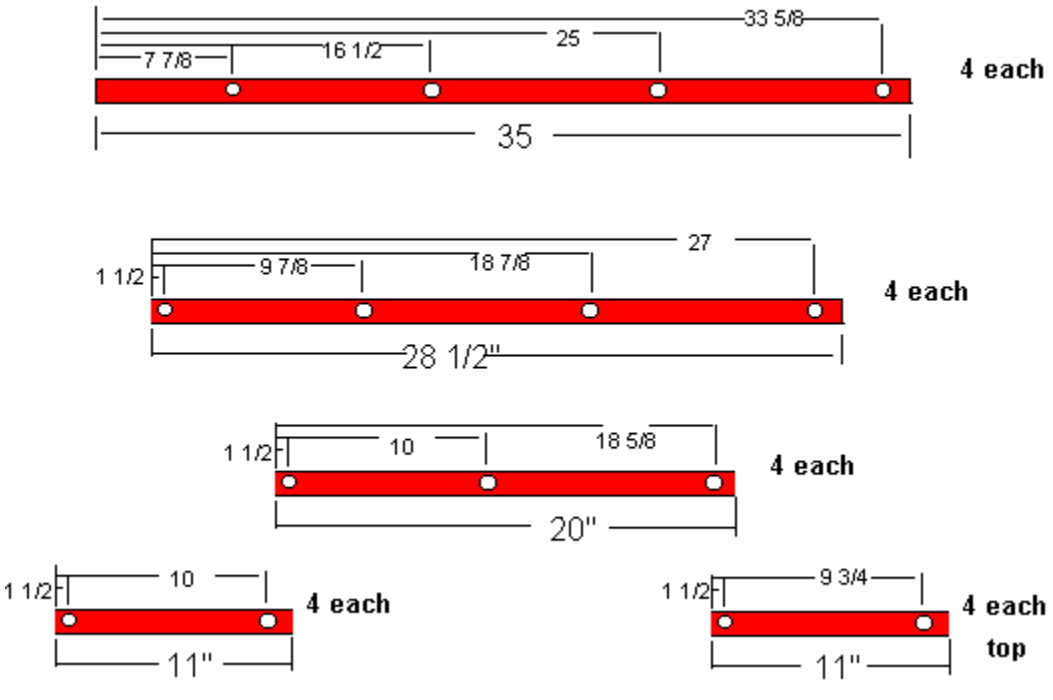
building a drying rack

The perfectly green answer to today's high energy costs. A drying rack that is big enough to handle a large load.

This drying rack is a simple enough item to make. Inexpensive and straight forward, it can be made relatively quickly and easily. The plans detailed here are for a rather large one. This is the good kind for the basement, out on the deck, or back of the garage.

Ok, the rack is made of 20 support pieces of various sizes and 17 dowels.
The dowels are each 3 feet long (the standard length when you buy them) and 3/8 in diameter and the only hard part of this project is taking the ends down to 1/4 inch in diameter.
The side folding support pieces should be made of a hardwood like oak, since they are relatively thin. They should be 1/2 thick and 3/4 wide. This way you can rip 1/2 strips off of a piece of 3/4 inch wood. If your wood is thicker than 3/4 so much the better. 7/8 to 1 inch would be better still, but since most wood will be 3/4 thick.. that is what we will stick with.

Ok, cut 4 pieces of oak 35 inches long (by 1/2 by 3/4)
cut 4 pieces 28 1/2 inches long
cut 4 pieces 20 inches long
cut 8 pieces 11 inches long



Next drill 1/4 in holes in them to accept the dowels.
Start with the 35 inch long piece, drill holes measuring from the bottom:

at 7 7/8"
at 16 1/2"
at 25"
and at 33 5/8"
All holes measured to the center of the hole from the bottom of the strip.

Next drill the 1/4 inch holes in the 28 1/2 inch pieces:
at 1 1/2"
at 9 7/8"
at 18 7/8"
and at 27"
again measured from the bottom to the center of each hole.

On the 20 inch pieces
at 1 1/2"
at 10"
and at 18 5/8"

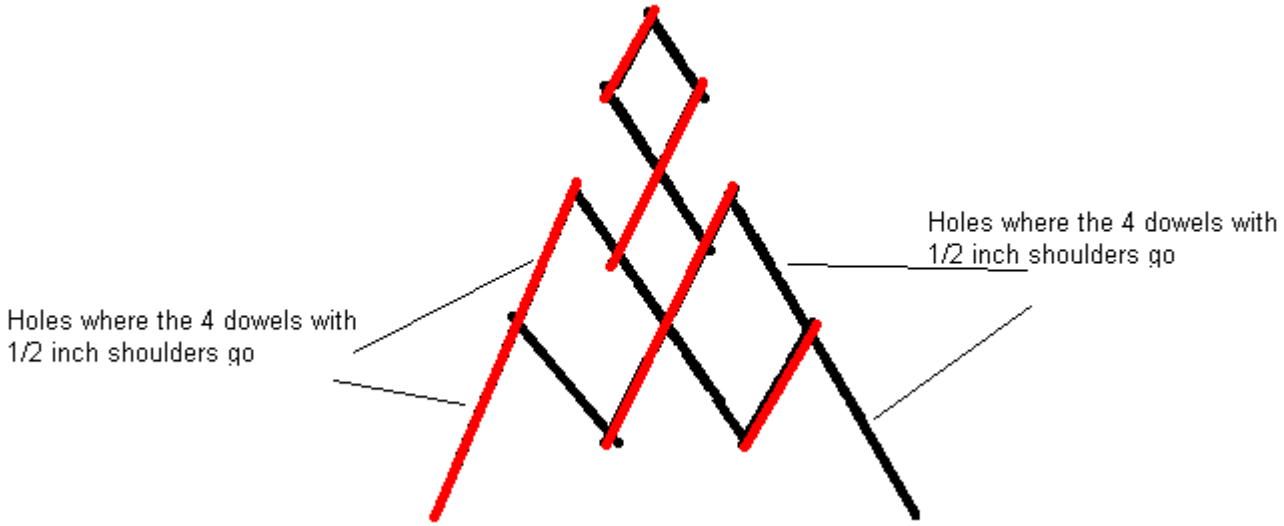
On 4 of the 11 inch pieces:
at 1 1/2"
and at 10"
These go on the bottom of the rack

And finally on the last four 11 inch pieces:
at 1 1/2"
and at 9 3/4"
These are the top part of the rack.

Now, cut and round off one inch on both ends of the dowels so the last inch is at 1/4 inch diameter, except for 4 of the dowels.. on these four.. just cut the last 1/2 inch instead. I haven't found an easier way of doing this than cutting it with a knife to a shoulder cut. Slicing away a small amount of material all the way around and around, and then smoothing it with some sand paper. What you are looking for is a fairly square shoulder where the dowel goes from 1/4 inch to 3/8 to keep it from sticking in the 1/4 inch holes, and smooth enough that it turns ok inside the 1/4 inch holes in the inside support piece.

Ready to put this all together? You have to sort of study the pictures to get an idea.
You will want to put all the pieces that are angled in the same direction on the outside on one side of the rack Shown in red below.. and on the inside of the other side of the rack. So looking at this side, all the dowels will be glued into the red pieces, and pass through the black pieces, unglued.
You can lay the pieces colored red in the picture on the floor, put a dab of glue in the holes, and then lay the black pieces on top of them. Then insert the dowels. The four dowels that have the shoulder cut back only 1/2 inch go in the bottom and third holes of the two bottom pieces.

With it still laying there with the 17 dowels facing up in the air.. place the pieces on to the dowels which are angled the same direction, as the red on the floor.. no glue this time.. and then the black pieces.. with glue this time.



After the glue dries, it is a good idea to drive a very small brad into each of the end pieces to help the glue keep the dowel in place. Also at this time you will notice there are some dowels that didn't get glue.. the four in the bottom section. Glue and nail those.

Here is a tip to help you keep from gluing the moving ones.. use wax paper between the parts to keep the glue from getting on the other part. Use only a dab of glue in each of the glued holes, since you will follow up with a brad anyway. If you coat the parts you don't want the glue to stick to with wax, that will help too.