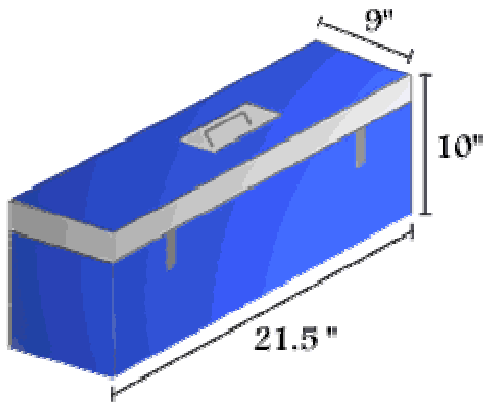


Home constructed Drywasher powered by a Leaf Blower

by Jack "Tin Can Lid" Purcell / TTHN

Total costs will be less than US \$ 100!



Tuff - E Toolbox

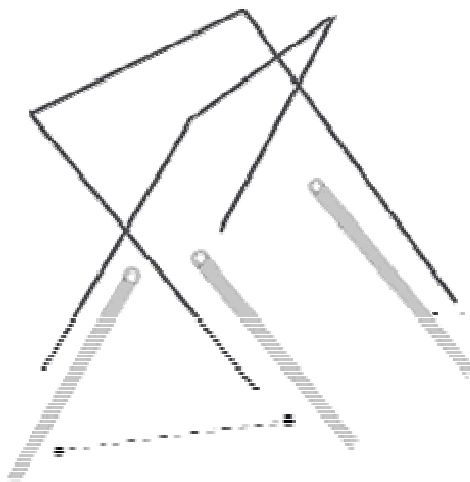
Begin with the vinyl or impact plastic toolbox which can be purchased at e.g. Walmart

The toolbox bottom serves as the air/riffle box. The top serves as the hopper/grizly when inverted.

Step 1: Remove the wire which goes through the hinges on the back side of the box

Save the wire. You will need to clip about 6 inches from each end and bend the end about an inch on each to use as a hinge which can be removed easily when the box is converted to a drywasher.

Cut 4 pieces of pvc pipe about a foot longer than the legs of the tv tray stand ... the pipe should be of a size which fits snugly as a sleeve over the tv tray legs. The pvc will serve to lengthen the legs of the stand. Screw set screws (woodscrews) into the pvc to hold the pipe tightly against the metal legs.



Television Tray stand with PVC Pipe leg extensions

Later you will screw eyebolts into the bottoms of the pvc, front pointed backwards and back leg pointed forward to stretch between the forward and back legs to give stability to the frame. The length of the pvc pipes from the joint between

the bars to the ground will determine the height of the drywasher.



*Bottom of riffle box showing aluminium
1/4 inch bar to hold in cloth*

Bar should be cut as tightly fitting as possible inside the edges of the margin of the tray ... bolts go through the bar, through the cloth and through the angle aluminium which serves as the riffles.

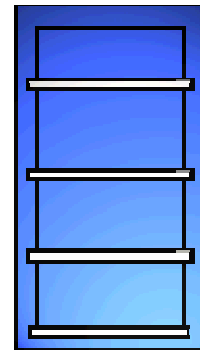
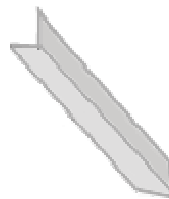
Holes may be drilled through the sides and end and carriage bolts used to pull the sides of the riffle box tightly against the outer box ... wingnuts should be used for easy removal of the box.

Cloth nests between the aluminium bars, on the bottomside of the tray, and the aluminium riffles on the top side ... held together by small machine bolts.

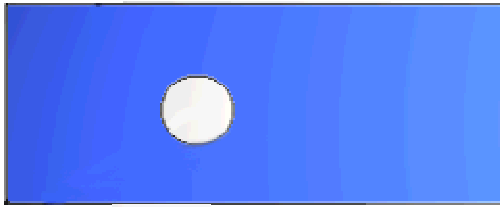
Remove the tray from the toolbox and cut the center out of the tray. This ledge will serve as a base for the riffles and cloth.



Use 1/4 inch aluminium angle moulding for the riffles. Drill through the angle and plastic of the tray to position the riffles. Cut down one end of the tray to the level of the discharge riffle.

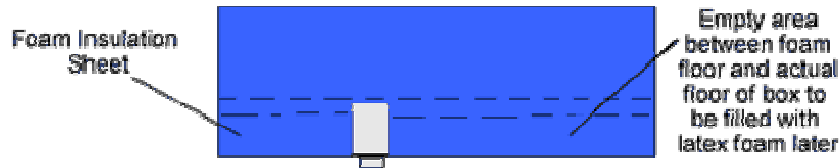


TOP of Riffle Box

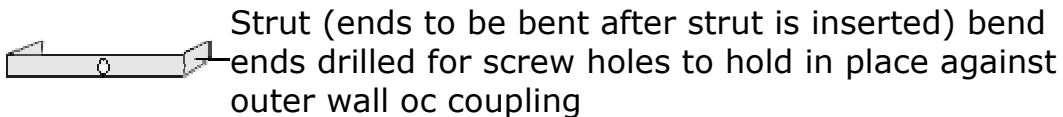
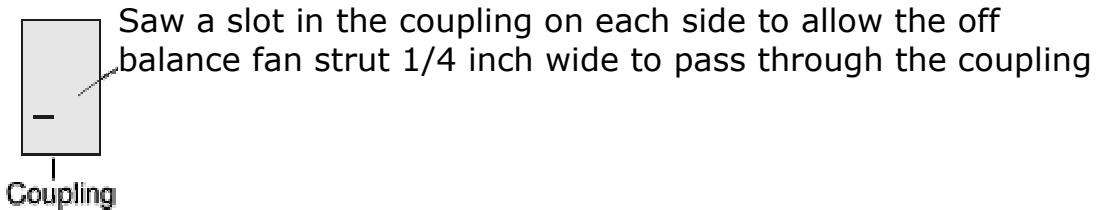


Cut a 2 3/4 inch hole in the bottom of the toolbox in the approximate position indicated. This hole will serve as the inlet hole for the air. The hole should allow a 2 1/2 inch ID pvc long coupling to fit snugly inside.

Cutaway view of side of toolbox (airbox) bottom

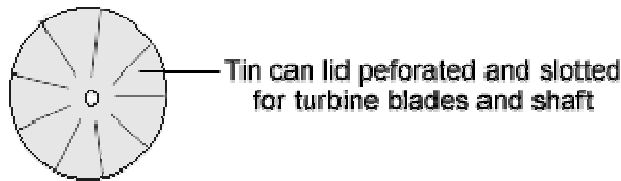


Cut 1" insulating foam (sheet) the size of the inside of the box. Cut a hole 2 3/4 inch diameter in the piece to allow the PVC long coupling.

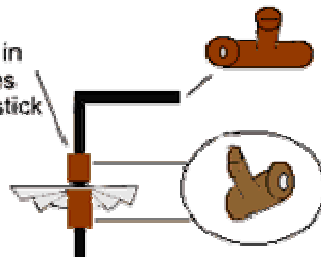


Fan Disk

Cut tin can lid with slots and drill hole the size of shaft for shaft hole. Bend slot edges to make turbine prop.



Fanshaft ... fanable disk is held in place by two flanges made from 1" broomstick

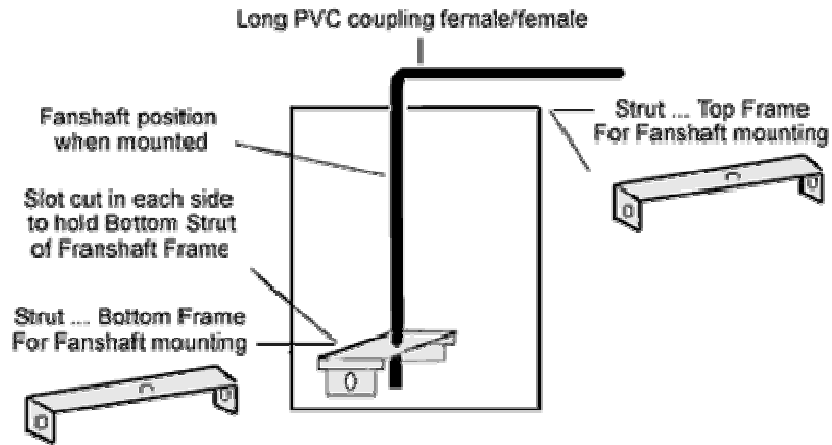


Weight for off-balance Fanshaft ... pour 1 1/2 inch long 1/2 copper tubing full of molten lead. When cool drill hole through center the size of shaft ... drill hole for set screw through side to shaft hole

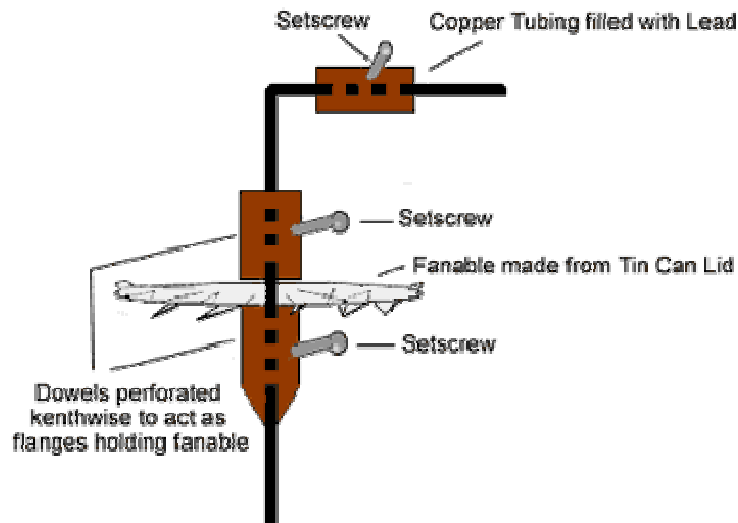
Cut two pieces of 1" dowel of broomstick and drill center shaft hole ... set screw inside to hold in place. Fanable is sandwiched between two pieces of dowel with setscrews hold blade in place

and prevent free travel on shaft.

Shaft Mounting

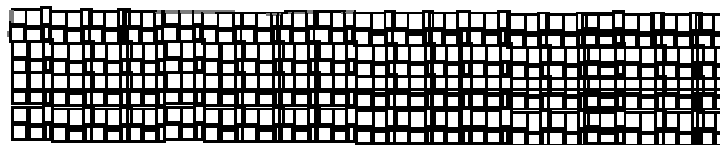


Fanshaft Detail

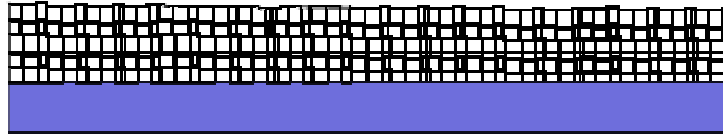


Two ring washers rest below the nacelle end of the dowel at the lower end against frame struts, and above the top dowel to assure shaft freedom when air pushes top dowel against top frame member.

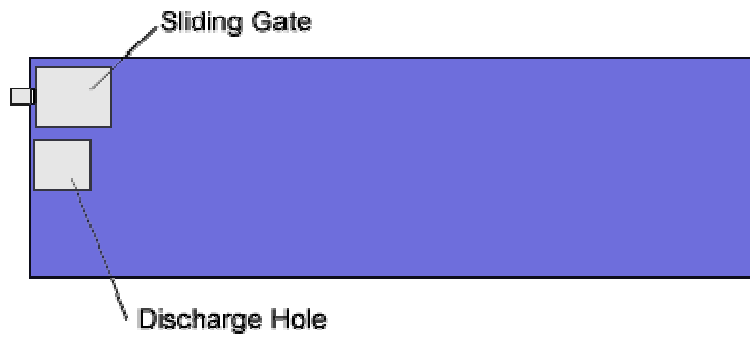
Top of Hopper



1/4 inch mesh hardware cloth grizzly



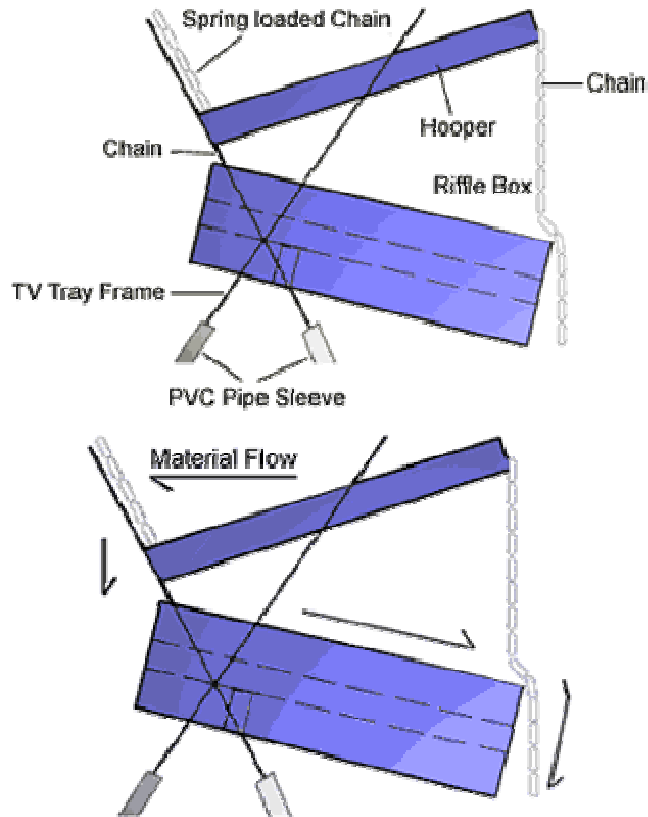
Side view - Top of box inverted to make hoper



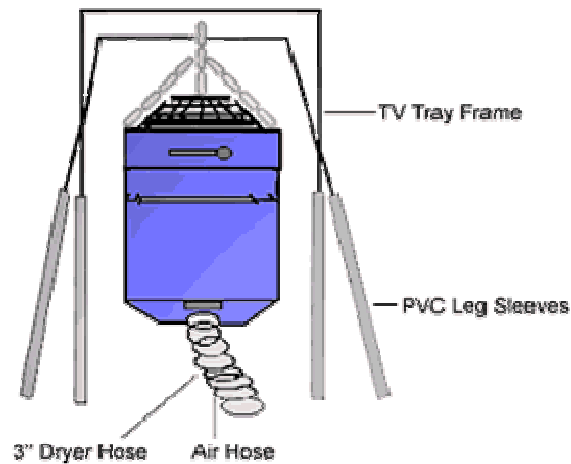
Top view - Indicating sleeding sheet, metal gate and discharge hole

Improvise a bit here ... I'm not going to try to explain how I did it.

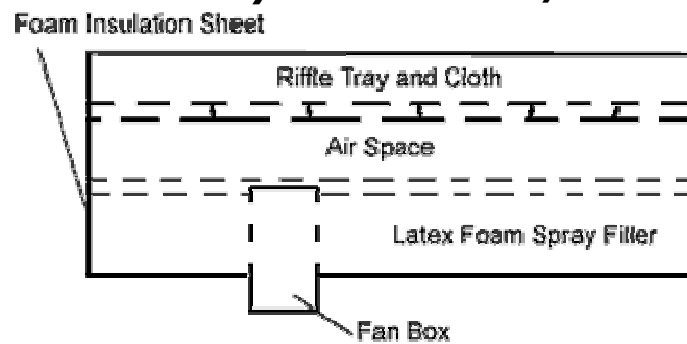
Hanging Configuration of Drywasher to Frame



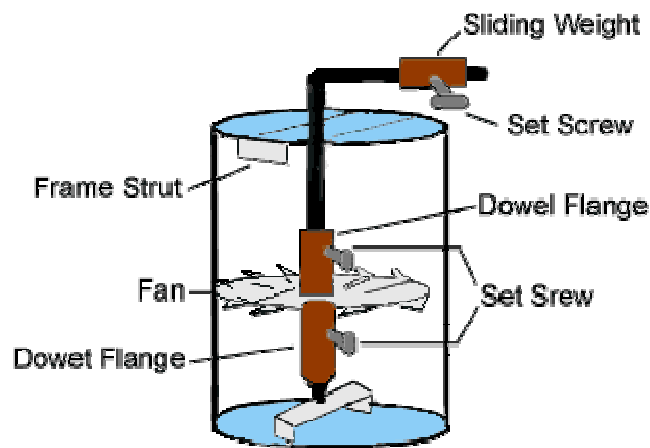
Front View



Side cutaway view of riffle/air box



Off balance fan box cutaway



Lower frame strut should be positioned higher than shown so upward travel of fan stops at upper strut when air pressure is applied, and shaft at bottom remains in receiver hole in bottom

strut.