

Do It Yourself

To print this page, select **File** then **Print** from your browser

URL: http://www.diynet.com/diy/ww_beds_furniture/article/0,2049,DIY_14438_2274599,00.html

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

Safety 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**).
4. Once you've cut out the form of the template, use a pattern-maker'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**).
6. Wedge-shaped pieces known as **dog-ears** are marked and cut on



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.
8. After the slots have been cut in the ends of the stock pieces, a band saw is used to rough-cut the sections -- including the dog-ears -- that will make up the top curve of the headboard (**figure I**).
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.



Figure G



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



Figure H



Figure I

The segment that follows details the techniques used for making joinery for the curved rail and other components of the headboard.

Sponsored Resource

> [Click here](#) to order your tools and materials for this project from Woodcraft!

RESOURCES:

Fine Woodworking

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

Newtown, CT 06470
Phone: 203-426-8171
Fax: 203-426-3434
Email: service@taunton.com

The Small Wood Shop (The Best of Fine Woodworking)

Model: 1561580619
Author: Helen Albert (Editor)

Woodworking Techniques: Best Methods for Building Furniture from Fine Woodworking

Model: 1561583456
Author: Fine Woodworking Magazine
The Taunton Press Inc
Newtown, CT 06470
Phone: 203-426-8171
Fax: 203-426-3434
Email: service@taunton.com

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

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. Descistofofo
(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

• **ALSO IN THIS EPISODE:**

[Contemporary Headboard -- Mockup, Template and Frame](#)

[Contemporary Headboard -- Joinery](#)

[Contemporary Headboard -- Frame Completion and Back-Panel](#)

[Contemporary Headboard -- Shaping and Finishing](#)