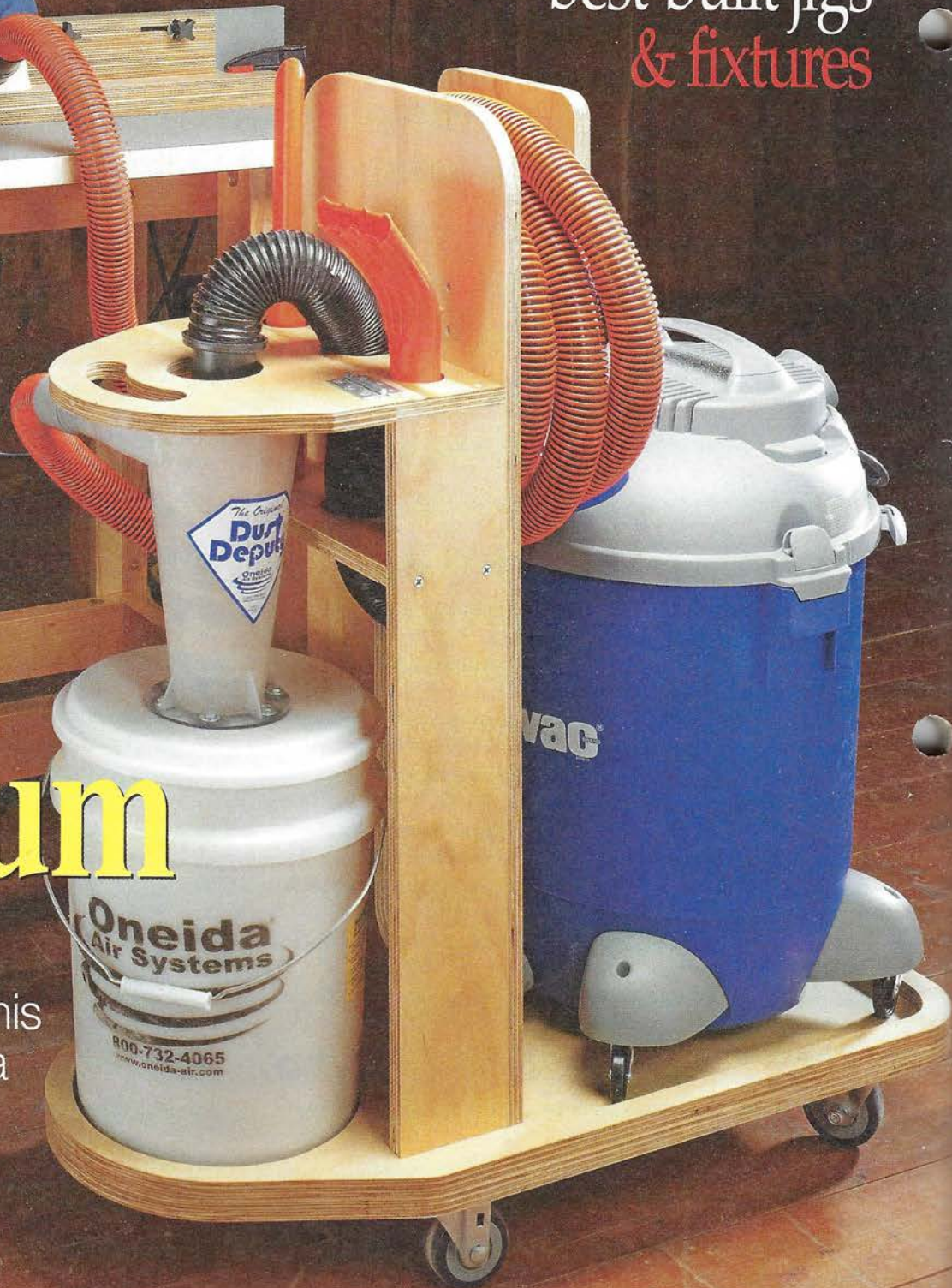


super-charge Your Shop Vacuum

A low-cost cyclone kit and this simple cart turn a shop vacuum into a top-notch dust collector.



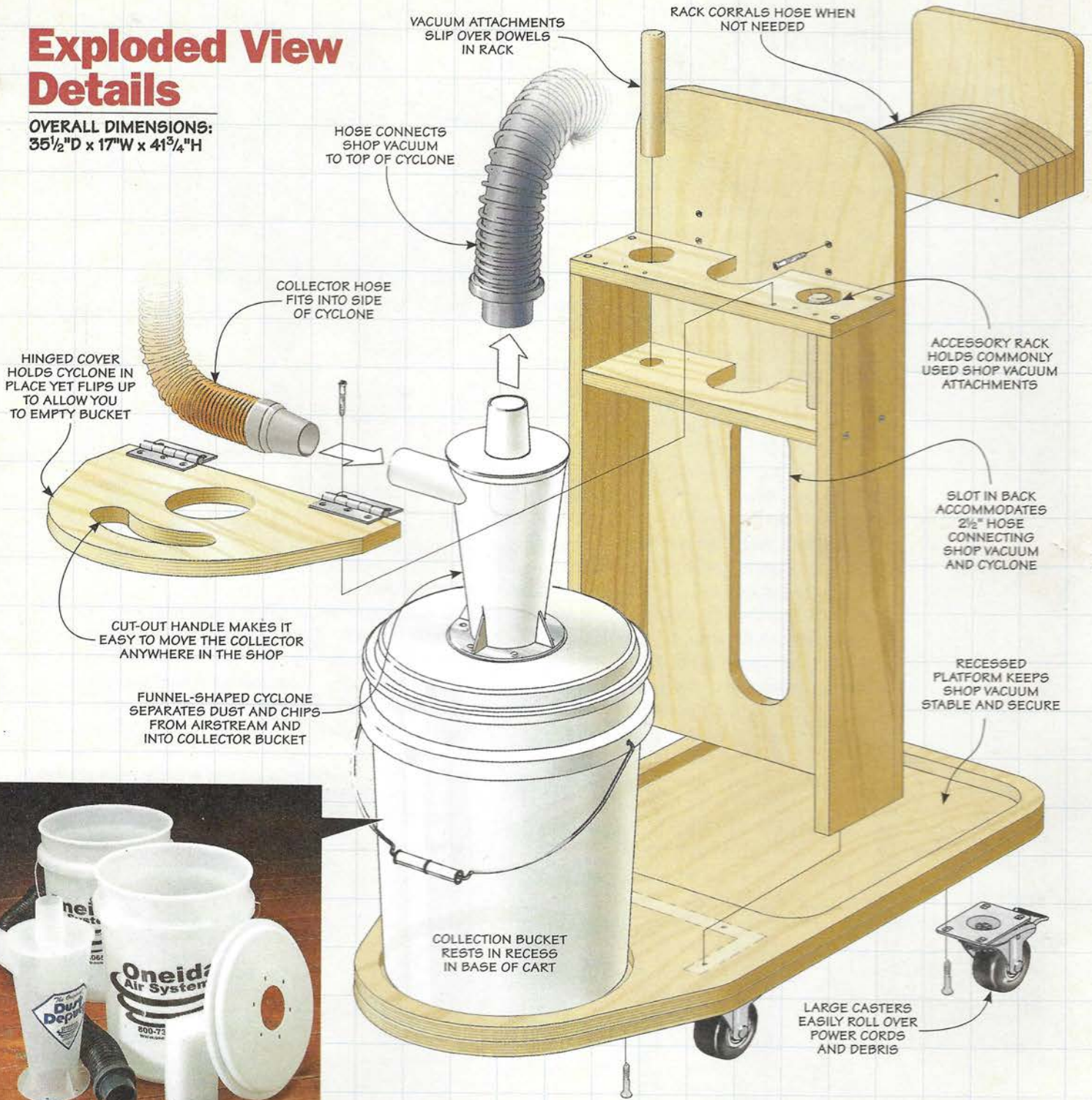
■ A shop vacuum comes in handy to collect dust and chips from power tools and for all-around shop cleanup. But it doesn't take long for the filter inside the canister to clog with dust, which reduces its effectiveness.

To prevent this from happening, *Oneida Air Systems* designed its *Dust Deputy* kit shown above. It features a small, plastic cyclone separator to direct most of

the dust and chips into a five-gallon bucket. The kit shown in the photo on the facing page includes some foam blocks and an extra bucket to attach the cyclone directly to the side of the vacuum canister. As the bucket fills with chips though, things can get unbalanced. So I designed the roll-around cart shown above to create a stable, compact dust collecting center.

Exploded View Details

OVERALL DIMENSIONS:
35½"D x 17"W x 41¾"H



▲ **Oneida Cyclone Kit.** The Dust Deputy kit includes the cyclone, two buckets, mounting hardware, foam blocks, and connector hose. For sources, turn to page 51.

Materials & Hardware

A	Bottom and Rim (2)	17 x 35½ - ¾ Ply.	H	Hose Holder (1)	9 x 4 - 4½ Ply.
B	Sides (2)	4½ x 25 ¾ - ¾ Ply.	I	Holder End (1)	9 x 9 - ¾ Ply.
C	Top (1)	4½ x 14 - ¾ Ply.		• (4) 3" Swivel Casters w/Screws	
D	Shelf (1)	4½ x 12½ - ¾ Ply.		• (28) #8 x 1½" Fh Woodscrews	
E	Back (1)	14 x 36 - ¾ Ply.		• (7) #8 x 3" Fh Woodscrews	
F	Attachment Rods (2)	1 x 1 - 6½		• (1 pr.) 3" Utility Hinges w/Screws	
G	Cover (1)	9¼ x 14 - ¾ Ply.		• (1) Dust Deputy Cyclone Kit	

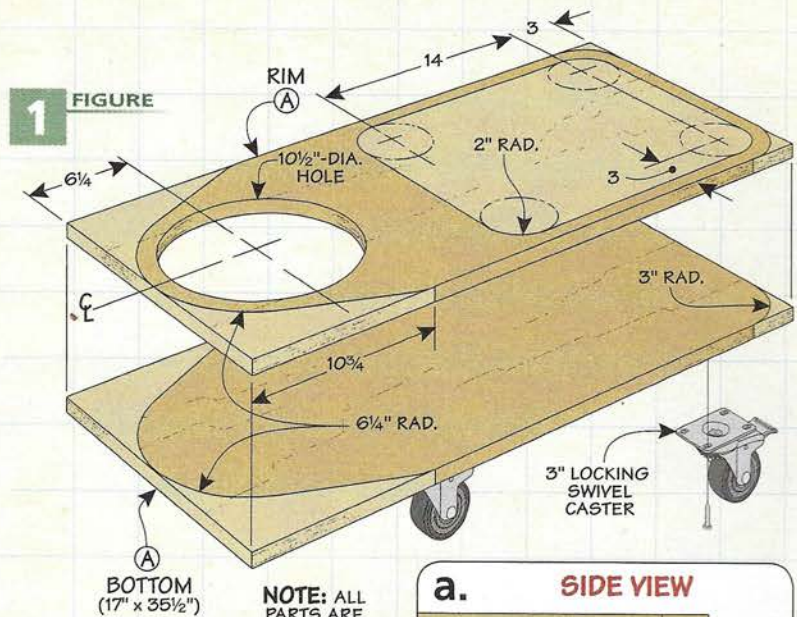
roll-around Cart

The main purpose of this simple cart is to provide a single platform for both a shop vacuum and the *Dust Deputy* system. But you'll find there are a few other features as well. For starters, a flip-up cover adds stability to the tall, slender cyclone. Pulling on the hose could cause the cyclone to tip over without this extra support.

Another feature is the center column. On one side, there's a rack for storing a couple commonly used shop vacuum accessories. Then on the other side, there's a rack that's designed to hold the vacuum hose.

Additionally, the rounded base won't catch on your tools or workbench. And the large, 3" casters aren't likely to get caught on power cords or cracks in the floor.

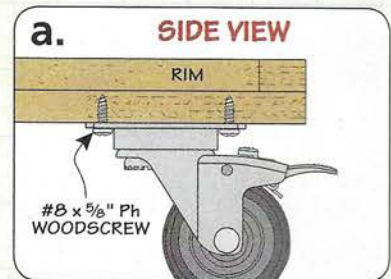
Finally, the cart is made from ordinary, inexpensive plywood.



And due to its straightforward joinery, you can build it and put it to use in a weekend.

STABLE BASE

I began building the cart from the base up since all the other parts are attached to it. The base is sized to hold the cyclone, bucket, and vacuum, as shown in Figure 1.



Two-Layer Base. The base actually consists of two layers of plywood. The first layer is solid. The second layer has a pair of cutouts.

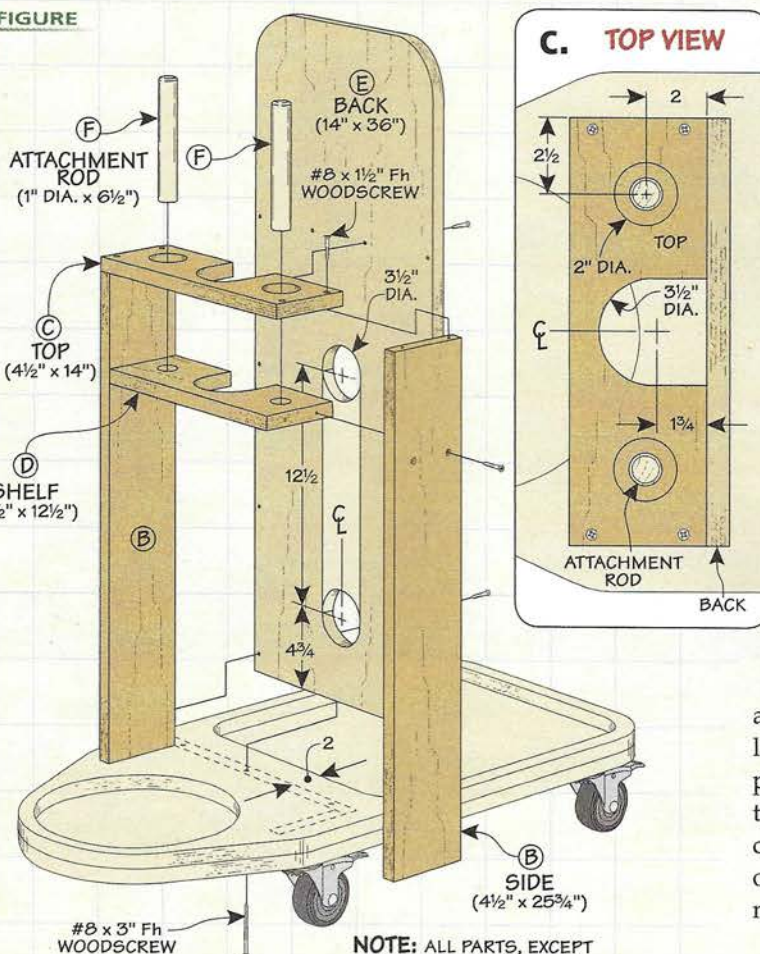
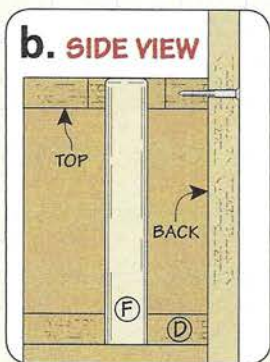
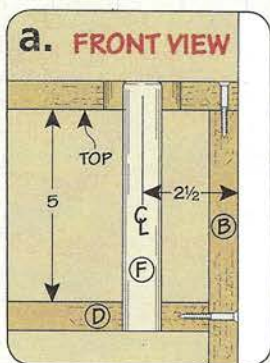
The cutout on one end captures the five-gallon cyclone bucket. On the other end, the cutout creates a rim to keep the shop vacuum from rolling off the base.

To create the cutouts, I started by cutting two rectangular blanks at the table saw to match the width and length shown in Figure 1.

I set one of the blanks aside for the time being and marked the location and size of the cutouts on the other blank. The cutout for the shop vacuum is sized to accommodate most models, but it's a good idea to check the overall "footprint" of your vacuum before moving on.

You can create the cutouts with a jig saw. Drill a hole just inside the layout lines to provide a starting point for the jig saw. Cut as close to the waste side of the line as you can. This will reduce the amount of time it takes to sand away blade marks and clean up the edges.

2 FIGURE



Final Size. With the cutouts complete, you can lay out the final shape on the blank. Here again, I used a jig saw to make the cuts and then sanded everything smooth.

Now that one layer is complete, you can use it as a template to shape the other one so they're identical. I glued the two pieces together making sure to align the square end and long edges. Simply rough cut the bottom layer then trim it flush using a hand-held router and a pattern bit.

The final step to complete the base is to attach the casters to the bottom with screws (Figure 1a).

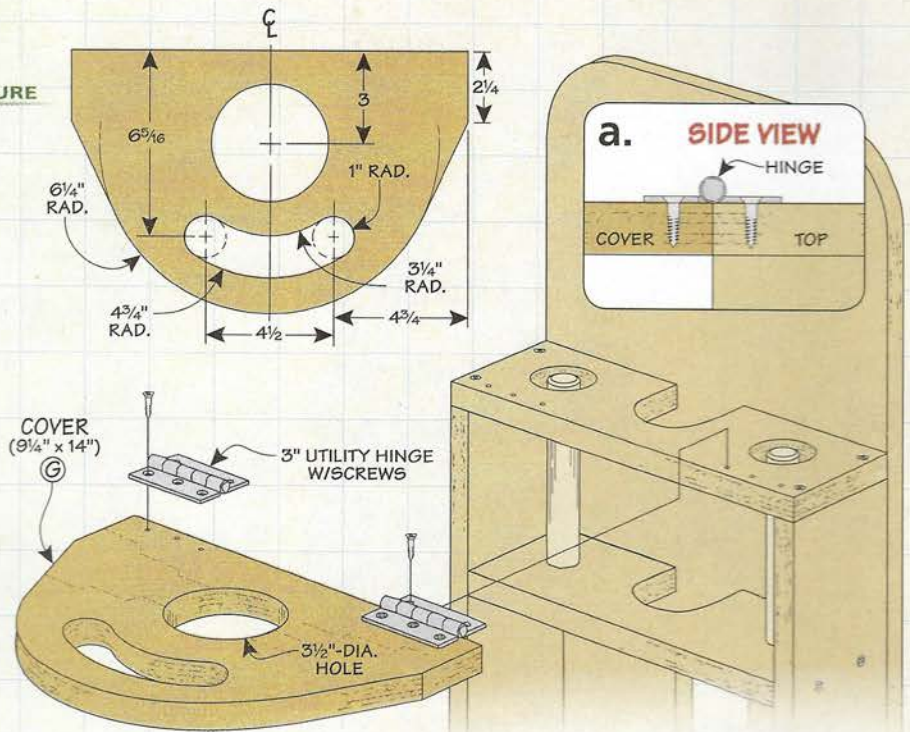
ACCESSORY COLUMN

Located between the two cutouts in the base is the column. As I mentioned before, it provides stability to the cyclone and has racks for vacuum attachments and the hose.

The column is made up of a pair of sides. These are connected by a top and shelf (Figure 2). Both the top and shelf have a cutout on one edge to accept the hose that connects the cyclone to the shop vacuum.

Accessory Rack. These pieces also have a pair of holes to hold

3 FIGURE



the shop vacuum accessories. Just keep in mind that the holes aren't the same size, as shown in Figure 2a. The lower holes accept a length of dowel that supports the hose attachments (Figure 2b).

Back. The next piece to make is the back of the column. It's rounded on the top to soften the corners. There's a slot cut in it to allow the connecting hose to pass

through, as in Figure 2. You can make this slot the same way as you made the cutouts in the base.

Cover. On the front of the column I added a hinged cover. It's rounded to match the shape of the base, as you can see in Figure 3.

The cyclone fits through a large hole in the cover to keep it stable in use. When you need to empty the bucket, simply remove the top hose and flip the lid clear. The cover also has a curved slot that serves as a handle.

Vacuum Hose Holder. The final component to make for the cart is the hose holder that mounts on the back side of the column, as illustrated in Figure 4. The holder consists of six layers of plywood. Here again, I shaped one layer and used it as a template to create the other layers one at a time.

The vacuum hose is held in place by an end piece. The end piece is attached to the hose holder with screws (Figure 4a). The hose rack is screwed to the column through the back, as shown in Figure 4b.

With the cart complete, you can set the vacuum and cyclone in place and thread the connecting hose through the column. Now you're ready to hook it up to your power tools and start collecting dust and chips.

4 FIGURE

