

Traditional upholstery

TIME-TESTED TOOLS AND MATERIALS STILL GIVE THE BEST RESULTS, AND ANYONE CAN DO IT

BY W. MICKEY CALLAHAN

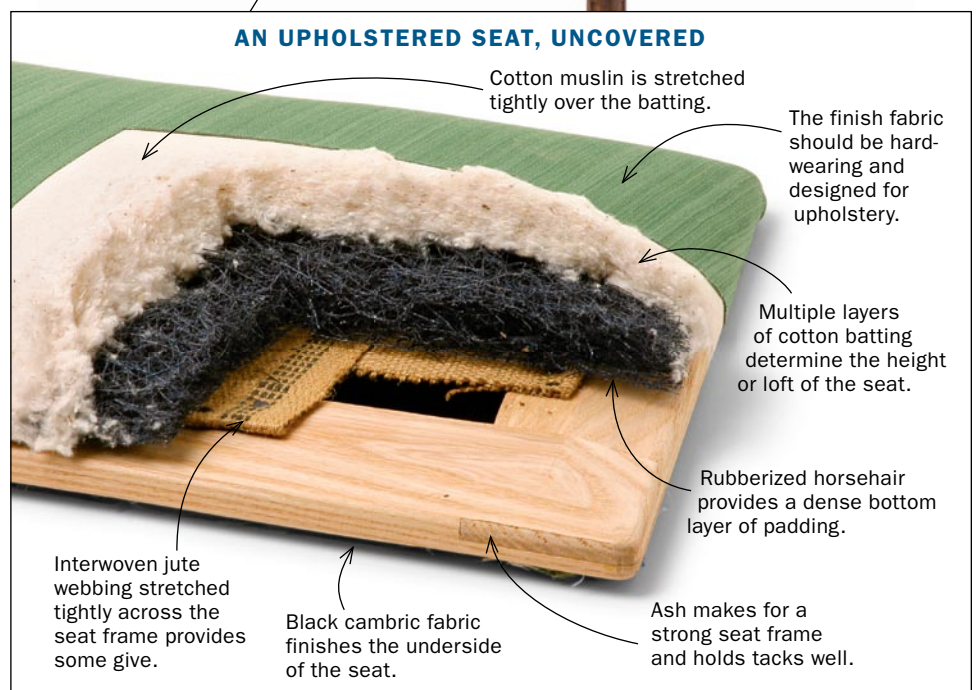
Many woodworkers hesitate to build a chair, particularly a period version, because of the upholstered seat. They think the options are either shopmade with foam rubber, which won't look correct, or an expensive professional job. But you can do the job yourself using traditional materials in a time-tested way. Basic upholstery tools cost around \$60, the materials can be bought online, and the techniques are easily learned. The result will look and feel authentic and last a lifetime.

The frame is the foundation

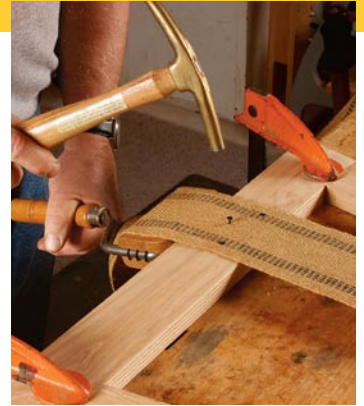
The seat frame anchors all the upholstery. While it can be constructed from any medium-density hardwood, ash works best because it is strong and holds upholstery tacks firmly. You can use mortise-and-tenon joinery or, as in this case, bridle joints. The frame is 2½ in. wide; the outer dimensions depend on the thickness of the outer fabric. A ⅜-³/₃₂-in. clearance between the frame and the chair rails is fine for most fabrics, but leather will require a larger gap.

The frame should extend ¼ in. above the chair rail, but put an 8° to 10° bevel on the top outside edge. Starting even with the chair rail, the bevel creates a transition from the upholstered seat to the chair frame and helps reduce wear on the upholstery fabric, as does rounding over the frame's outside edges.

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Step 1: Weave a web



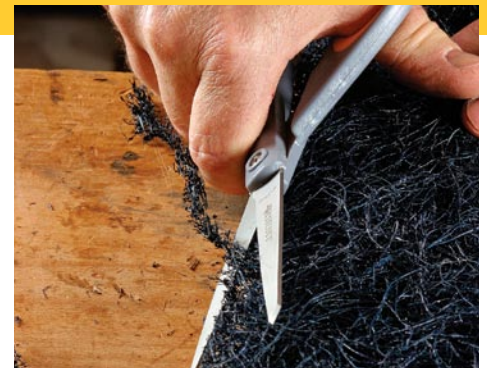
Tack and fold. Cut off a strip of webbing about 6 in. longer than the width of the frame. Tack down one end just inside the bevel using five #6 tacks, staggering the tacks slightly to avoid splitting the wood. Fold the webbing over the tacked end to create a double layer, and tack this down as well, interspersing the tacks with the first set.

Stretch and tack. Stretch the webbing across the frame using a webbing stretcher. The webbing should be tight but not enough to distort the frame. Anchor this end of the webbing in a similar way with another double row of tacks. The magnetic-tipped hammer allows you to pick up the tacks while one hand holds the stretcher.



Over and under. When attaching the side-to-side webbing, go over and under the front-to-back webbing to create a weave.

Step 2: Add horsehair



Tack and trim. Apply a layer of rubberized horsehair padding following the outline of the seat. Secure the horsehair with two #3 tacks per side and then use scissors to slightly round over the top edges.

Step 3: Lay on the batting



Start in the middle. Peel apart some 1-in.-thick cotton batting and place a ½-in.-thick piece in the center. Stop 2 in. from the edge.



Move outward. Add progressively larger squares of ½-in.-thick batting. Pull the edges to feather them down onto the rubberized horsehair.



Cover the edging. The third or fourth piece of batting should reach the contoured edges of the rubberized horsehair.

Step 4: Stretch and fit the muslin



Tack lightly. Cut the muslin so it extends 6 in. beyond the frame on all sides. Lightly stretch it over the padding and secure it with one #3 tack centered on the bottom of each frame piece.



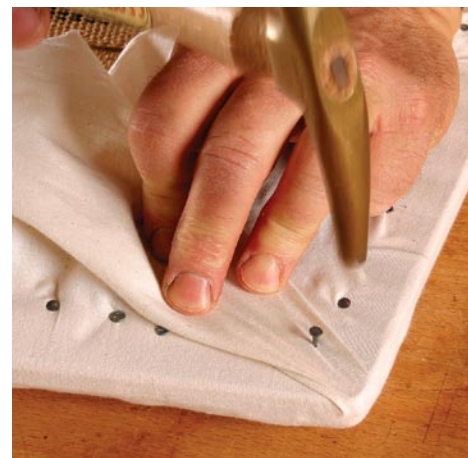
Check the fit and finish. Look at the seat, and sit on it to determine if cotton batting needs to be added or removed.



If it looks good, you can move on. Once satisfied, place the seat facedown. With the muslin held tightly, remove one of the tacks using a tack lifter.



Stretch and tack lightly. Stretch the muslin, making sure there are no wrinkles along the edge of the frame. Apply three tacks, working out from the center. Don't drive them home. Go around the frame, working evenly out from the center of each side, keeping the muslin evenly stretched and wrinkle-free.



Pound them in. Drive the tacks home once you are satisfied that the muslin fits tight without wrinkles. Then place a tack on either side of an imaginary diagonal line from each corner.



Finish with the corners. Pull the flap of muslin out and away from a corner.



Tack it. Holding the flap tight, secure it with two or three more tacks.



Then trim it. Cut away the excess fabric inside the line of tacks.

Step 5: Cover with the finish fabric



The top layer. Don't stretch the finish fabric as tightly as the muslin. Use longer #4 tacks, and make sure the weave and any pattern are oriented correctly.



Pull to remove wrinkles. Ensure that wrinkles are eliminated, particularly at the corners.



Trim the excess. Cut away surplus fabric to leave the underside of the frame as flat as possible.

SOURCES OF SUPPLY

The upholstery tools and materials can be found at upholsterysupplies.com

For one seat frame, you will need 2 to 3 yds. of 3½-in.-wide jute webbing, several feet of rubberized horsehair padding, 1 to 2 yds. of 1-in.-thick cotton batting, and 2 to 3 ft. of cotton muslin, black cambric, and your choice of finish fabric. Upholstery or blue tacks work better than staples because you can partially sink them and then remove them if the upholstery material needs moving. You'll need #3, #4, and #6 sizes.



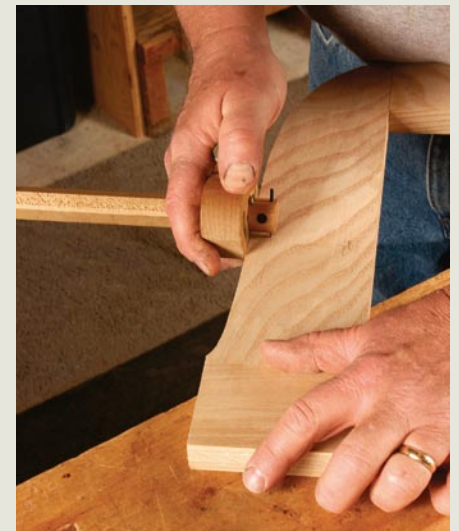
Hide your work. To finish, tack or staple down black fabric to hide and protect the webbing and padding.

How to fit a seat frame to a curved chair

On a seat whose rails are not straight, such as the corner chair featured on pp. 62-69, you'll need to transfer the chair's shape to the seat frame. Place the frame on top of the front rails with the back sides about ⅜ in. away from the back rails. Trace the profile of the front rails onto the underside of the frame and cut this out on the bandsaw. Now use a marking gauge to draw a line ½ in. inside this curve and head back over to the bandsaw. Test the fit until there is an even gap between the frame and the chair rails. Ease all the edges and chamfer the top front edges.



Matching curves. Transfer the curve of the chair rails to the underside of the slip-seat frame.



Cut twice, scribe once. After bandsawing the line you just drew, scribe a parallel line ½ in. to the inside and saw it, too.