

## BUILD A CLASSIC STICKLEY BOOKCASE WITH BOB LANG

MARC ADAMS SCHOOL OF WOODWORKING  
OCTOBER 3-7, 2016

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Thank you for signing up for this class, it will be an enjoyable and productive week. Here is the information you will need to prepare for the class. The project is a reproduction of the Gustave Stickley No. 700 Glass Door bookcase, originally made in the early 1900s. Harvey Ellis likely designed this piece, and it's a great example of American Arts & Crafts period casework. This piece isn't as big as you might think; it's about 36 inches wide, 60 inches tall and 14 inches deep. In addition to being a great place to store your favorite books, it also makes a nice display cabinet.

I built this chair as the cover project for the February 2005 issue of Popular Woodworking Magazine, and that article is included in my book "Classic Arts & Crafts Furniture: 14 Timeless Designs". You might want to read the article before class to get an idea of how this piece goes together. You can get the book, or a PDF version of the article directly from Popular Woodworking. Click on the links below or call 855-840-5118.

[Link to purchase book](#)

[Link to download PDF article](#)

### HOW MUCH MATERIAL DO I NEED?

This is a "bring your own materials" class, so you need to bring your own lumber. There is a cutlist at the end of this document, but please don't cut all the pieces to the sizes on the list before class. It will help to bring "rough cut" pieces, thicker, wider and longer than the sizes on the list. We'll mill all the parts to the exact sizes we need as the class progresses. In all likelihood, you will need to glue pieces together in width to make the case sides, bottom, shelves and top. If you're capable of doing that before class, bringing these pieces already glued will give you a head start. If not, don't worry about it, we will be milling rough lumber and gluing up panels first thing Monday morning.

The traditional material for this bookcase is quartersawn white oak, but it can be made of any hardwood. The best source for quartersawn white oak is Frank Miller Lumber in Union City, Indiana. The retail store should be able to help you, their phone number is 765-964-7705. The Frank Miller website can be found at <http://www.frankmiller.com/about/retail-store>. Frank Miller also carries quartersawn white oak plywood if you decide to opt for a plywood back.

If you calculate the volume of the finished parts, this piece requires about 55 board feet of rough sawn 4/4 material, including an allowance for waste. If you hand select your lumber, and everything goes well you can likely get by with less. If you're ordering random widths and lengths, sight unseen, it would be smart to purchase more.

One factor that will affect your material needs is how you choose to make the back. In the article, I made a solid wood frame with shiplapped panels. You could easily substitute 1/4" plywood for the shiplapped boards and save time. You can also skip the frame and make the entire back from a single piece of plywood, 1/2"-thick would be best, but 1/4" will also work. The sizes of the parts you need for these options are listed in the cutlist.

At the end of the cutlist is a list of hardware. The original has a full-mortise lock and no knob on the door. This looks nice, but practically speaking the lack of a knob means you need to keep the door locked to keep it closed, and you're either snagging the key (if you leave it in the lock) every time you walk by, or you're looking for the key (if you don't leave it in the lock) when you want to open the door. You may well decide to forego the lock and use a knob instead. We can make an appropriate pyramid-shaped knob in class, or you can buy a reproduction metal pull and use a bullet catch to keep the door closed. The two shelves inside the case are adjustable, they rest on pegs in 1/4" holes. Feel free to spend more on pegs if you want to or purchase any of the hardware from another source.



## WHAT TOOLS SHOULD I BRING?

### Measuring, Marking & Layout Tools

- ▶ Tape Measure
- ▶ Combination Square-6", 12" or both
- ▶ Small double square-4" or 6"
- ▶ Tite-Mark or similar marking gauge
- ▶ Marking Knife
- ▶ Bevel Gauge
- ▶ 6" rule or Lee Valley 6" precision square

### Joinery

- ▶ Back saw or Japanese pull saw
- ▶ Chisels-paring chisels, 1/4", 1/2", 3/4" and 1"
- ▶ Shoulder plane or rabbet plane
- ▶ wide float or file
- ▶ narrow float or file
- ▶ dead blow mallet

### Surfacing

- ▶ Block plane
- ▶ smooth plane
- ▶ jack plane (optional)
- ▶ card scraper
- ▶ medium and fine cut rasp

Feel free to bring additional tools and [send me an e-mail](#) if you have any questions. Don't worry if you don't have everything on the list.

## WHAT WILL WE DO ALL WEEK?

### Monday

- ▶ Mill stock to thickness and width
- ▶ Glue Sides, Bottom, Shelves and Top to needed width. This will be the top priority so parts can dry overnight
- ▶ Make template for through mortises at bottom of case sides
- ▶ Create story stick for project
- ▶ If you have wide enough pieces for the sides, you can begin to cut joints in sides

### Tuesday

- ▶ Cut rabbets on back edge of sides
- ▶ Cut dados for bottom in sides
- ▶ Cut mortises for lower rails in sides
- ▶ Cut dovetail on upper back rail, cut dovetail socket in top of sides
- ▶ Drill holes for adjustable shelves in sides
- ▶ Sand inner face of sides
- ▶ Mill bottom to finished size

### Wednesday

- ▶ Cut tenons on lower rails
- ▶ Cut joints in face frame stiles and rail
- ▶ Assemble case
- ▶ Assemble face frame
- ▶ Glue face frame assembly to carcass
- ▶ Prepare parts for door
- ▶ Begin door joinery; rabbets on back of stiles and rails, mortise and tenon joints, lap joints on interior stiles & rails

### Thursday

- ▶ Finish door joinery and assemble door
- ▶ Work on trim pilaster and capital
- ▶ Attach trim to case
- ▶ Prepare parts and assemble back panels

## Friday

- ▶ Hang completed door
- ▶ Install lock or other door hardware
- ▶ Attach back to assembled case
- ▶ Attach top to assembled case
- ▶ Prepare for finishing

At some point during the week, probably Tuesday or Wednesday, I'll give an after lunch slide show about Gustav Stickley and Harvey Ellis, how the original pieces were made, and the Arts & Crafts period in general. We won't get to finishing in class, but we will discuss original methods and modern alternatives. I plan on bringing my completed bookcase so we will have a finished example in the class.

## DRAWINGS AND SKETCHUP MODEL

I will be bringing detailed drawings for everyone to use to class. If you would like to have the drawings before class, get in touch with me and I will e-mail them to you in PDF format. There is also a pretty good SketchUp model available online in the 3D Warehouse. If you'd like to learn more about SketchUp, I will be teaching a weekend workshop at MASW April 16-17, 2016.

[Click this link to access the SketchUp Model.](#)

If you have any questions or concerns before class, feel free to get in touch with me. I prefer e-mail as it gives me time give you a thoughtful response. It may take me a day or two, but I will respond. If you have to call, that's okay but be aware that you might catch me in the middle of something.

Thanks again, I'm looking forward to having a great time with you in October.

Bob Lang

Gustav Stickley No. 700 Bookcase Bill of Materials

Part	QUAN.	THIK.	WTH.	LTH	Material	Notes
Case Side	2	3/4"	13"	57 1/4"	Solid-primary	
Case Bottom	1	3/4"	13"	31 1/2"	Solid-primary	
Case Lower Rail	2	3/4"	5"	33 1/8"	Solid-primary	31" Shoulder to shoulder
Case Back Rail	1	3/4"	2"	31 3/4"	Solid-primary	31" Shoulder to shoulder
Case Bottom Trim	2	1/2"	3/4"	32"	Solid-primary	
Case Adj. Shelf	2	3/4"	10 7/8"	30 7/8"	Solid-primary	
Case Glue blocks	2	5/8"	5/8"	31"	Solid-secondary	glue between bottom & rails after assembly
Face Frame Stile	2	7/8"	1 1/2"	50 1/2"	Solid-primary	
Face Frame Rail	1	7/8"	1 1/8"	30 1/2"	Solid-primary	28" shoulder to shoulder
Hor. Dust Seal	1	1/4"	1 1/2"	27 1/4"	Solid-primary	glue behind rail after assembly
Vertical Dust Seat	2	1/4"	1 7/8"	50 1/2"	Solid-primary	glue behind stiles after assembly & hinge mortises
Pilaster	2	1/4"	1"	49 3/8"	Solid-primary	
Capital	2	7/8"	2 1/8"	1 1/8"	Solid-primary	shape both pieces from one long piece
Top	1	7/8"	14"	36"	Solid-primary	
Back-Option A	1	1/2" or 1/4"	31 3/4"	50 3/4"	plywood	veneer to match primary wood
Back-Option B		3/4"	31 3/4"	50 3/4"		
Back Stile	2	3/4"	2"	50 3/4"	Solid-primary	
Back-Top/Bot Rail	2	3/4"	2"	30 1/4"	Solid-primary	27 3/4" shoulder to shoulder
Back-Mid Rail	1	3/4"	2 1/2"	30 1/4"	Solid-primary	27 3/4" shoulder to shoulder
Back Panels	2	1/4"	28 1/2"	22 7/8"	plywood	veneer to match primary wood
Back-Option C		3/4"	31 3/4"	50 3/4"		
Back Stile	2	3/4"	2"	50 3/4"	Solid-primary	
Back-Top/Bot Rail	2	3/4"	2"	30 1/4"	Solid-primary	27 3/4" shoulder to shoulder
Back-Mid Rail	1	3/4"	2 1/2"	30 1/4"	Solid-primary	27 3/4" shoulder to shoulder
Back-Shiplap End	2	1/4"	5 1/4"	22 7/8"	Solid-primary	1/8" x 1/4" rabbet one edge
Back-Shiplap End	2	1/4"	5"	22 7/8"	Solid-primary	1/8" x 1/4" rabbet one edge
Back-Shiplap Mid	8	1/4"	4 7/8"	22 7/8"	Solid-primary	1/8" x 1/4" rabbet both edges
Door		3/4"	27 15/16"	49 3/8"	Solid-primary	
Door Stiles		3/4"	2 1/2"	49 3/8"	Solid-primary	
Door-Top Rail		3/4"	2 1/2"	25 15/16"	Solid-primary	22 15/16" shoulder to shoulder
Door-Bottom Rail		3/4"	3 1/2"	25 15/16"	Solid-primary	22 15/16" shoulder to shoulder
Door-Mid Rail		3/4"	1 1/4"	25 15/16"	Solid-primary	22 15/16" shoulder to shoulder
Door-Mid Stile		3/4"	1 1/4"	46 3/8"	Solid-primary	43 3/8" shoulder to shoulder
Short Glass Stop		1/4"	1/4"	7 5/16"	Solid-primary	
Long Glass Stop		1/4"	1/4"	35 13/16"	Solid-primary	
Glass-upper	3	1/8"	7 1/4"	7 1/4"	glass	glass cut to actual openings in assembled door
Glass-lower	3	1/8"	7 1/4"	35 3/4"	glass	glass cut to actual openings in assembled door

Hardware Item	QUAN.	Part No.	Source
1 3/8" Standard Mortise Lock	1	OON25.35	Lee Valley
1/2" Extruded Brass Escutcheon	1	OOA03.01	Lee Valley
3" x 2" Loose Pin Brass Hinges	3	OOD05.01	Lee Valley
Traditional Shelf Supports	8	O5H20.01	Lee Valley
Figure-8 Fasteners	8	13K01.50	Lee Valley

Note: Lee Valley does not include screws with hardware, purchase appropriate screws for hinges, lock and figure-8 connectors