

## How to build a simple 2-bin backyard compost system



Follow along with our simple step-by-step instructions to build yourself a compost bin that will last for years and provide you with convenient food-scrap disposal and rich organic fertilizer for your garden. Remember: Once you're composting, add plenty of carbon-rich material (browns) and turn your compost to help the food scraps decompose.

The design in this plan has been modified to simplify construction and improve the functionality of the bins. This design uses hardware cloth to deter rodents and promote air circulation.

Check out our video that demonstrates building a two-bin compost system on our website:  
<http://www.cvswmd.org/home-composting.html>

### **Site preparation:**

Choose an easily accessible location.

Dig in stone or cement block footings to support your bin and keep it off the ground.

Make sure they are level in both directions.

Choose an untreated, weather resistant wood such as hemlock, cedar, or locust. We purchased lumber and hardware for this project and salvaged old tin roofing for the lid.

Use whatever materials you have and feel free to re-use old materials.

Here's a list of the materials we used for a 3' x 3' x 6' two-bin system.



CENTRAL VERMONT SOLID WASTE MANAGEMENT DISTRICT  
137 BARRE STREET, MONTPELIER, VT 05602

## Materials

### **\*Wood:**

2 2x4s @ 12'  
1 2x4s @ 10'  
1 2x4s @ 8'  
4 1x4s @ 12'  
1 1x6 @ 10'  
2 1x6s @ 12'

### **Hardware:**

(4) Hinges  
(1) large box of 3 ½" decking screws  
(1) Large box of 2" decking screws  
(3) 3' x 3' pieces of ½" or ¼" hardware cloth (wire mesh)  
(2) 6' x 3' pieces of ½" or ¼" hardware cloth  
(1) box of 1" heavy duty staples  
(2) handles (optional)

### **Other Materials:**

(2) 36" x 38" pieces of tin roofing  
(6) stones to help level the bin  
(2) lengths of chain, cable, or rope to hold the lid open

### **Tools:**

Saw	Tin snips
Hammer	Stapler
Impact driver	Tape measure
Drill	Safety gear (gloves, glasses, ear plugs)
Carpenter's square	Level

*\*Rough-sawn wood is generally close to the named dimensions, but may vary in thickness and width. Dimensional lumber from a store is smaller, so make sure to adjust your measurements accordingly. For instance, a rough-sawn 2x4 is about 2"x4" whereas a dimensional 2x4 is really 1 ½"x 3 ½".*



### Material processing:

Cut and assemble whichever parts you can reasonably move. Examples include building the 3' x 3' dividers, the lid, and cutting the other parts to size for onsite assembly. See illustrations next page.

(3) Divider frames: Fig. 1, 2

- (2) 2x4s @ 36"
- (2) 2x4s @ 33"
- (1) 36"x36" piece of 1/2" hardware cloth
- 3 1/2" Screws
- Staples

(1) Lid: Fig. 11, 12

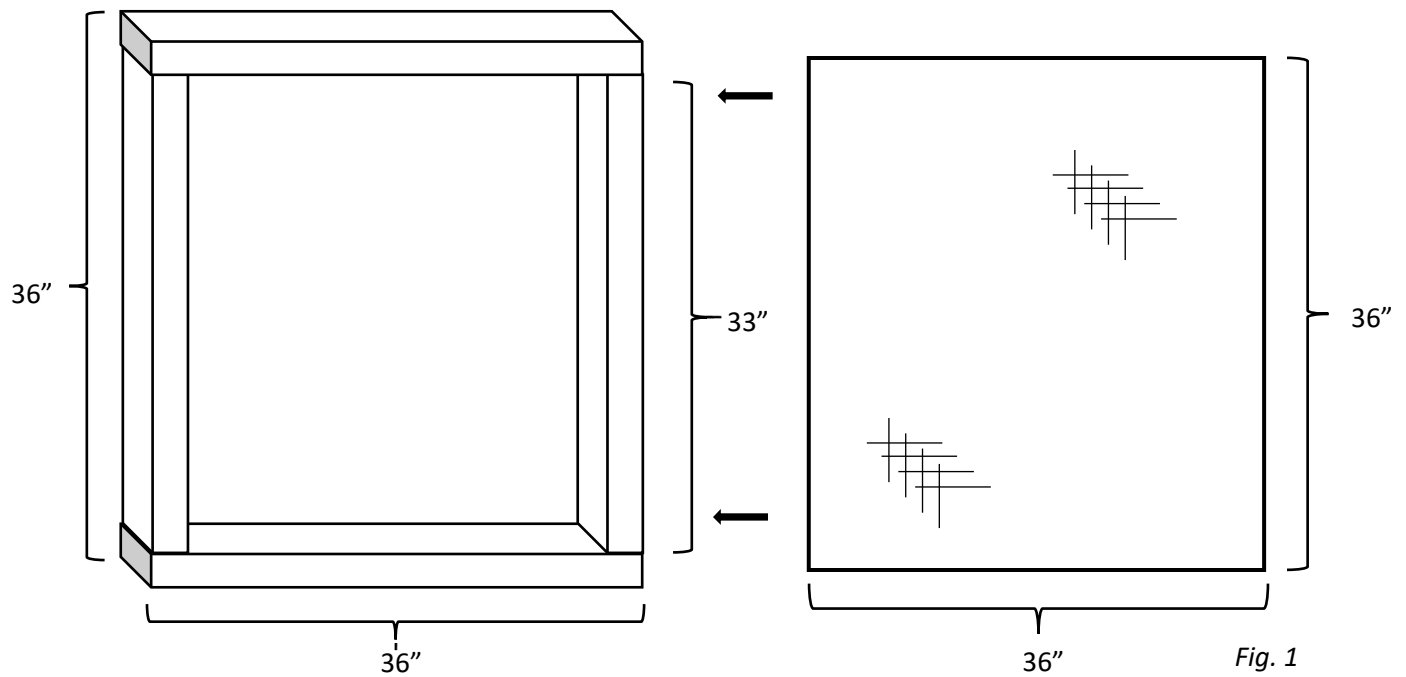
- (2) 1x4s @ 72", (3) 1x4s @ 36"
- (2) 36"x 38" pieces of roofing tin (or other suitable cover material)
- 2" screws
- (4) Hinges
- (2) Handles
- (2) lengths of chain/cable/rope to hold the lid open

### Other pieces to prepare for onsite assembly:

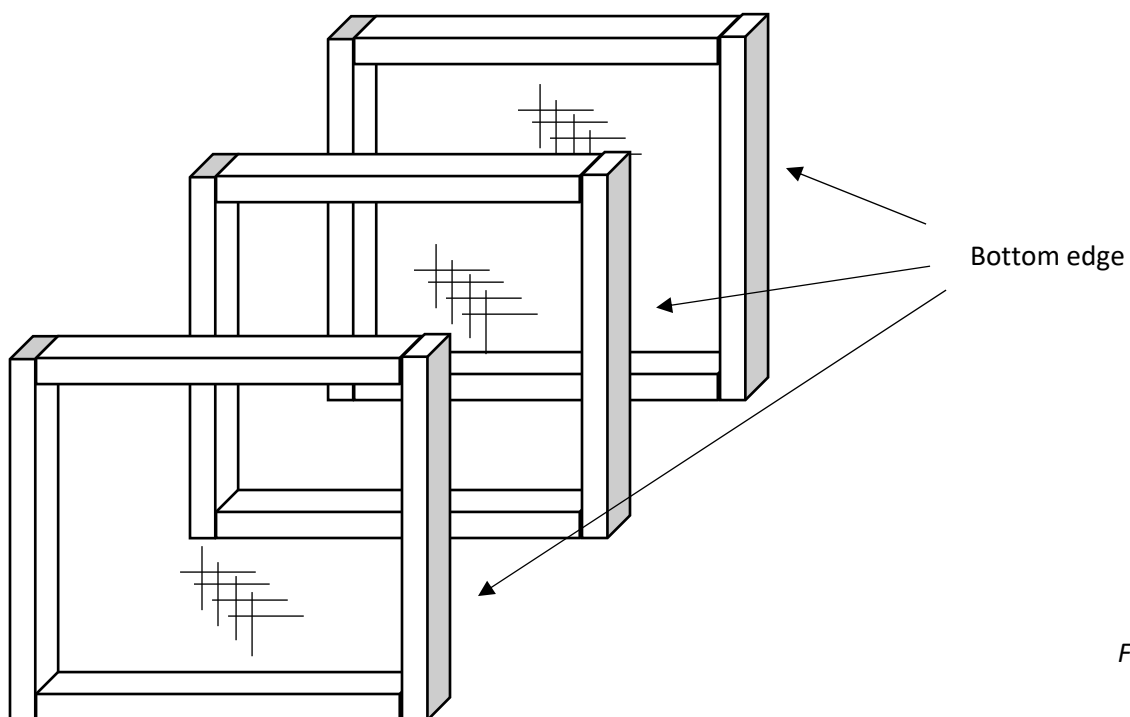
- (12) Horizontal front door slats. *Cut these last to make sure they fit the opening properly.*
  - (10) 1x6s @ 28"
  - (2) 1x4s @ 28" for the top slat of each bin
- Add two screws to each bottom edge to create a 1/4" space for air. Adjust screws as necessary to make the top slat flush with the top of the opening. Fig. 9, 10
- (3) 1x6s @ 37 1/2" for vertical front trim to hold the door slats in. Fig. 7
- (4) 1x4s @ 36" for internal supports for the door slats Fig. 8
- (4) 1x4s @ 72" for horizontal rear bracing and bottom bracing Fig. 3, 4



Assemble three divider frames, then staple hardware cloth across the opening on one side:



Once you have your three divider frames, lay them out with the sides that will end up on the bottom facing out. (see the gray colored sides of the frames in fig. 2)



Use two 72" 1x4s to create the frame for the bottom of the bin. Lay them out so parallel so that the distance between the outside edges is 36".

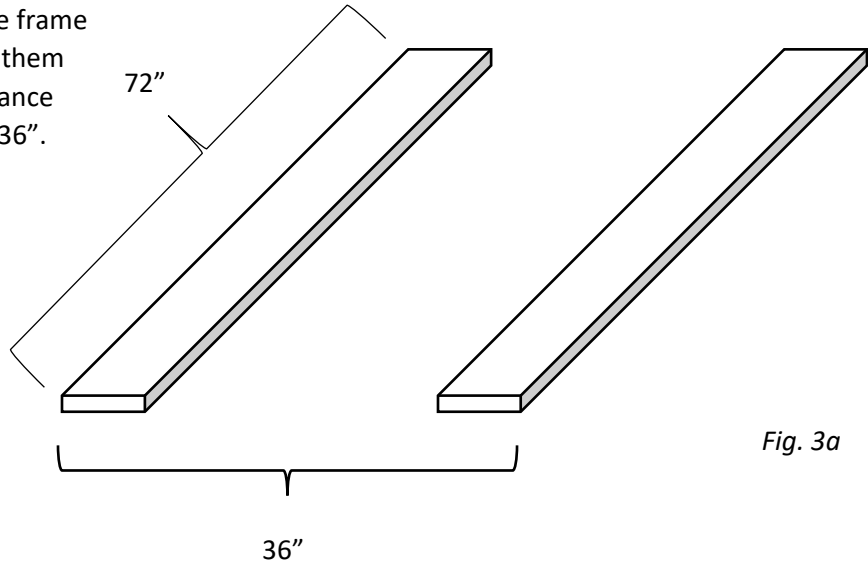


Fig. 3a

Staple a 36" x 72" piece of hardware cloth on to these planks to create the frame for the bottom of the bin.

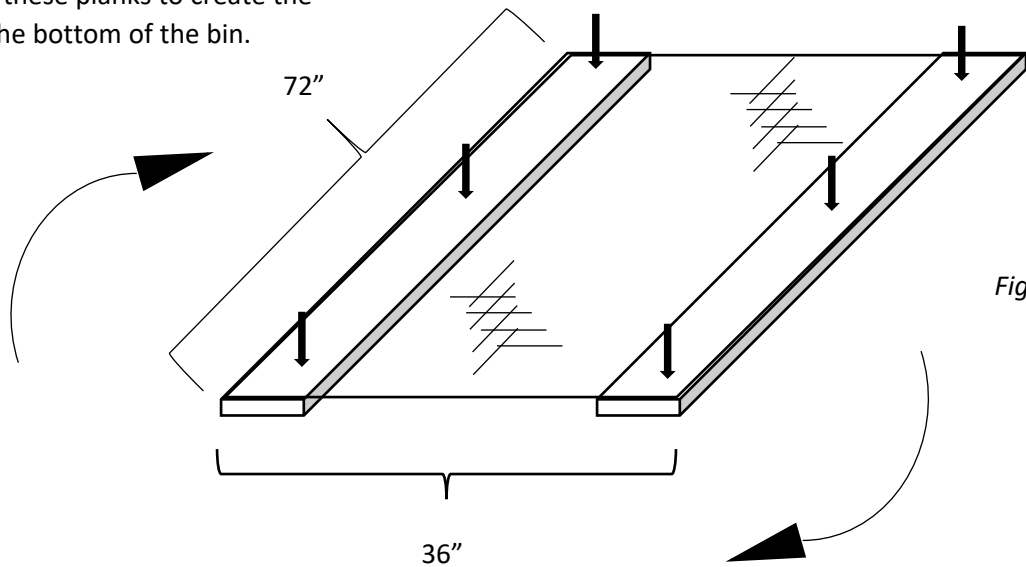


Fig. 3b

Flip this bottom frame over and set it on top of your divider frames before screwing it down. See fig. 4a

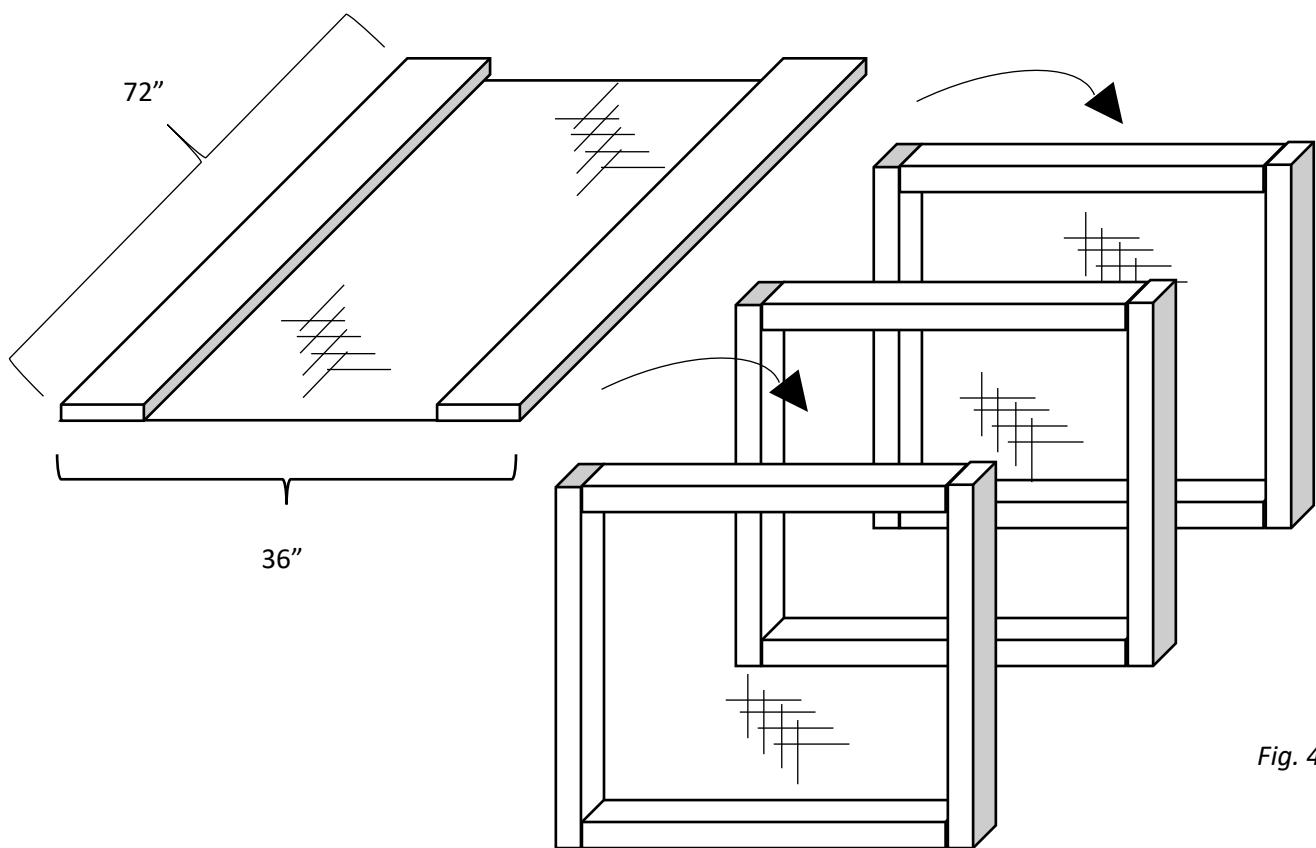
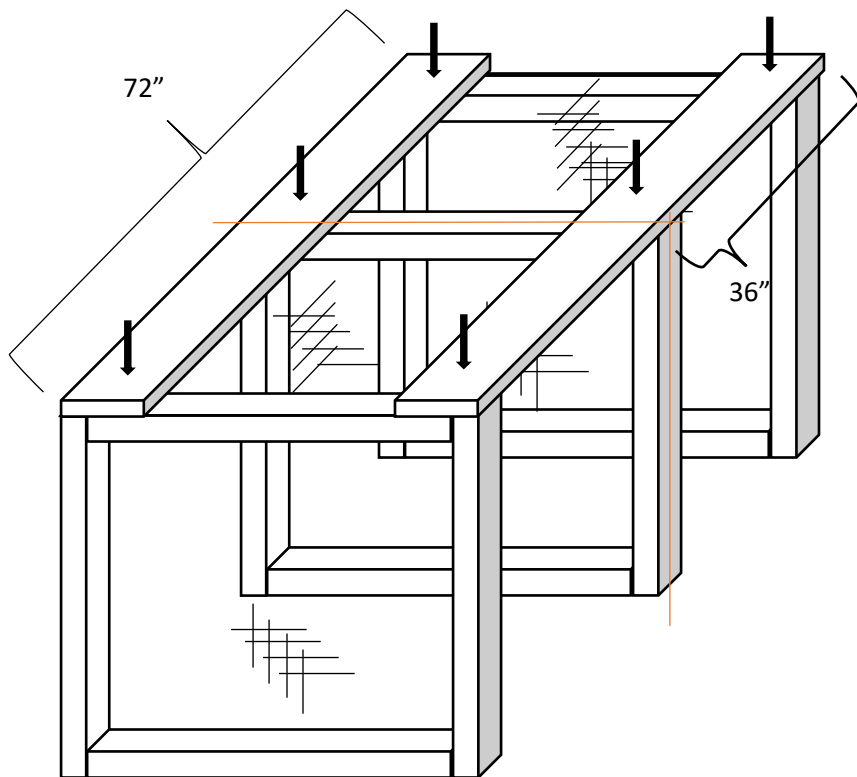


Fig. 4a



Use screws to attach the bottom frame to the divider frames. The center of the center divider should be attached at the center of the bottom frame. This center line will be 36" from the end.

Fig. 4b

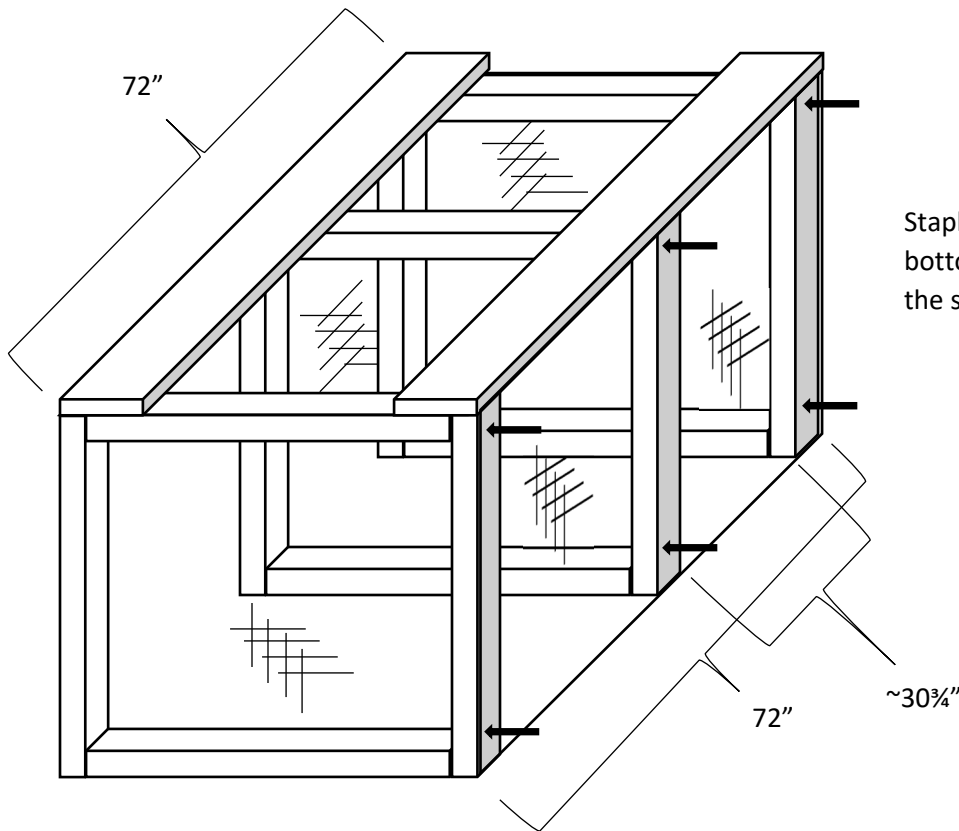
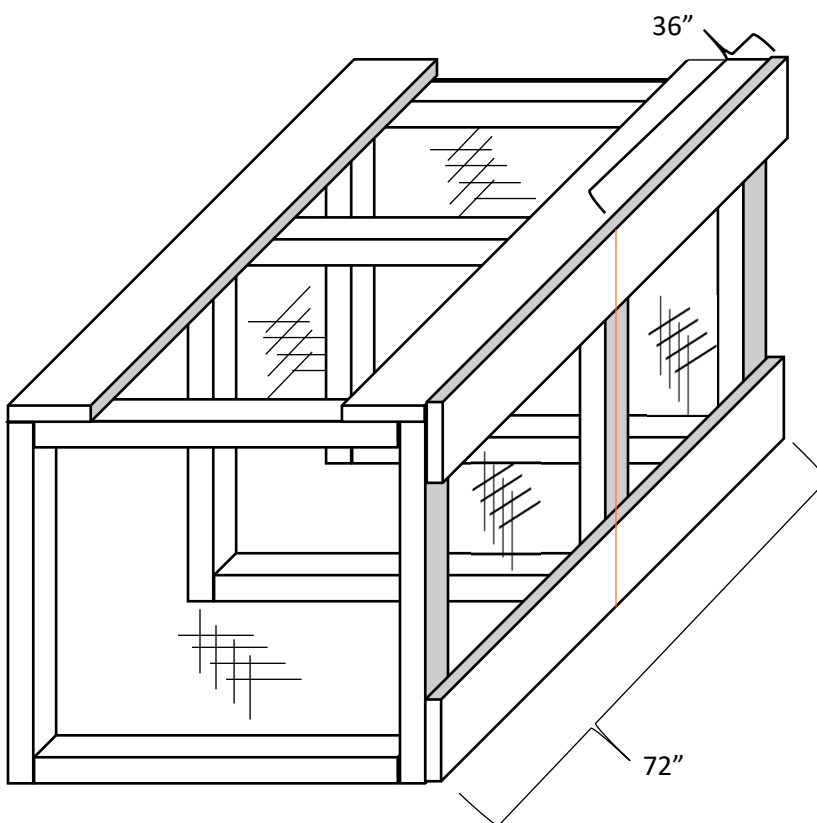


Fig. 5a

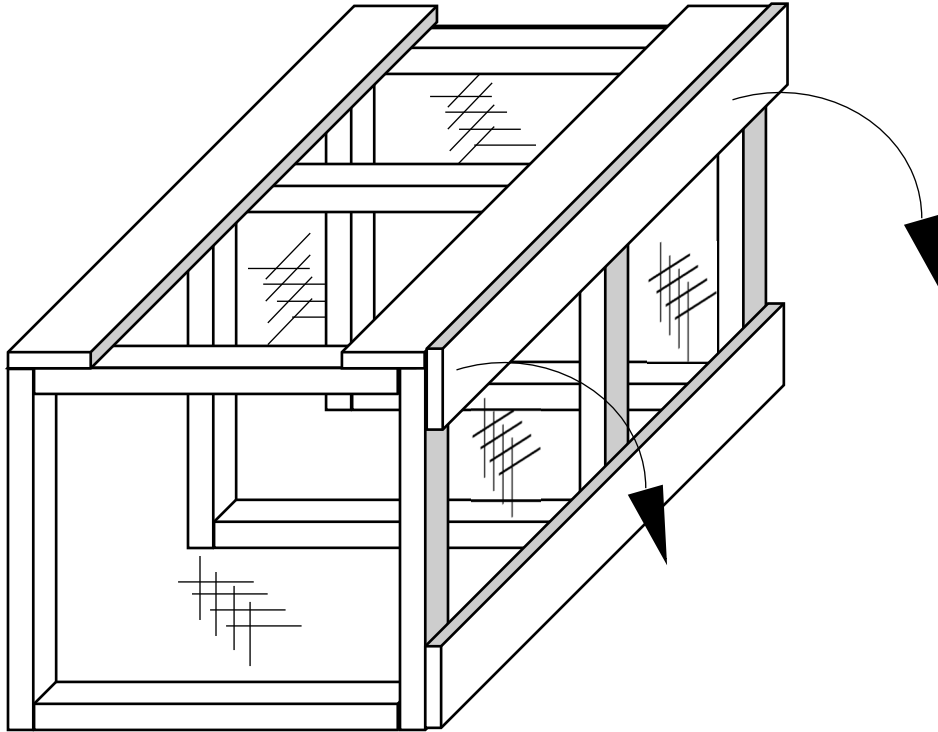


Screw 1x4 planks on over the bottom for bracing. Make sure the bottom of the bin is the same length as the top of the bin end to end (72")

Fig. 4b

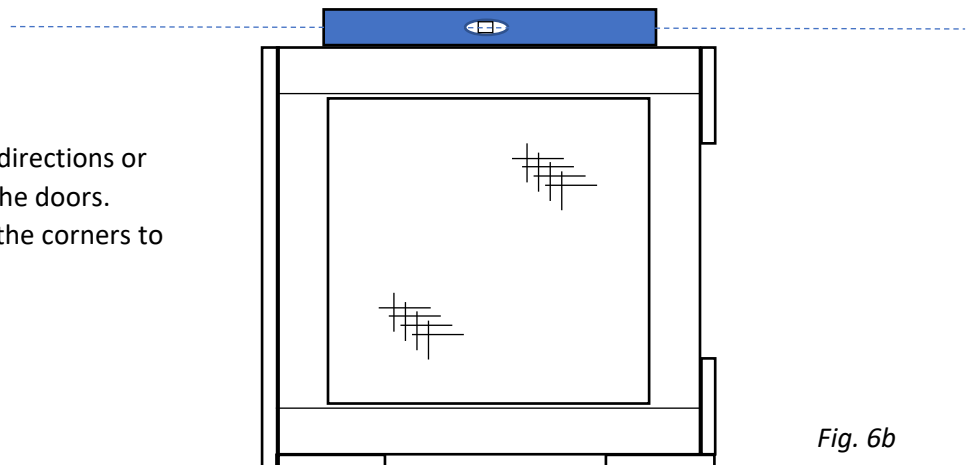
Make sure the center of the center divider lines up with the center of the braces on top and bottom at 36" from each end.

Roll the bin over and set it in place.



*Fig. 6a*

Make sure it is level in both directions or you may have trouble with the doors. You can place stones under the corners to help level if needed.



*Fig. 6b*





Screw on the front trim.  
It should cover the front  
of the dividers from  
bottom to top.

37 1/2"

Fig. 7

About  
1 1/4"

Screw on the internal braces  
to hold the door panels in place.

36"

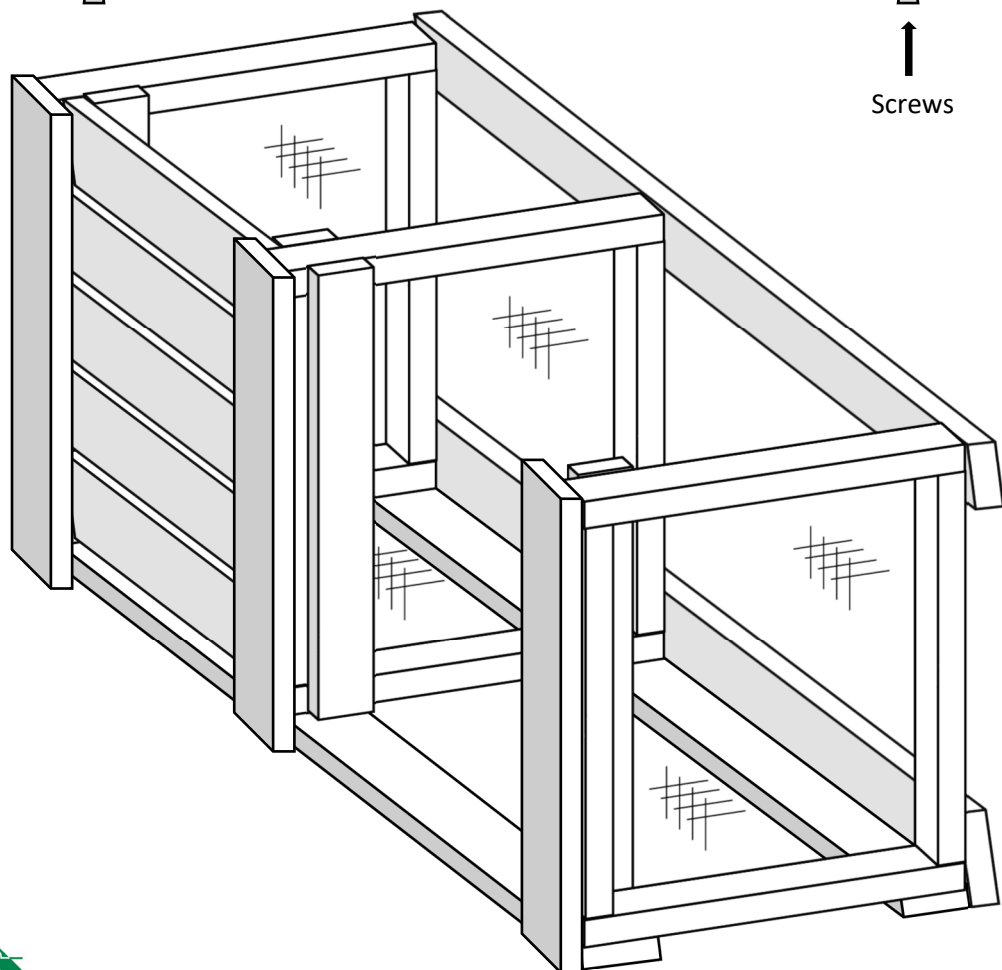
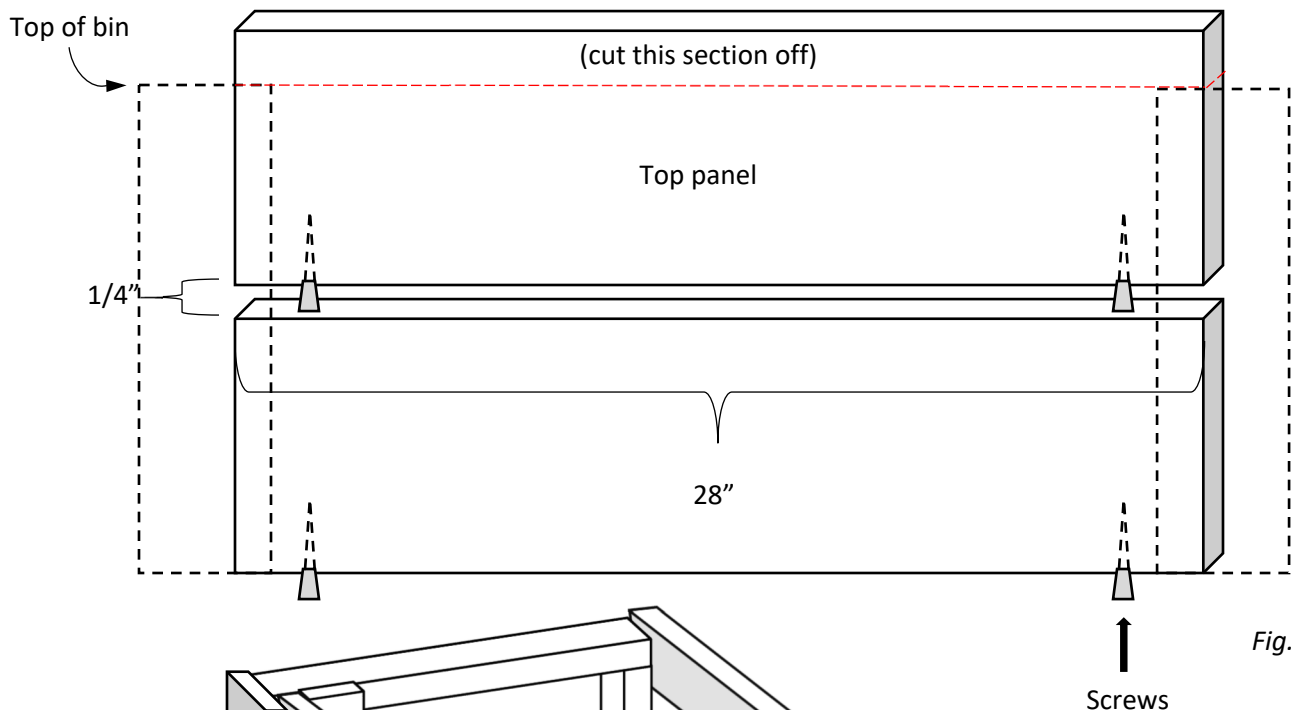
Tip: Use a front panel to  
space the internal  
supports. You should be  
able to place and remove  
the door panels easily.

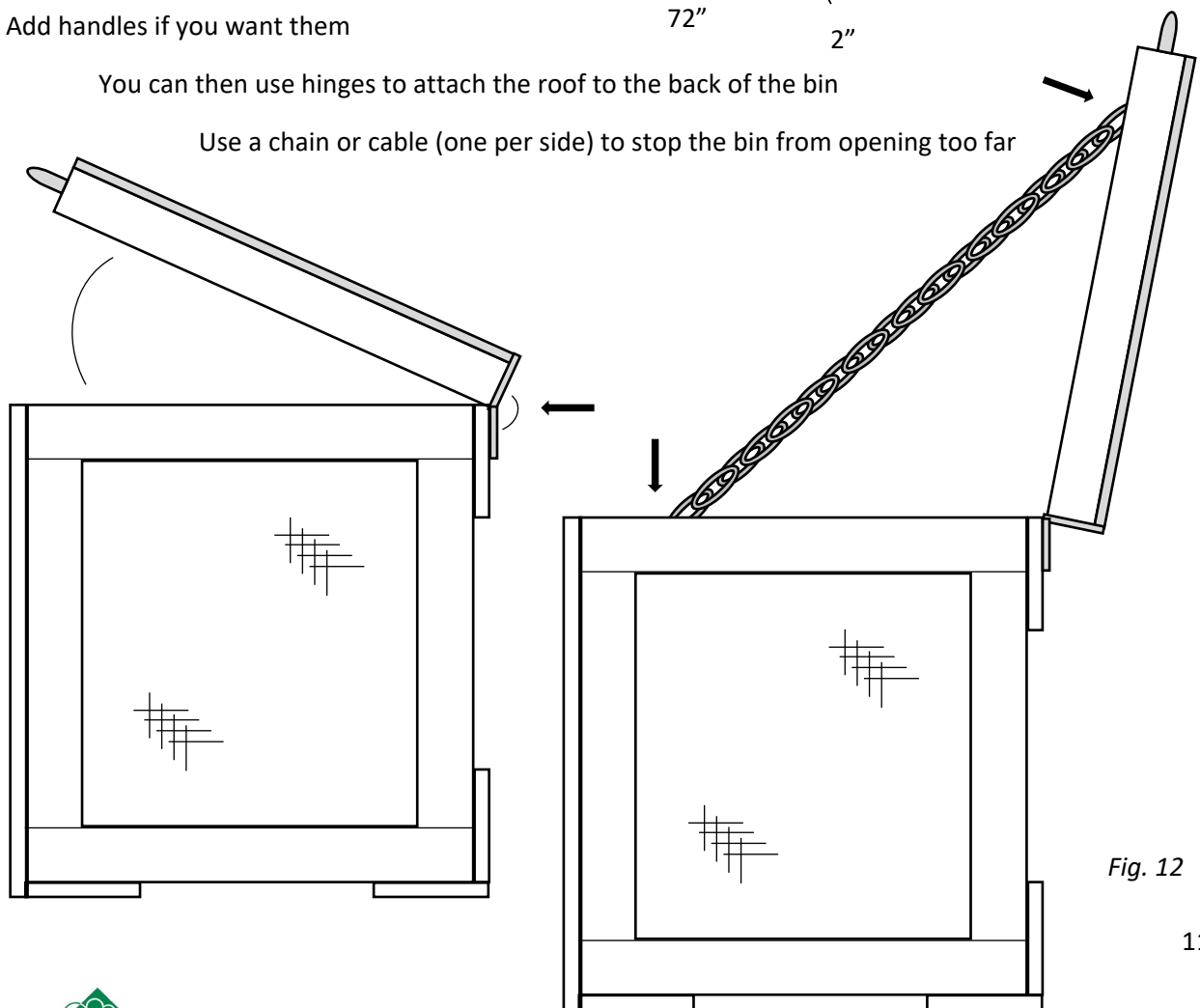
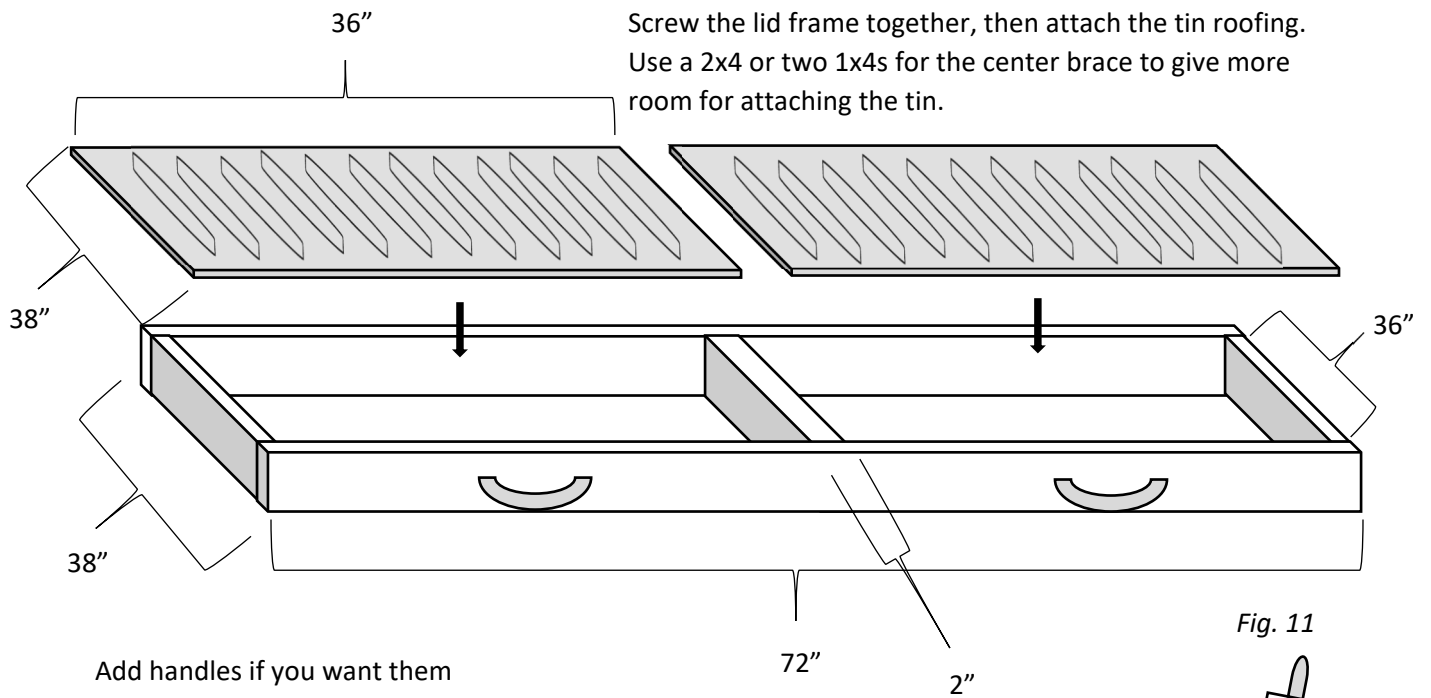
Fig. 8



Use screws to space the front door panels out by  $\frac{1}{4}$ " to create airflow. Adjust as necessary.

Cut the top panel down so that it lines up flush with the top of the bin. See fig. 10 (trim the board above the red dashed line in fig. 9)







This bin was designed and built by Jan Lloyd and Theron Lay-Sleeper for educational purposes. The graphics were created by Theron. We hope you enjoy building it and putting your food scraps to their highest and best use. For more information on backyard composting, and other ways to reduce and manage your waste outputs at home, please visit our website at <http://www.cvswwmd.org/>

