep from scrounging for those missing wrenches and such is by using large magnets from old speakers. Simply stick the magnet to the tool stand and the wrench to the magnet. This way, you'll always have the appropriate wrench right on the tool that needs it.



Exploded View

MATERIAL LIST

	T x W x L
1 Base Ends (2)	1½" x 5½" x 36"
2 Base Sides (2)	1½" x 5½" x 81"
3 Base Cross Braces (8)	1½" x 5½" x 33"
4 Short Blocking (6)	1½" x 5½" x 8½"
5 Long Blocking (3)	1½" x 3½" x 9"
6 Front Uprights (3)	1½" x 3½" x 61"
7 Angled Uprights (2)	1½" x 3½" x 66¼"
8 Rear Uprights (5)	1½" x 3½" x 70½"
9 Top Cross Braces (4)	1½" x 3½" x 16"
10 Wide Upright Braces (2)	¾" x 12" x 81"
11 Narrow Upright Brace (1)	¾" x 9½" x 81"
12 Cutoff Bin Back (1)	¾" x 19" x 81"
13 Cutoff Bin Ends (2)	¾" x 9½" x 16"
14 Cutoff Bin Bottom (1)	¾" x 15½" x 81"
15 Slides (5)	¼" x 1½" x 9" UHMW
16 Shelf Standards (10)	1½" x 55" Steel
17 Casters (6)	4 Swivel, 2 Fixed

the ends, back and braces.

Wrapping Things Up

Time to install some hardware. Bolt shelf standards to the uprights. We used heavy-duty standards and brackets. Use four 5/16" x 3-1/2" lag bolts and 1-1/2" diameter (O.D.) fender washers to attach each standard. Cut pieces of Ultra High Molecular Weight (UHMW) plastic into slides (pieces 15) and chamfer the top edges. (You can buy sheets of this super slippery plastic from

many woodworking suppliers. These slides make it much easier to load and unload heavy sheet goods by yourself.)

Slip the slides into their recesses in the base cross braces and attach with countersunk screws. Arrange six heavy-duty casters around the base. Choose fixed wheels for the center pair and swiveling casters for the corners. Make sure that the casters you buy are rated to support at least 500 pounds each.

Quick Tip

Options for Displaying Those Project Plans and Notes...

Keeping blueprints and notes handy when you're in the middle of a project can be a real challenge, especially if you're working on a small bench.

One solution is to mount an ordinary roll-up window shade above your workbench. Tape your drawings and plans right on the shade. When you need whatever is behind the shade, simply roll it up out of the way. While it's rolled up, everything stays neat, protected and right where you can find it again.

If you've got some open wall space near the bench, consider mounting an inexpensive bulletin board or dry-erase board there. Tack or tape up your drawings to keep them accessible while you work.

Calendar of Shop Maintenance Tips

Every Day (of use):

Empty shop garbage cans and any open dust bins.

Clean out rag storage cans; hang rags soaked with oil finish out to dry.

Lubricate air-powered tools (nail guns, random-orbit sanders, etc.) and/or refill reservoirs on automatic oilers.

Every Week:

Clean sawdust from shop floors and benches.

Drain moisture from compressor's air storage tank, pipes and manifold and filter/moisture trap(s).

Shake dust collector's filter bags to remove excess dust cake (more often if necessary).

Empty sawdust from dust collector bags or bins (more often if necessary).

Empty shop vacuum and clean filter (more often if necessary).

Every Month:

Vacuum fine dust from tops of light fixtures and out of electrical outlets, switches and junction boxes.

Vacuum prefilters on air filtration devices.

Clean out sanding tables and machines not connected to dust collection.

Clean off built-up finish on spray guns, spray booth walls, etc.

Check the condition of the air filter and the oil level in your compressor's pump (latter not required for oil-less models).

Test and reset ground-fault interrupt (GFI) outlets and circuits.

Twice a Year:

Inspect condition of machines and portable power tools; service as needed.

Check fire extinguishers; recharge or replace as necessary.

Change oil in air compressor pump (oil-less compressors exempt).

Treat metal surfaces on tools with rust preventative spray or wax.

Check compressed air system (tank, hoses, fittings) for leaks.

Check condition of filter bags or cartridges on dust collectors, air cleaners and shop vacuums; replace as necessary.

Inspect central dust collection system's ductwork and flexible hoses for air leaks or clogs.

Check first-aid kit for completeness; refresh supplies as necessary.

Check condition of glues and finishes; properly discard products that are past their expiration dates, dried out or partially cured in the can or bottle.

Check shop for leaks or moisture that may ruin tools and stored lumber and supplies.