



Historic HomeWorks

Forum

Ask questions, post replies, seek guidance, help others, keep in touch. Moderated by John Leeke

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Sashmaking



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Author	Message
<p>johnleeke Site Admin</p> <p>Joined: 20 Aug 2004 Posts: 2924 Location: Portland, Maine, USA</p>	<p>Posted: Tue Jan 10, 2012 11:08 am Post subject: Sashmaking quote</p> <p>Here is the article I wrote on sashmaking for Fine Homebuilding back in 1984:</p> <p>Making Window Sash, How to do a custom job with ordinary shop tools and a router by John Leeke. http://gpaelgin.org/wp-content/uploads/making-window-sash.pdf</p> <p>Here are all the discussions here at the forum on sashmaking:</p> <p>Glue for sash joints: http://historichomeworks.com/forum/viewtopic.php?p=4330</p> <p>Unusual meeting rail joint: http://historichomeworks.com/forum/viewtopic.php?p=7403</p> <p>why building windows is fun: http://historichomeworks.com/forum/viewtopic.php?p=9744</p> <p>Building new windows http://historichomeworks.com/forum/viewtopic.php?p=10751</p> <p>Making sash on old-time machinery: http://awwm.wordpress.com/making-wood-window-sash/</p> <p>Wood Sash Pegs (with Video) http://historichomeworks.com/forum/viewtopic.php?t=1117</p> <p>Building Wooden Storms (with detail drawings & measurements) http://historichomeworks.com/forum/viewtopic.php?t=2555</p> <p>John</p> <p>by hammer and hand great works do stand by pen and thought best words are wrought</p> <p>Last edited by johnleeke on Mon Oct 16, 2017 10:25 am; edited 3 times in total</p>
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<p>johnleeke Site Admin</p> <p>Joined: 20 Aug 2004 Posts: 2924 Location: Portland, Maine, USA</p>	<p>Posted: Fri Oct 12, 2012 9:53 am Post subject: Which wood for sash and frames? quote</p> <p>A decay resistant species can improve durability, but making the right "cut and selection" can be more important than which species.</p> <p>I try to use all heartwood because the heartwood of most species is more decay resistant and more stable with changes in moisture content.</p> <p>I seldom get all-heartwood boards. If there is not enough wood to select for all heartwood, I select my cuttings for sills and lower rails from the heartwood end of the board, and then put the sap wood in the frame headers and top sash rails. If a jamb or stile is only half heartwood, I'll put the heartwood at the bottom where it'll do the most good. That's what I mean by "cut and select" for heartwood. Often there's a lot more heartwood in lower grades, so I just take cuttings from the good wood between the knots.</p> <p>Vertical-grain or ruff-grain is more stable and I usually cut it off the outer edges of wider flat-sawn planks and boards.</p> <p>I've always had lots of fun going to the lumber dealer or the sawmill and "creaming the pile" myself to get the best boards, although it takes a special relationship with the dealer for them to let you do it. Go through 5k bf to get 1k bf for a big job, when its fun I don't notice the work</p>
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involved.

John

by hammer and hand great works do stand
by pen and thought best words are wrought

Last edited by johnleeke on Fri Jun 28, 2013 2:56 pm; edited 2 times in total

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rncx

 Posted: Mon Oct 15, 2012 1:20 am Post subject:

 [quote](#)

Joined: 21 Jun 2008
Posts: 660
Location: Little Rock, AR

species/lumber selection in the US these days is...well....limited.

here's a good writeup on the characteristics of wood movement due to moisture.

http://www.woodweb.com/knowledge_base/A_Finish_Carpenters_Guide_to_Understanding.html

there is a basic chart by species in that article, a more in depth study of various species is in the forest product labs wood handbook...

http://www.fpl.fs.fed.us/products/publications/several_pubs.php?grouping_id=100&header_id=p

what a non botanist can take away from all of this is there are a few species that are both resistant to moisture and stable over a range of moisture content. the rest are not suitable for wooden sashes because they're too unstable. if a 4" wide board moves an 8th between seasons and you have two rails, multiply by 2 and you have a 4th, far too much for a window sash.

as noted in that first link the difference in seasonal movement due to moisture in flat sawn versus quartersawn lumber is also double. that's why windows and doors cost more, you need the highest grades of lumber to keep them stable.

my lumber selection method differs from john's a bit, but we arrive at the same thing in the end. i order 2x12s, 16 feet long, clear of knots when i buy cypress for windows. that sort of board is no 'youngster' tree. from that i can cut the parts adjacent to the pith (center ring) out, and be left with vertical grain on the other 2/3 to 3/4 of the board.

as for cypress, i see about 1/16 of movement between summer and winter over an entire sash in AR (variance in humidity here between summer and winter of greater than 50%).

Neal

Last edited by rncx on Mon Oct 15, 2012 1:34 am; edited 1 time in total

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rncx

 Posted: Mon Oct 15, 2012 1:32 am Post subject:

 [quote](#)

Joined: 21 Jun 2008
Posts: 660
Location: Little Rock, AR

and while on that subject it should be noted that selecting vertical grain (quarter sawn) boards is only for rails and stiles. for muntins flat sawn is actually preferable, you'll have less tearing from the cutter that way. vertical grain muntins will be very prone to split and tear.

since muntins have very little width they will not move with moisture changes all that much regardless of their grain orientation.

Neal

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Tom King

 Posted: Tue Sep 17, 2013 9:18 pm Post subject:

 [quote](#)

Joined: 17 Sep 2013
Posts: 4

Here's a system I came up with to make replacement sash for an 1784 house.

We're in the middle of this job right now.

<http://www.historic-house-restoration.com/windowwork.html>

This is my first post on these Forums. I just found this Forum today. I've enjoyed everything I've read on them.

Historic-House-Restoration.com

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johnleeke
Site Admin

 Posted: Wed Sep 18, 2013 8:47 am Post subject:

 [quote](#)

Joined: 20 Aug 2004
Posts: 2924
Location: Portland, Maine, USA

Tom, welcome to the Forum.

This looks like an unconventional, but effective method--much like the method I developed for my first sashmaking as show in the Fine Homebuilding article linked to above, with router, vacuum hose, etc.

The strategy we both used was "use what you have and do what needs to be done."

I like your boxwood coping jig.

John

by hammer and hand great works do stand
by pen and thought best words are wrought

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Tom King

Posted: Wed Sep 18, 2013 6:12 pm Post subject:

 [quote](#)

Joined: 17 Sep 2013
Posts: 4

Someone gave me scraps of the synthetic bowling alley flooring. It's solid phenolic about 3/8" thick. I mounted it to the bottom of a 7518, and plunged a 1/2 straight bit up through it. This left a hole the size of the shank for the sash cutters. I freehanded a recess with another router for clearance of the bit. With the intake for the shop vac, and another intake hole over the bit, the shop vac gets every bit of the dust. None reaches the motor either.

I was intending to repurpose a molding plane with some of the boxwood "negatives" to clean off milling marks, but the Whiteside bits cut so cleanly, that it looks like it's not going to be necessary.

I just started cutting and assembling more windows today. I stuck the one in the pictures together in a hurry for a presentation this past weekend. I need to knock that one back apart, and hand plane the faces. I was able to build two 4-lights today, and may be able to get it up to 3, but that will be a good day. There is still a fair amount of hand work required. If it was some easier wood to work with, it wouldn't be so bad, but this old pine requires some finesse.

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Tom King

Posted: Thu Sep 19, 2013 4:11 pm Post subject:

 [quote](#)

Joined: 17 Sep 2013
Posts: 4

It actually went a bit better than I thought today. Something as simple as a little table beside the bench to lay my tools out on, and moving the assembly table to the other side of my seat speeded things up considerably. I also made a couple of jigs for laying out the mortises which helped a lot.

I got brave and ran enough pieces to make four sash this morning, and had them all assembled by 3:30. A bit of an assembly line process was used. I first fitted all the stile and rail mortise and tenons for the four sash, and then fitted the mullions and muntins.

If I didn't have to cut the middle mortise and tenons by hand, for my modification to the mullion to muntin joint, it would go even quicker. Whiteside said right now it would take a month to run another cutter for the muntin ends, so I'm thinking about another process to cut the little groove. Right now, I'm cutting it with a jeweler's saw.

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johnleeke

Site Admin

Posted: Sat May 24, 2014 2:29 pm Post subject:

 [quote](#)

Joined: 20 Aug 2004
Posts: 2924
Location: Portland, Maine,
USA

Here is a document describing some of the methods and steps in sash making by hand that I just came across:

<http://tinyurl.com/q2ju9dv>

John

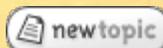
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