Do It Yourself

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Contemporary Headboard -- Mockup, Template and Frame

From "Wood Works"

episode WWK-107 -- More Projects »

In this project, host David Marks demonstrates the major steps in the construction of a contemporary-styled mahogany headboard designed to fit a queen-sized bed. The frame features sections of mahogany joined together in a gracefully curved design. The mahogany panel set into the frame adds style and strength. Solid-mahogany rails span the tapered legs, and a potassium-dichromate finish adds depth and rich tones to the wood.

Materials:

Mahogany stock

1/8" MDF (medium-density fiberboard) for mockup

1/2" MDF for template

Table saw

Jigsaw

Band saw

Table router; slot-cutter bit

Handheld router; bearing bits

Pattern-maker's rasp

Carpenter's pencil

Two bricks; clamps

Saftety glasses or goggles

Note: Cut sizes may vary. For exact measurements, please contact David Marks through his website -- information below under Resources.

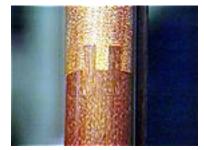
Safety Alert: *Always* wear safety goggles or safety glasses when working with wood, saws, drills, routers, etc.

Steps:

1. In a project like this one -- which features large, sweeping curves-- it will be necessary to construct a plywood template to use as a



This headboard, designed to fit a queen-sized bed, is highlighted by a sculpted mahogany frame with elegantly tapering curves.



Exposed-spline joinery is used to hold the frame-members together, creating the curved form.



Figure A

guide. Even before the template is made, it's also advisable to begin with a full-size **mockup** to get a sense of the full scale of the design (**figure A**). In this demonstration, the mockup was cut out of 1/8" MDF (medium-density fiberboard). The 1/8" MDF works well for a mockup, since it's stiffer than paper but not stiff enough to be used as a template.

- 2. The **template** is cut from 1/2" MDF. The mockup is laid over a sheet of 1/2" MDF (**figure B**), and the lines from the mockup are transferred to the thicker MDF in order to create the template.
 - **Tip**: If the lines in your mockup aren't perfectly symmetrical, simply trace the lines onto the sheet for the template, then flip the mockup over and retrace the lines again. This will give two sets of symmetrical curves. Select the ones that are best for cutting the template.
 - Tip: To create the curves for the mockup, use a thin, flexible strip of wood clamped to a brick at either end. Position the bricks so that the strip of wood is bowed in a curve (figure C). Adjust the positioning of the bricks until you get a curve and span that's suitable. Once you've arrived at a curve that's pleasing to the eye, trace the curve onto the MDF for creating the mockup.
- 3. With the design tracings transferred from the mockup to the 1/2" MDF, use a jigsaw to cut out the template (**figure D**).
- Once you've cut out the form of the template, use a patternmaker's rasp to clean up the rough edges left by the jigsaw (figure E).
- 5. The mahogany stock used in this project is 1-3/4" thick. The stock pieces started out as one long board. In that way, the individual sections could be grain-matched for a uniform pattern. The ends of the individual sections were bevel-cut on the table saw so that they could be pieced together in a roughly curved pattern to match the outline of the template. After placing the individual sections, lay out the template onto the mahogany stock and trace the profile of the headboard (figure F).

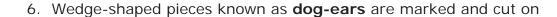




Figure B



Figure C



Figure D



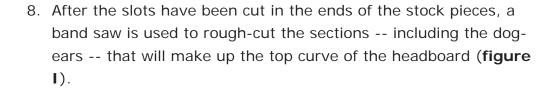
Figure E



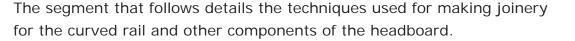
Figure F

the ends of each section. These wedges of extra stock are incorporated into the cut of each section and will assist in clamping the joints together securely during glue-up.

7. Before cutting away the extra stock from the frame sections, the joinery that will hold them together is cut. An exposed-spline joint is used to hold the members of the frame together. The joint is created using a slot-cutting bit on the table router. A pair of dado-slots are cut into the end grain of each member (figure G). Later, after the frame has been shaped into its curved design, the members are joined using wood splines (figure H). The splines fit snugly into the dados to hold the pieces together.



- 9. Dog-ears are also cut on the two straight pieces of stock (**figure J**) that will be used to make the legs of the headboard.
- 10. A handheld router is used to clean up the inside surfaces of the leg pieces to prepare them for making their joinery. Two separate router bits are used for this process (figure K) -- one with a bearing on top, and one with a bearing on the bottom. The first bit cuts a smooth surface, using the straight edge of the stock as a template (figure L). The leg piece is then flipped over, and the bearing on the bottom of the second bit uses that smooth surface as a guide for the second cut.



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RESOURCES:

Fine Woodworking

A magazine devoted to high-quality craftsmanship in woodworking. The Taunton Press Inc



Figure G



A slot-cutter bit is used on a table router for creating the exposedspline joints that hold the frame-members together.



Figure H



Figure I

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Woodworking Techniques: Best Methods for Building Furniture from Fine Woodworking

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Mastering Woodworking Machines (Fine Woodworking Book)

Model: 0942391985 Author: Mark Duginske

David Marks Website

David Marks, DIY's *Wood Works* host, is a master woodworker. For more information on cut sizes and project details, please contact him via his Website at www.djmarks.com

Beds and Bedroom Furniture: The Best of Fine Woodworking

Model: 1561581917

Author: Editors of Fine Woodworking

(1997)

The Taunton Press Inc Newtown, CT 06470 Phone: 203-426-8171 Fax: 203-426-3434

Email: service@taunton.com

The Complete Woodworker's Companion

Model: 0823008665



Figure J



Figure K



Figure L

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Author: Roger Holmes

(1996)

Watson-Guptill Publications Lakewood, NJ 08701-9914

Phone: 908-363-5679

Fax: Private

The Complete Book of Wood Joinery

Model: 0806999500

Author: Richard J. Descistoforo

(1997)

Sterling Publishing Co. Inc.

New York, NY 10016 Phone: 212-532-7160 Fax: 800-542-7567

Advanced Woodworking

Model: 0783539126

Author: Editors of Time Life Books

1998

Time-Life Books Inc. Alexandria, VA 22314 Phone: 703-838-7000

Fax: 703-518-4124

Popular Woodworking Magazine (F & W Publications, Inc.)

F & W Publications, Inc. Cincinnati, OH 45207 Phone: 515-280-1721

Website: www.popularwoodworking.com

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