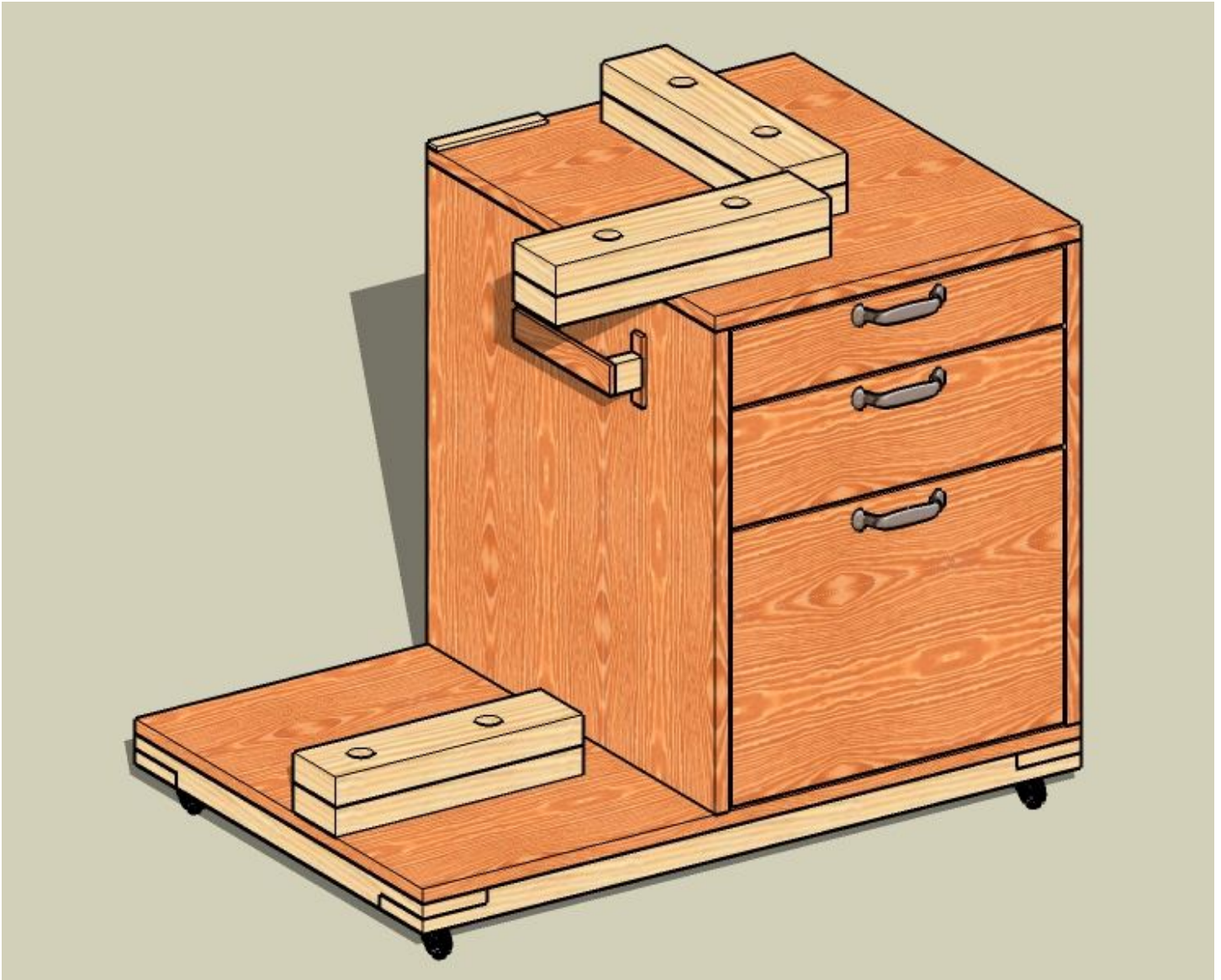


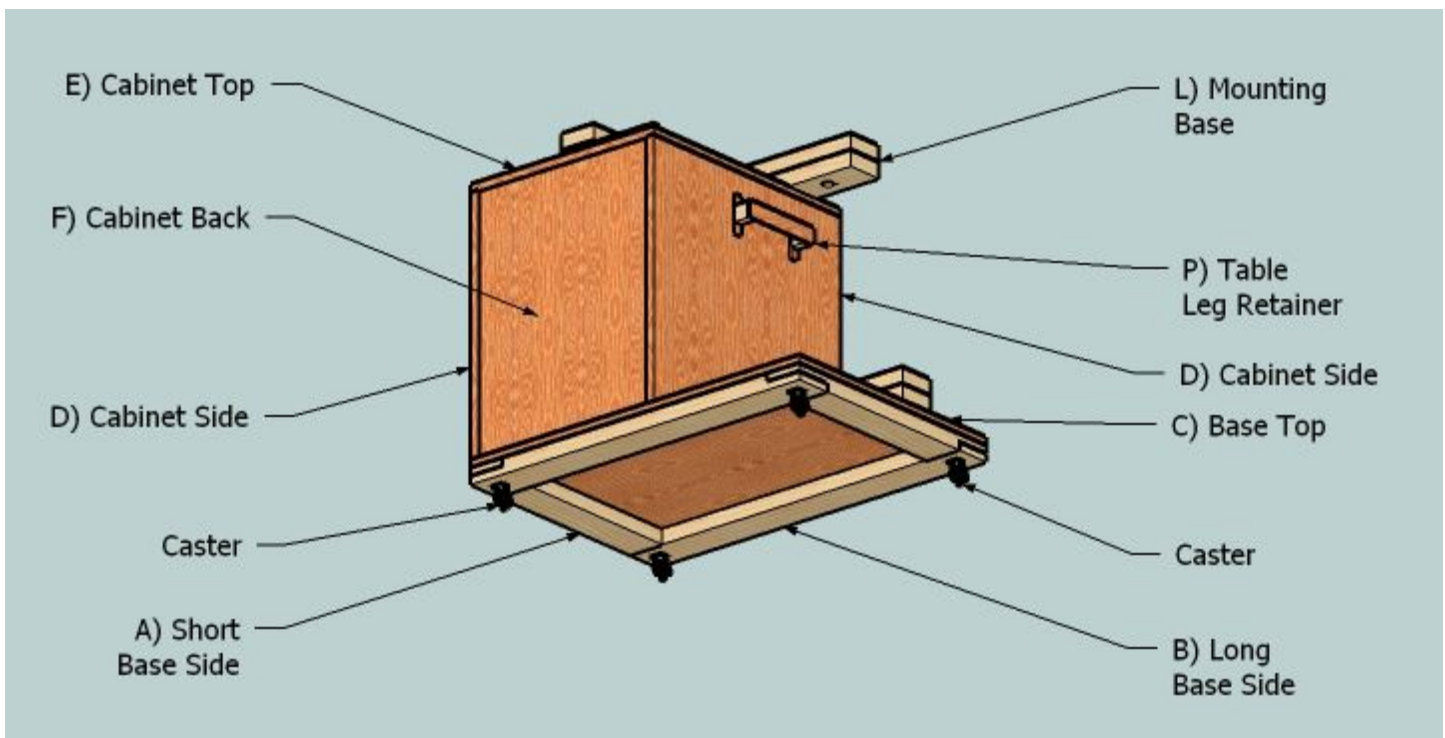
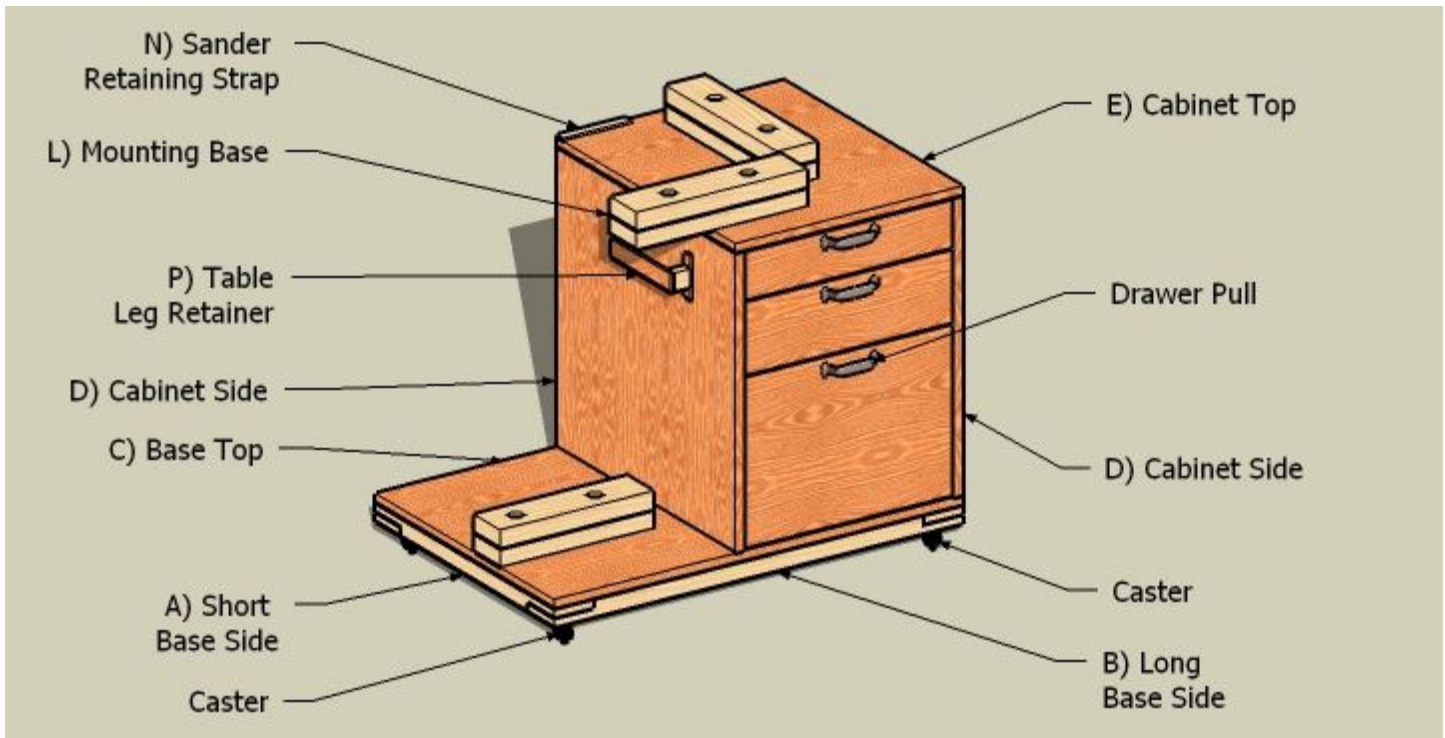
Compact SPT Cart for ShopSmith Construction Plans



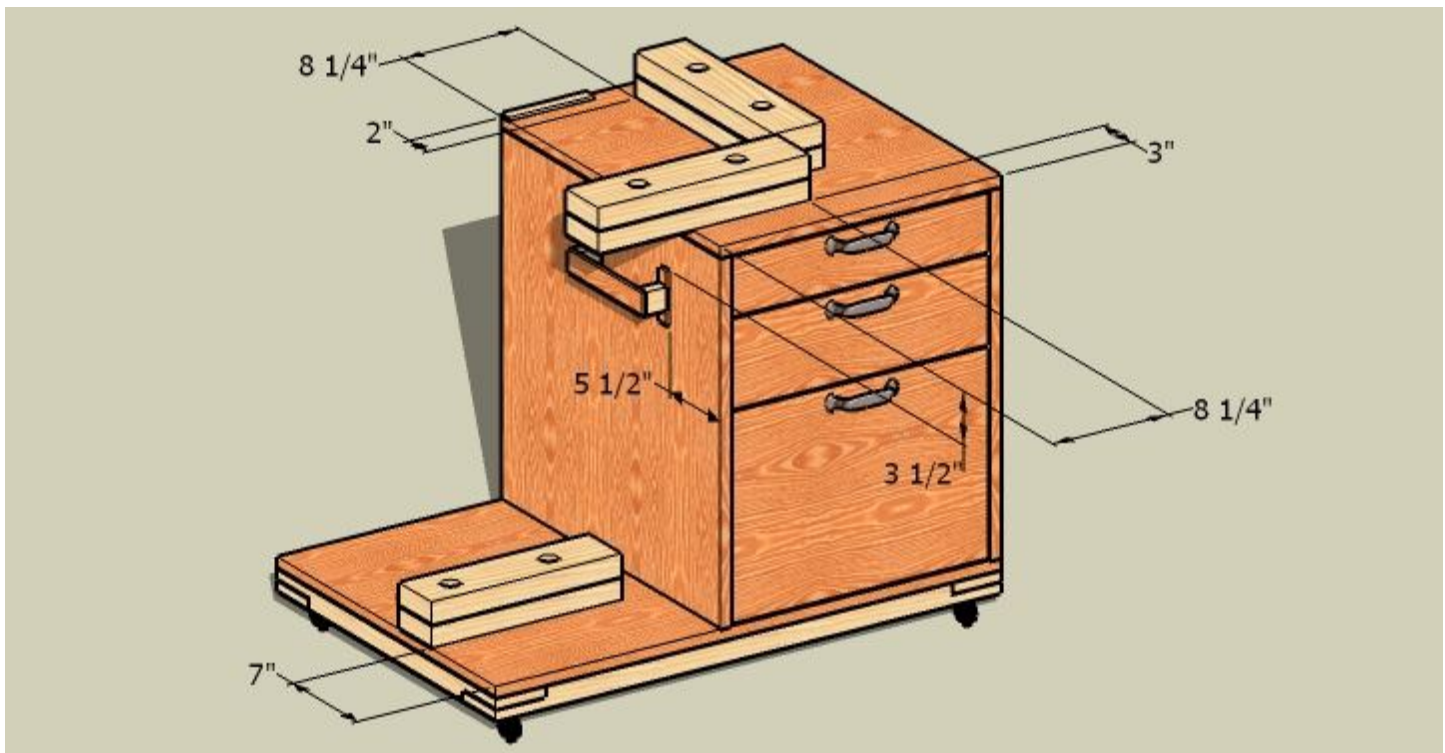
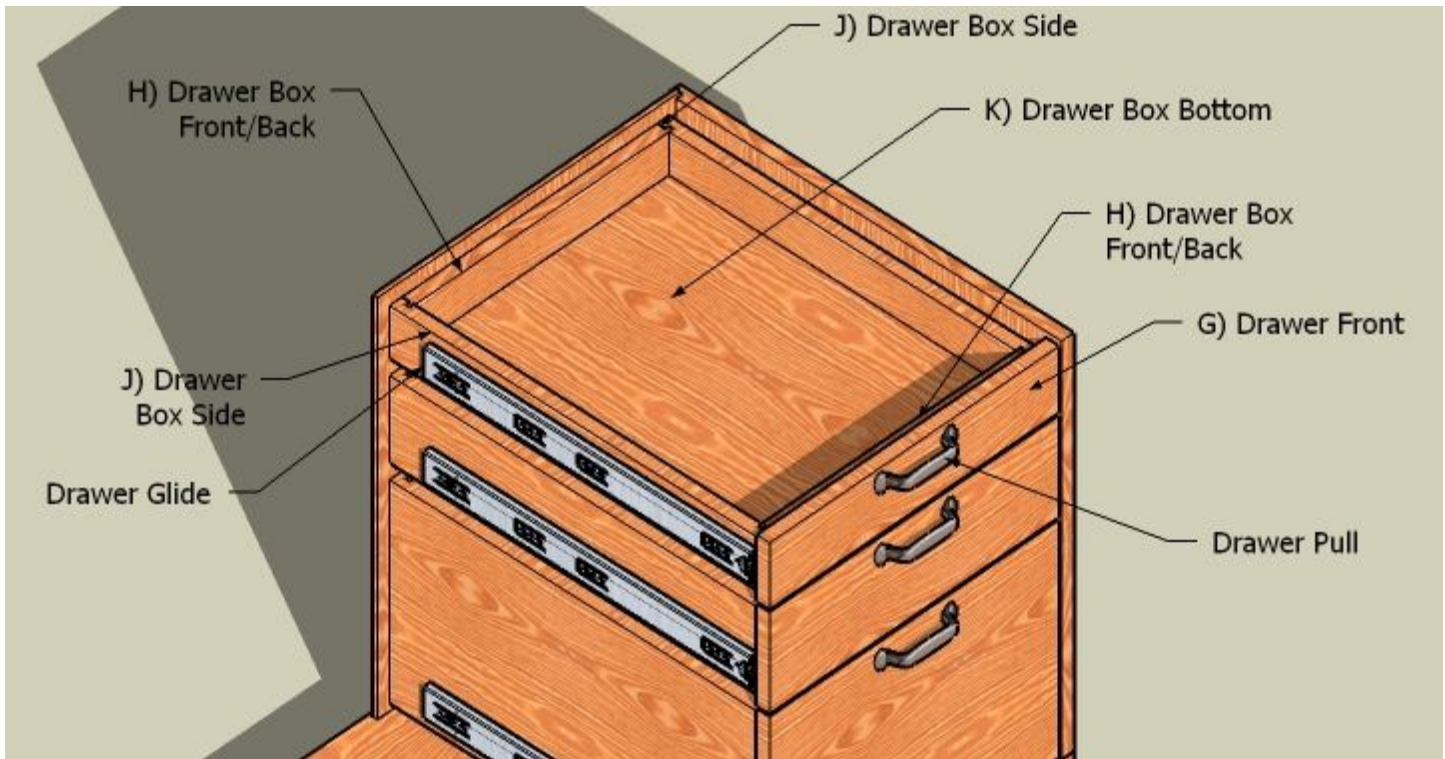
A very cleverly designed storage cart to hold ShopSmith Special Purpose Tools (SPT) between uses. Includes 3 drawers for miscellaneous storage, and specific mounts to hold a Strip Sander, Belt Sander, Jointer, Bandsaw and a set of Table Telescoping Support Legs. All in a compact 2x3' footprint. Special Thanks go to Art (Pennview) on the ShopSmith forums for the original design of this cart.

Compact SPT Cart for ShopSmith

Parts Identification



Compact SPT Cart for ShopSmith Parts Identification (Cont)



Compact SPT Cart for ShopSmith

Bill Of Materials

Description	Qty	Length	Width	Thickness	Material
A) Short Base Side	2	23 3/4"	3 1/2"	1 1/2"	Pine (2x4)
B) Long Base Side	2	36"	3 1/2"	1 1/2"	Pine (2x4)
C) Base Top	1	36"	23 3/4"	3/4"	Plywood
D) Cabinet Side	2	24"	23 3/4"	3/4"	Plywood
E) Cabinet Top	1	23 3/4"	20"	3/4"	Plywood
F) Cabinet Back	1	24 1/2"	19"	1/4"	Plywood
G) Drawer Front	1	18 1/8"	13 5/8"	3/4"	Plywood
G) Drawer Front	1	18 1/8"	5 13/16"	3/4"	Plywood
G) Drawer Front	1	18 1/8"	3 13/16"	3/4"	Plywood
H) Drawer Box Front/Back	2	16 1/2"	12 13/16"	3/4"	Plywood
H) Drawer Box Front/Back	2	16 1/2"	5"	3/4"	Plywood
H) Drawer Box Front/Back	2	16 1/2"	3"	3/4"	Plywood
J) Drawer Box Side	2	22 1/2"	12 13/16"	3/4"	Plywood
J) Drawer Box Side	2	22 1/2"	5"	3/4"	Plywood
J) Drawer Box Side	2	22 1/2"	3"	3/4"	Plywood
K) Drawer Box Bottom	3	21 1/2"	16 1/2"	1/4"	Plywood
L) Mounting Base	4	15"	3 1/2"	1 1/2"	Pine (2x4)
L) Mounting Base	2	13 1/2"	3 1/2"	1 1/2"	Pine (2x4)
N) Sander Retaining Strap	1	6"	3/4"	1/4"	Pine (2x4)
P) Table Leg Retainer	2	1 1/2"	1 1/2"	3/4"	Pine (2x4)
P) Table Leg Retainer	1	8"	1 1/2"	1/4"	Plywood
P) Table Leg Retainer	2	3 1/2"	3/4"	1/4"	Plywood
Drawer Glide	6	22"		1/2"	
Drawer Handle	3				
Caster Wheels	4	2" Dia.			

Cutting Diagram - Boards

Pine 2 x 4 (99.75%)

B) Long Base Side	B) Long Base Side	A) Short Base Side
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Pine 2 x 4 (90.0%)

A) Short Base Side	L) Mounting Base	L) Mounting Base	L) Mounting Base	L) Mounting Base	N) Sander Retaining Strap	P) Table Leg Retainer	P) Table Leg Retainer
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Pine 2 x 4" (28.25%)

L) Mounting Base	L) Mounting Base	
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Compact SPT Cart for ShopSmith

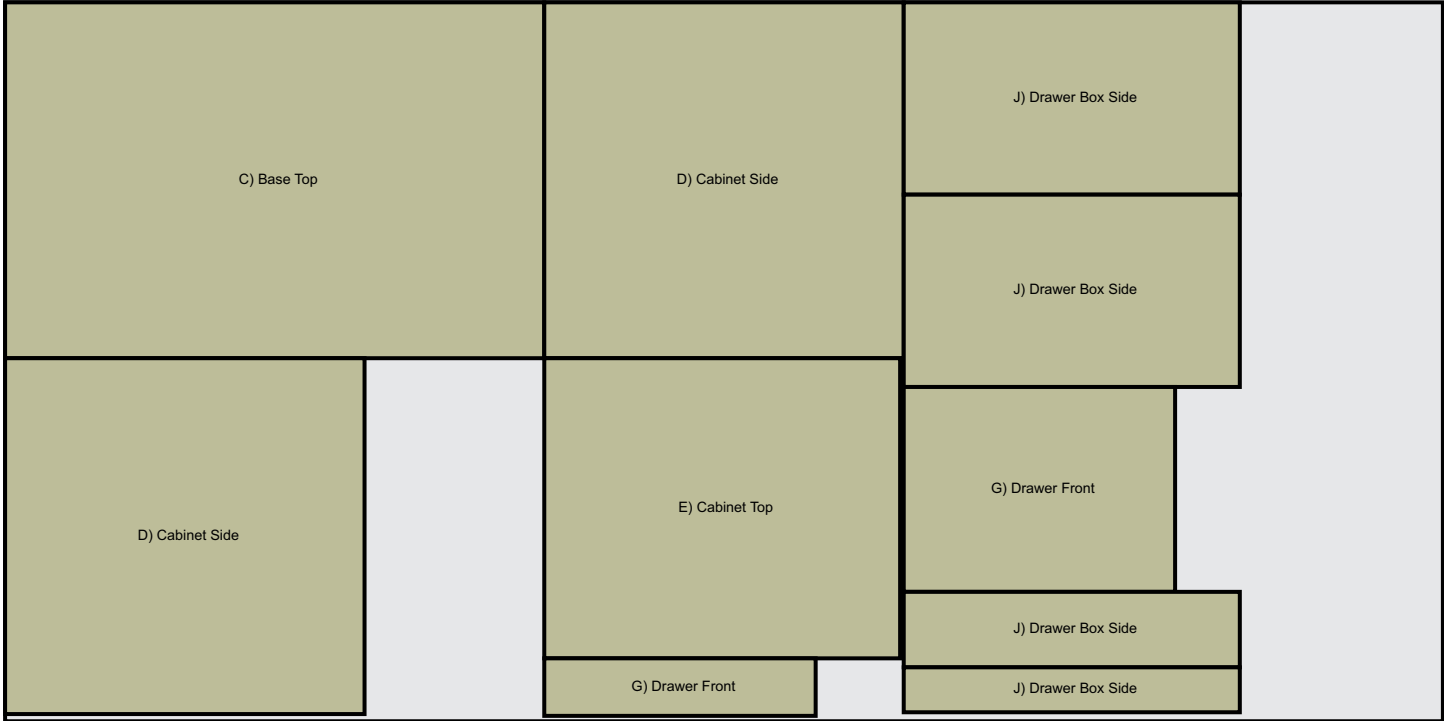
Cutting Diagram (Cont)

Cutting Diagram - Sheets

48" x 96", 1/4" Plywood (33.44%)



48" x 96", 3/4" Plywood (76.96%)

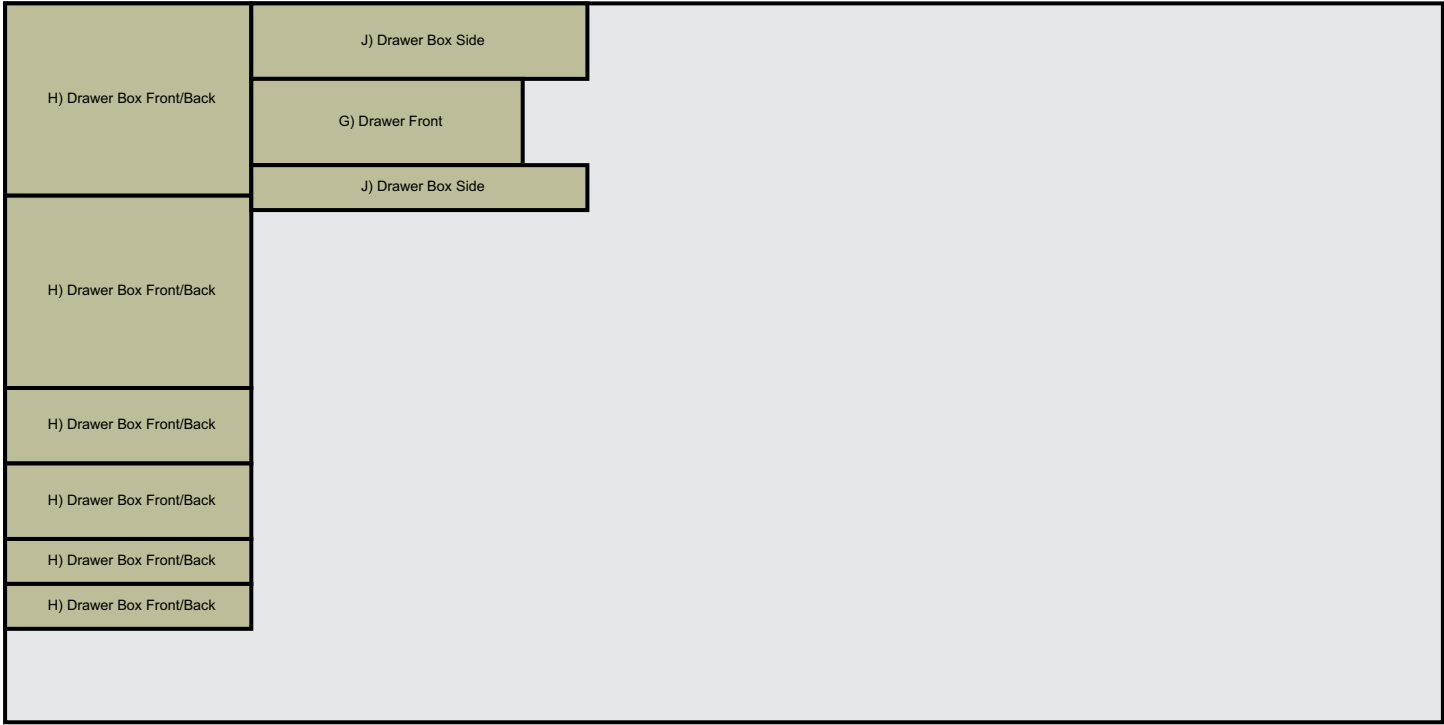


Compact SPT Cart for ShopSmith

Cutting Diagram (Cont)

Cutting Diagram - Sheet(Cont)

48" x 96", 3/4" Plywood (21.08%)



Note

The Cutting Diagram uses 3/4" Plywood for all Cabinet parts. Art used Cherry for the drawer fronts, which would reduce usage of 2nd 3/4" sheet of plywood some. If you didn't care about which direction the grain on the plywood ran on the drawer pieces, additional drawer piece could be fit into the first sheet of 3/4" plywood also.

Compact SPT Cart for ShopSmith

Assembly Notes (from Art)

The base is almost 24" x 36" and made from 2x4s joined at the four corners by half lap joints. The rest is made of 3/4" birch plywood. I used a bit over a full sheet and about half a sheet of 1/4" birch plywood.

The back of the cabinet is held in a dado that is located 1/4" in from the back edge. The dado runs the full length of the side pieces, but there is a stopped dado in the top and bottom pieces. I used one of those bits sized to match the thickness of plywood, about 7/32" to cut the dado.

Biscuit joints and glue were used to attach the cabinet sides to base.

The three-drawer cabinet is 20" wide by 24" high. The Cherry drawer fronts are about 14", 6" and 4" high, with the drawer boxes sized accordingly to fit using 22" KV-type drawer slides which are 1/2" thick. If you use a different style drawer slide, you will need to adjust the drawer box dimensions accordingly.

The drawer boxes also are 3/4 birch ply fronts, backs and sides, with 1/4" birch ply bottoms. The drawer parts were all glued together for strength. The back of the cabinet also is 1/4" birch ply.

The drawer bottoms are housed in dadoes cut into all four plywood drawer parts. No stop dadoes here though as the drawer front covers the "hole" that shows in the front and back of the box when using through dadoes. Like the back panel, the dadoes are inset 1/4" above the bottom edge of the drawer parts. The bottom panel is glued in place.

Another thing that complicates this whole process of creating plans using plywood is that the plywood itself uses nominal sizes where 3/4" isn't really 3/4", but rather about 23/32". So the depth of the rabbet on the ends of the front and back drawer pieces isn't the important measurement, but rather it's the 1/4" wide tongue that results from cutting the dado so that it fits snugly into the 1/4" wide dado in the side pieces. So perhaps it would be best to cut the dadoes in the side pieces and then cut the tongue to fit.

I used flat-head wood screws to assemble the pieces of the Table Leg Retainer (P) and to attach it to the side of the cabinet.

The mounting blocks are made from two pieces of 2x4 that were jointed on the two adjoining faces so that they'd be flat for gluing, so they ended up being less than 3" high. After gluing, I trued up the edges, as well as the top and bottom. They all were 15" long originally, but I trimmed off about 1 1/2" from the one end of the one holding the strip sander.

I used a 1 1/4" forstner bit to drill the mounting holes, so they need to be drilled accurately on 7" centers. All the holes were drilled 3 1/2" on either side of the centerline of the 2x4s. The holes were drilled as deep as I could go with my bit and stopped about 1/4" from going through the second 2x4. I made a test block from a single 2x4 to ensure the spacing was accurate and then used it to locate stop blocks attached to a fence on the drill press.

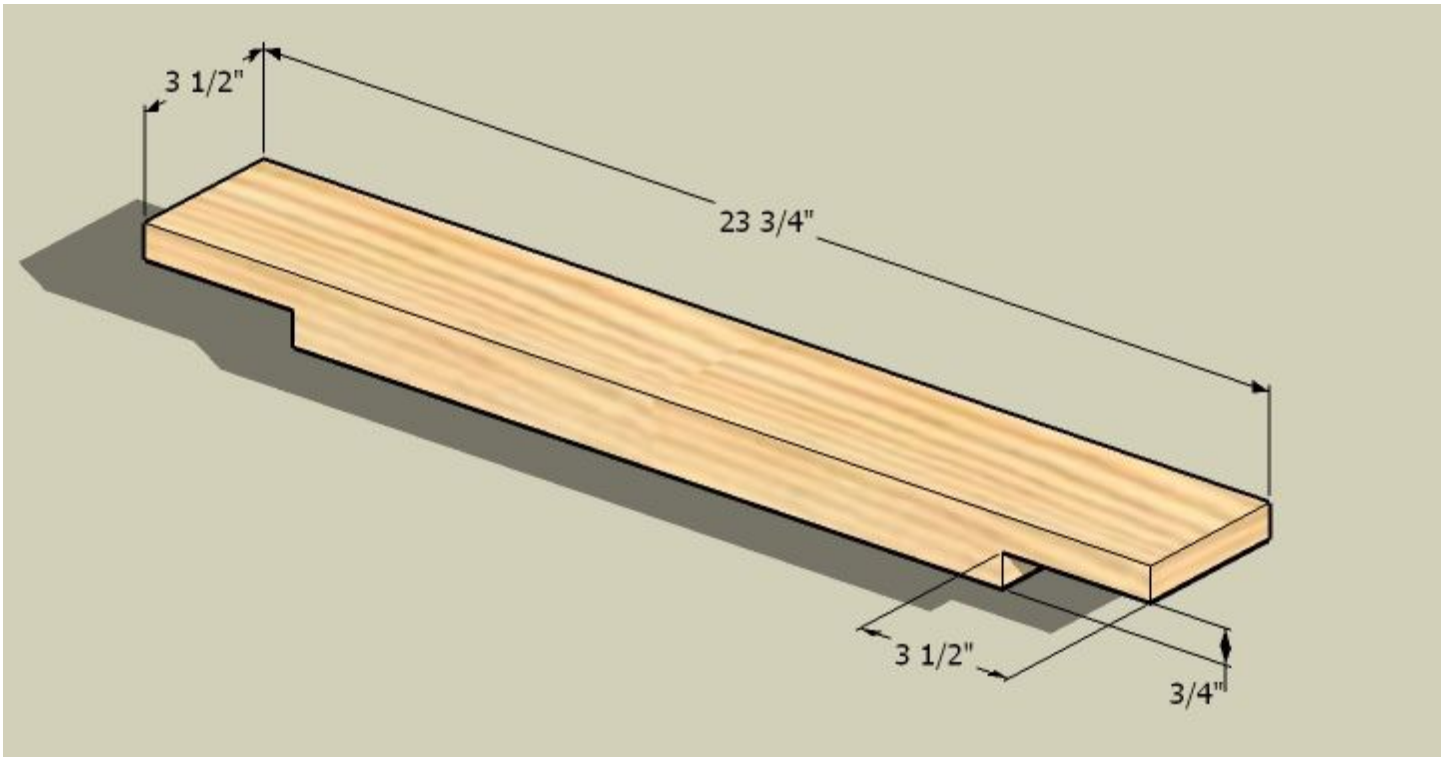
The blocks are then attached from the underside with 2" screws. I used double-sided carpet tape to hold the blocks in place while installing the screws.

I used birch banding to cover the edges of the plywood, attaching it with white glue and an iron for setting the glue.

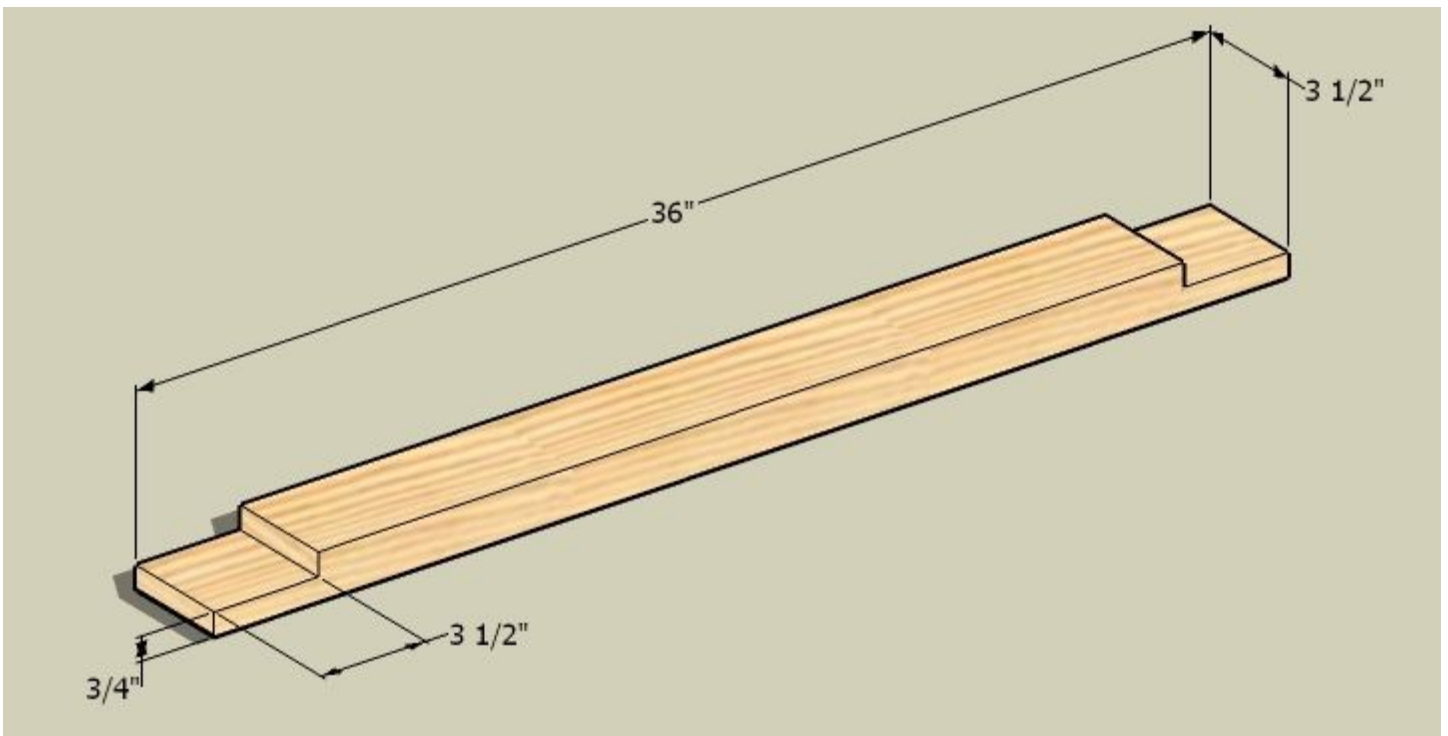
I'll also probably build another block with three holes to accept the lathe tail stock and the tool rest and mount it beside the strip sander.

Compact SPT Cart for ShopSmith

Individual Part Details

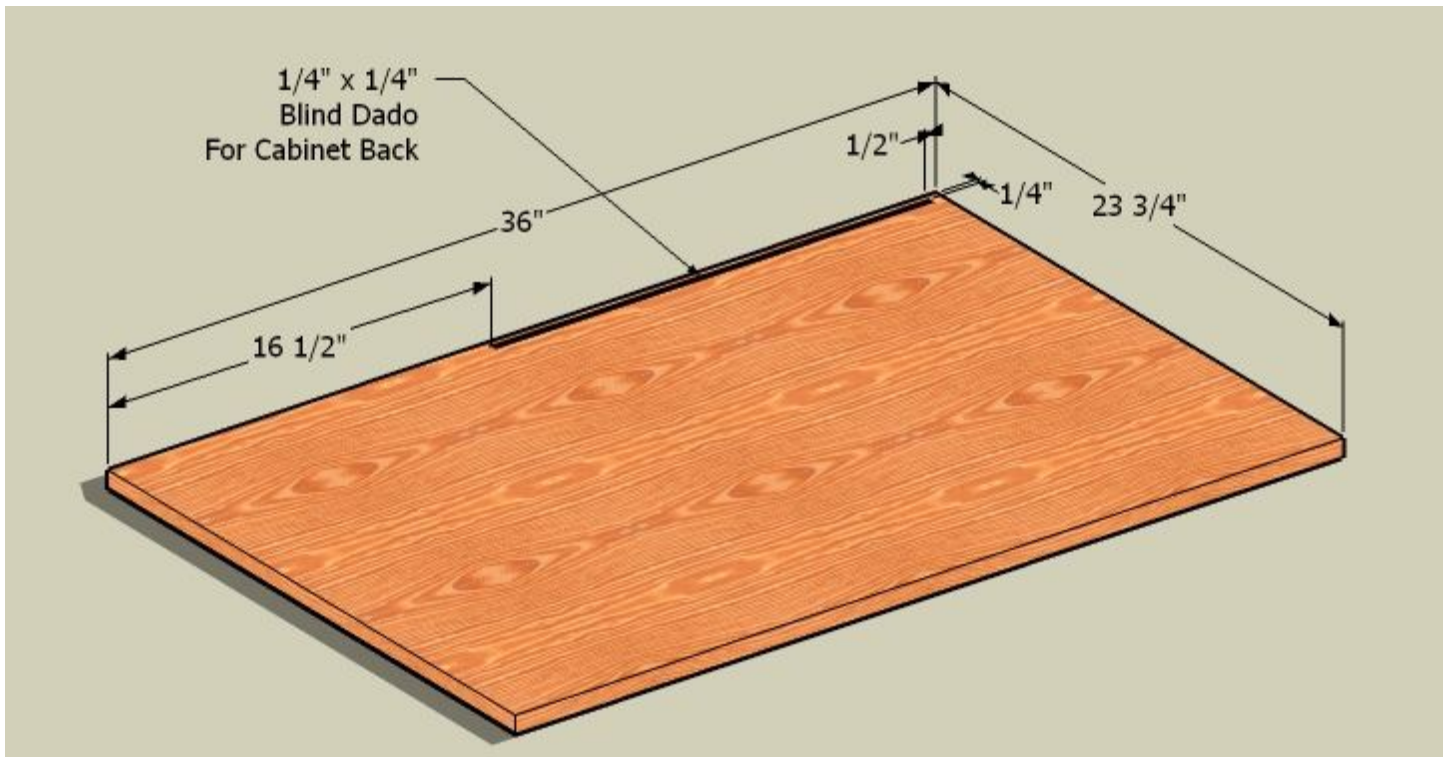


A) Detail

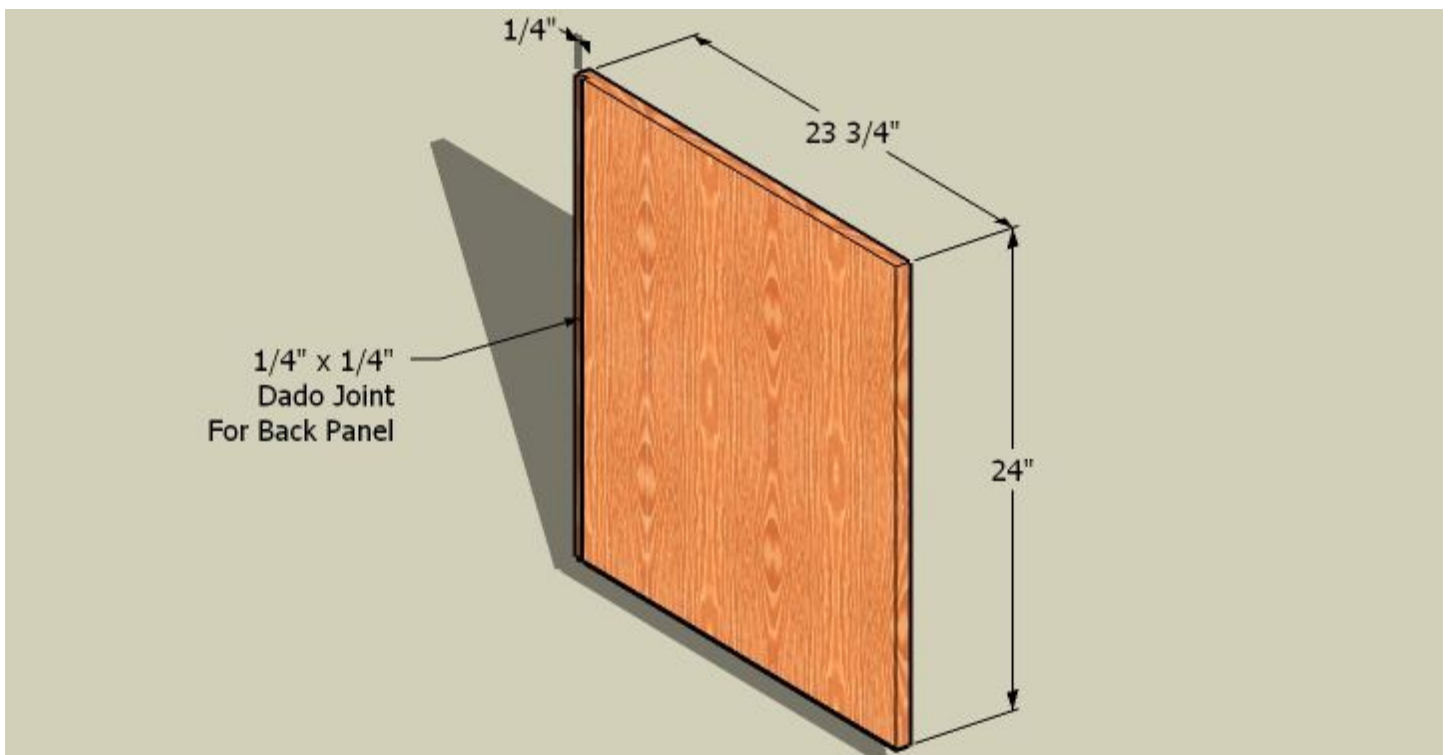


B) Detail

Compact SPT Cart for ShopSmith Individual Part Details (Cont.)

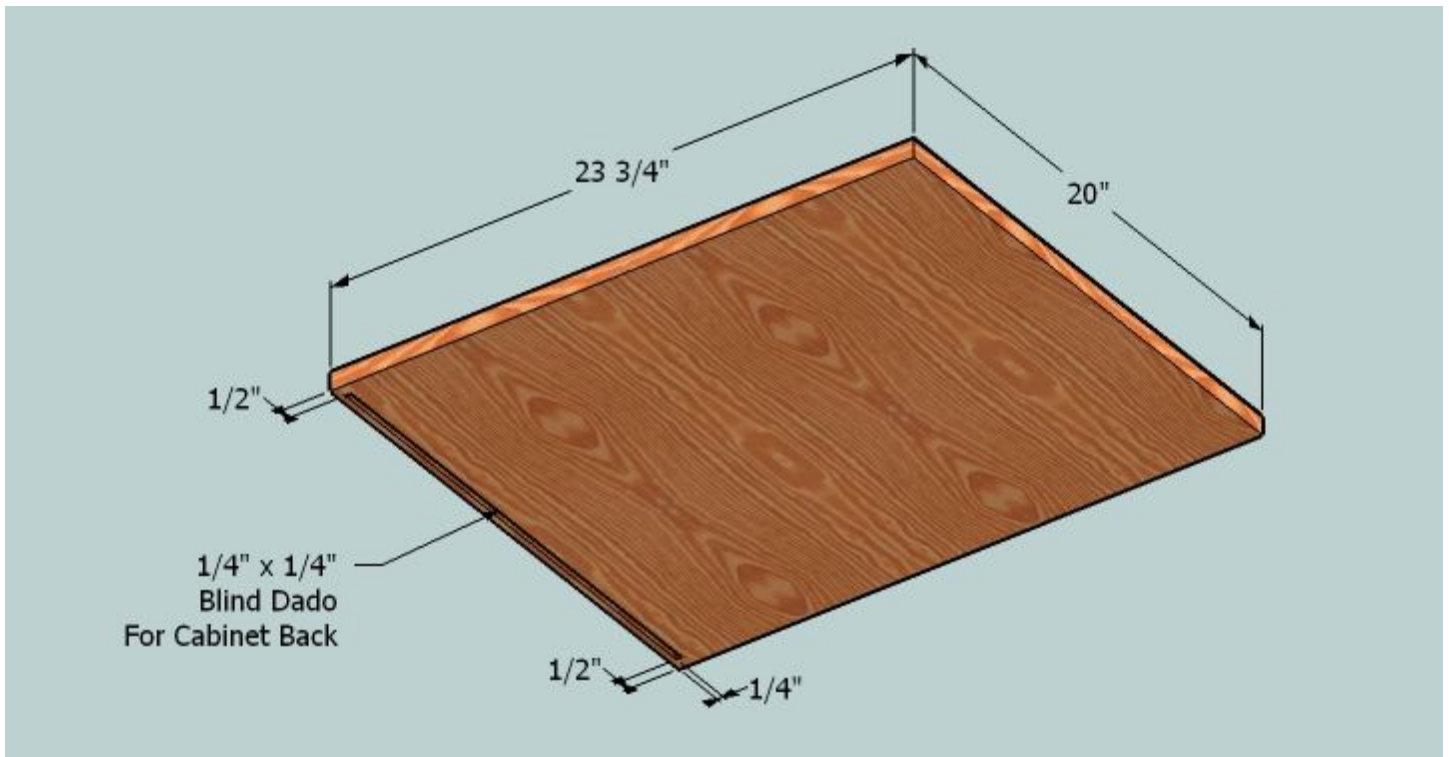


C) Detail

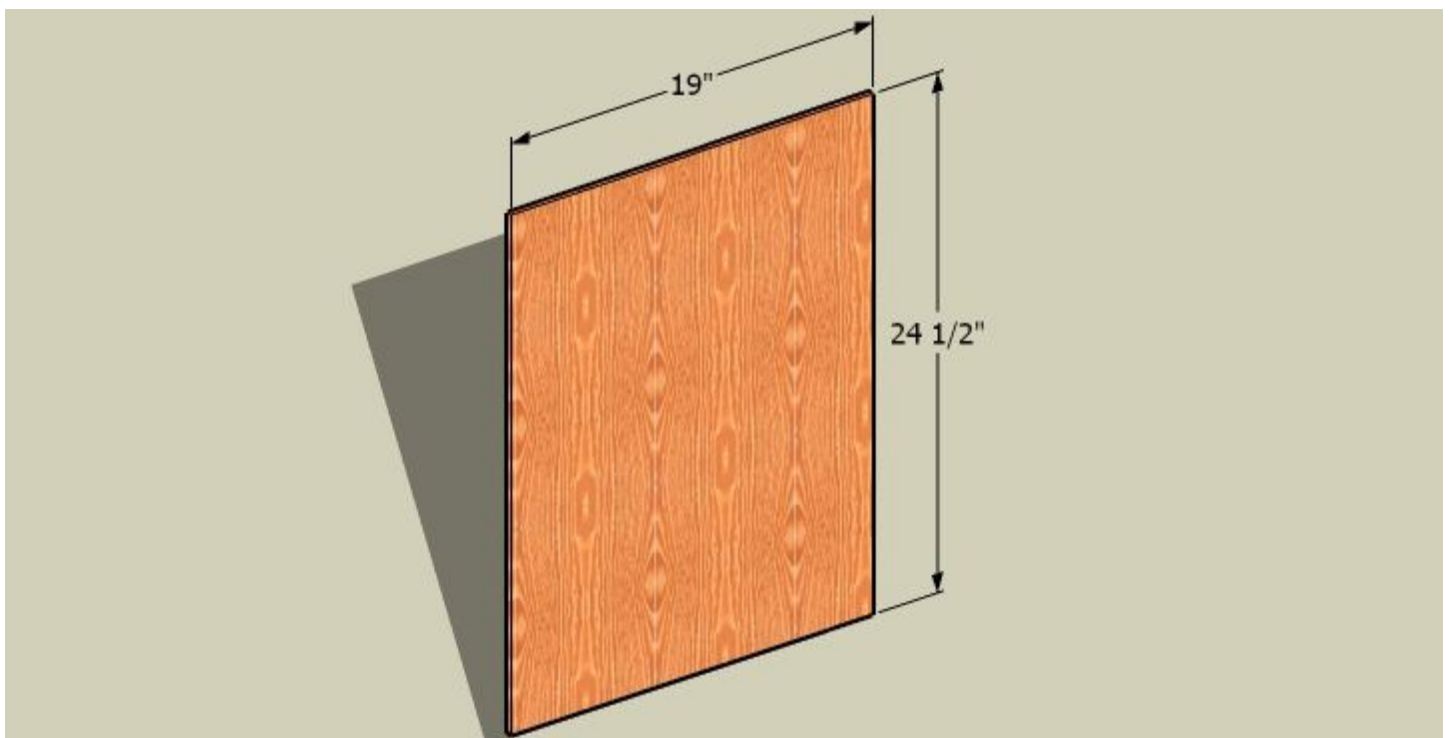


D) Detail

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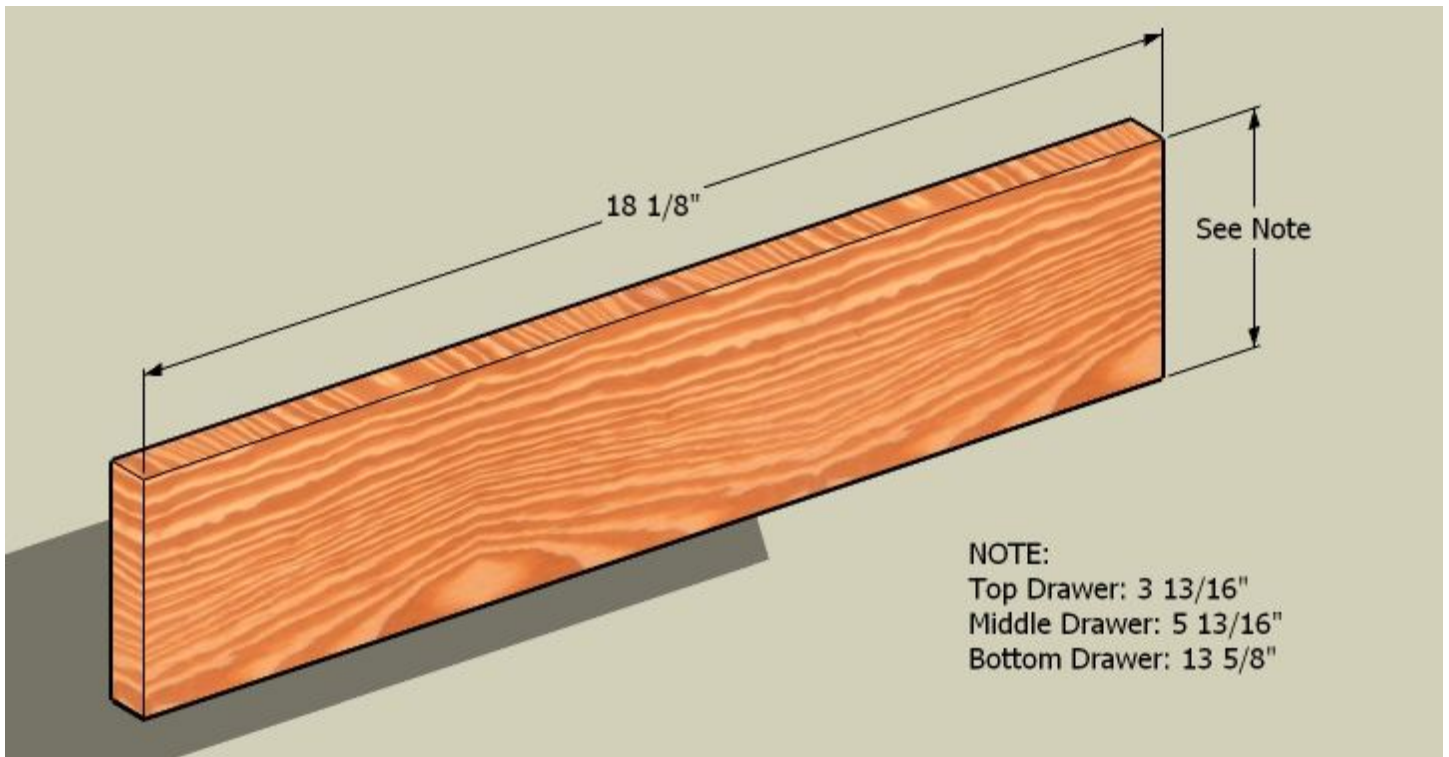


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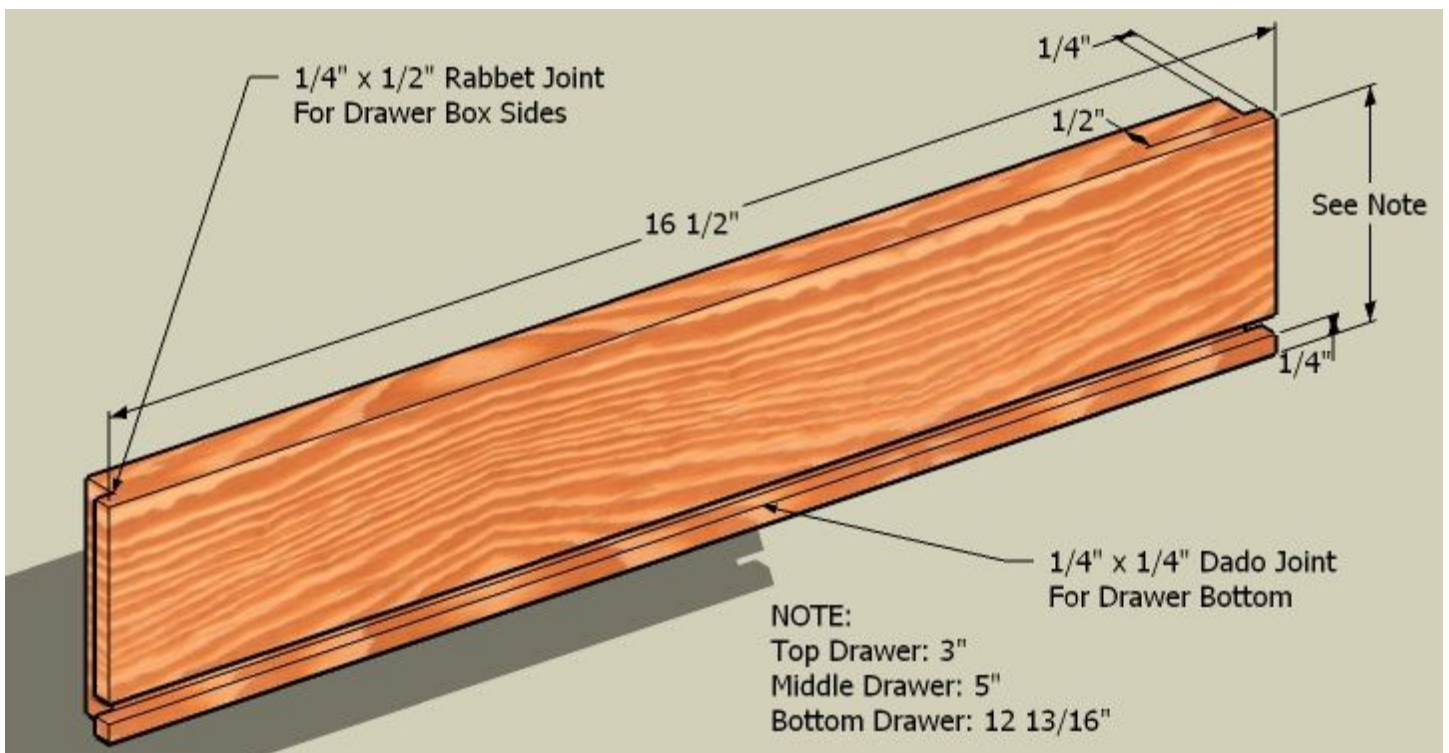


F) Detail

Compact SPT Cart for ShopSmith Individual Part Details (Cont.)

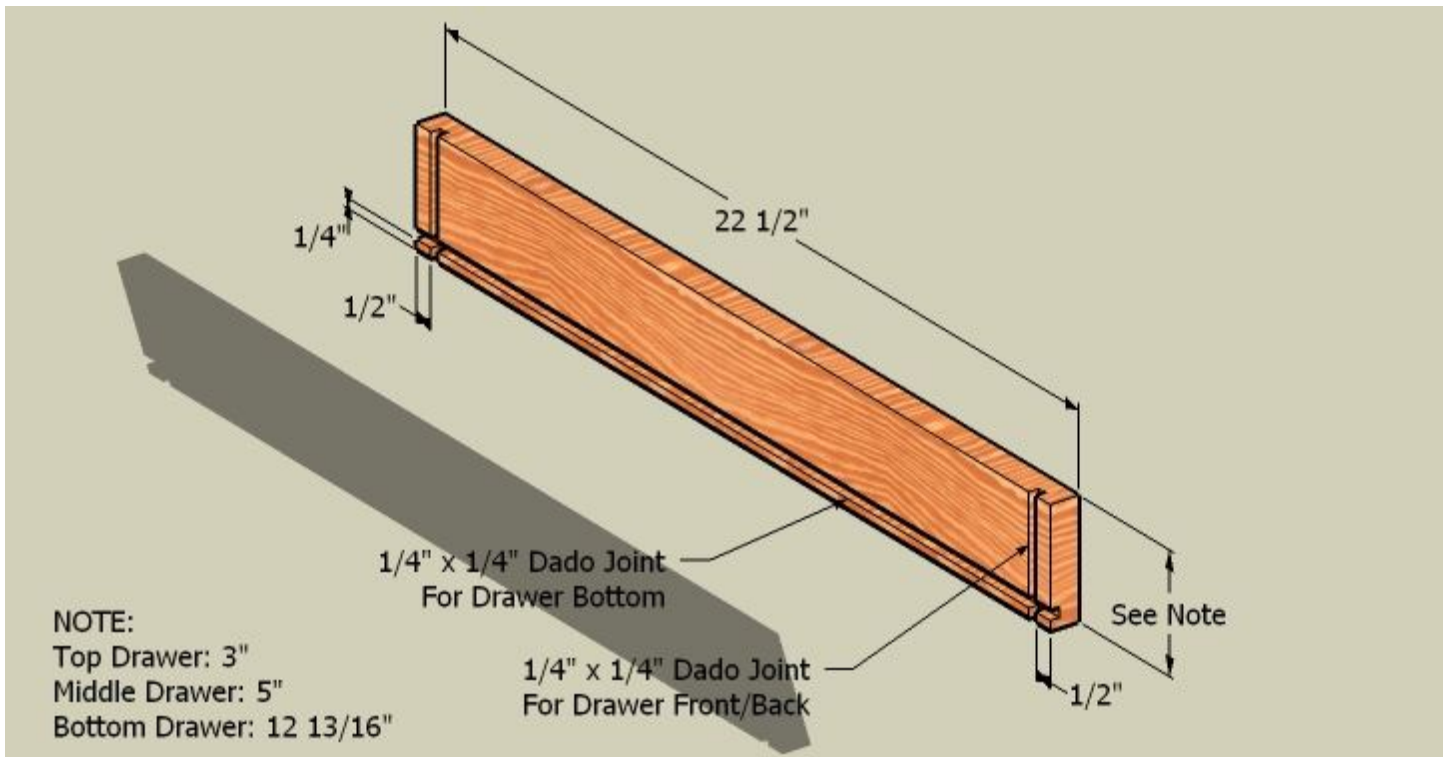


G) Detail

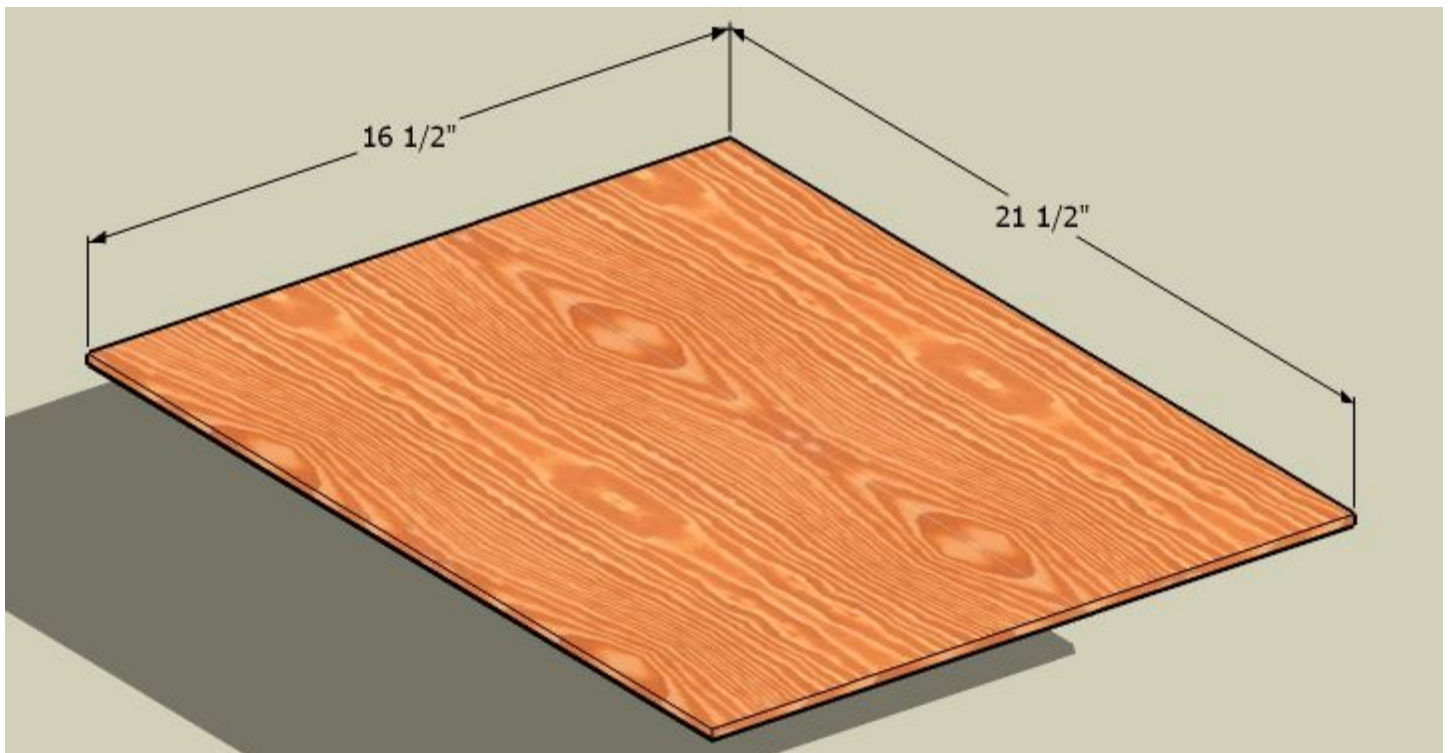


H) Detail

Compact SPT Cart for ShopSmith Individual Part Details (Cont.)

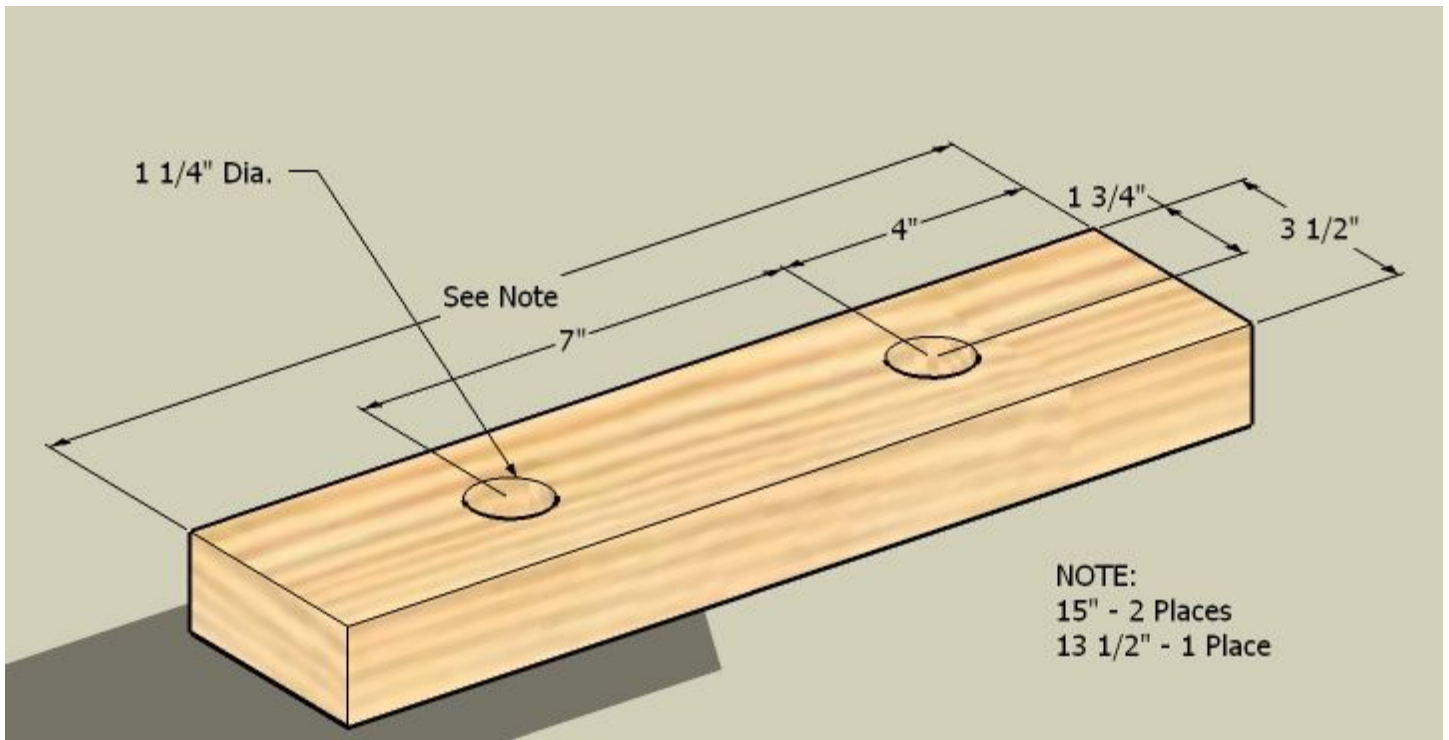


J) Detail

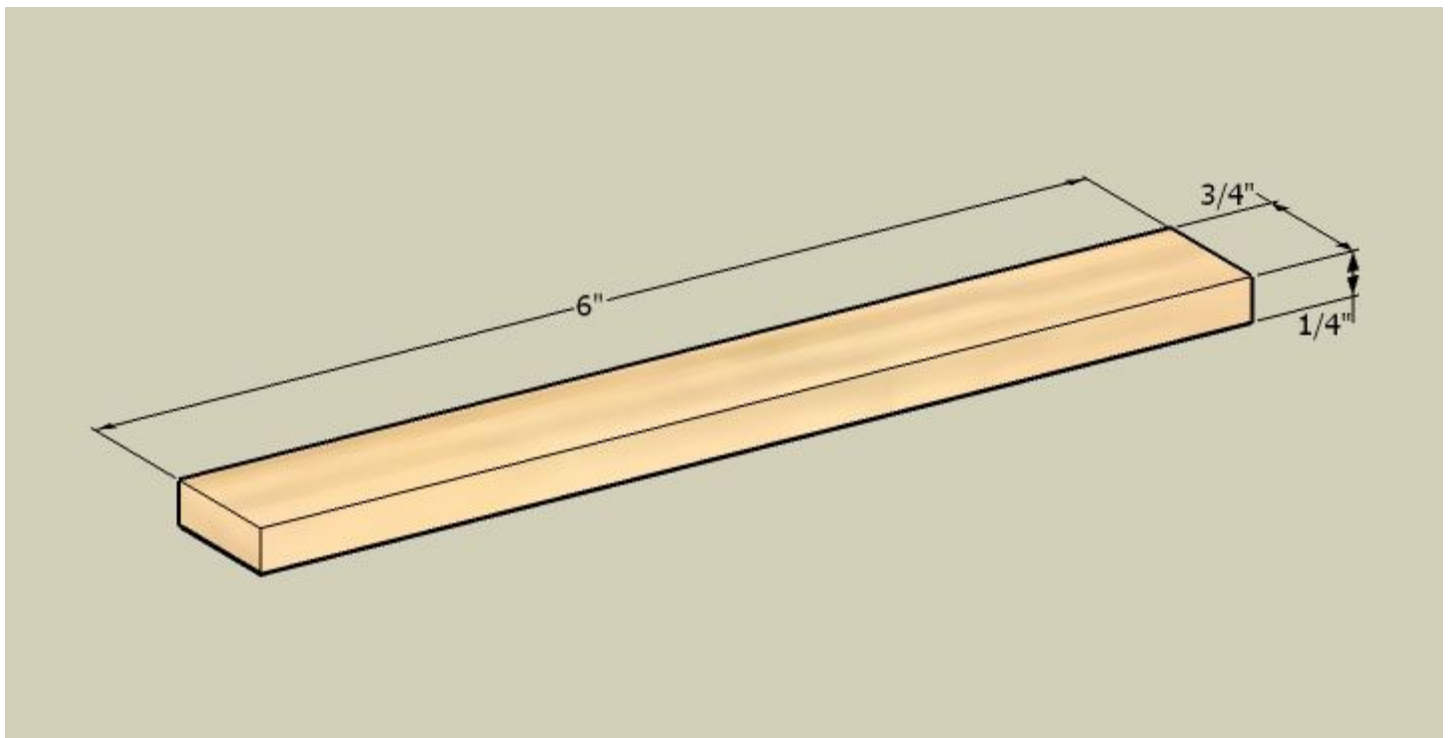


K) Detail

Compact SPT Cart for ShopSmith Individual Part Details (Cont.)

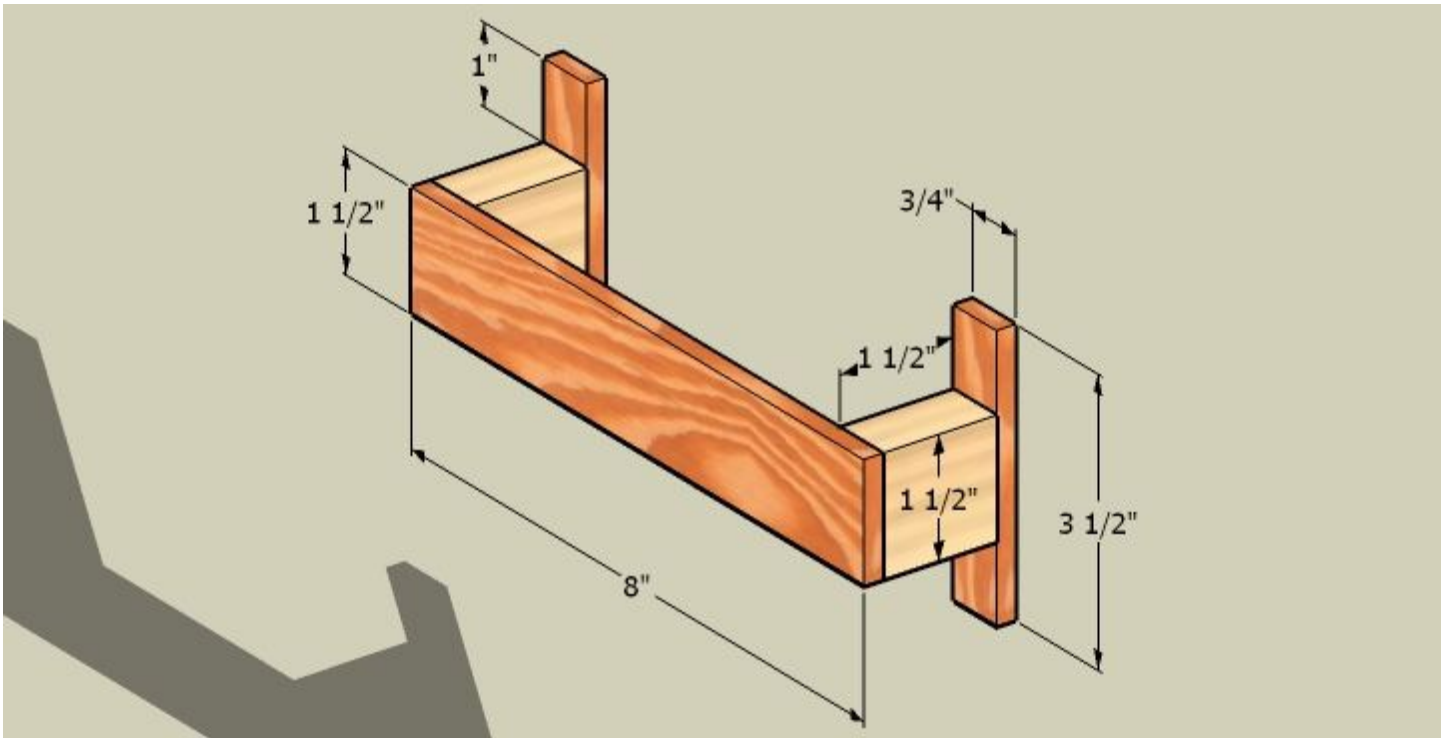


L) Detail

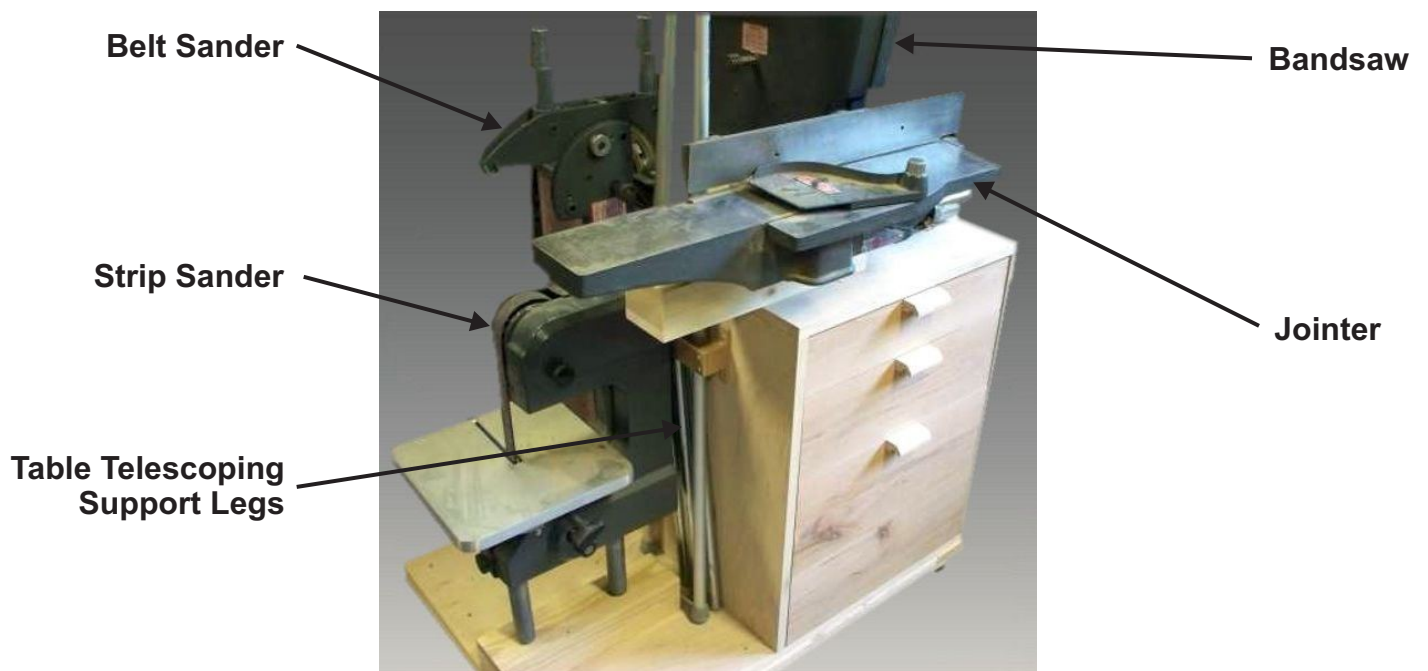


N) Detail

Compact SPT Cart for ShopSmith Individual Part Details (Cont.)



P) Detail



Cart In Use