

Beyond the basic Box

Exploratory laser cutting

Finger joints:

simple corresponding notches along edges that are joined.



Online automatic finger joint generators:

<http://www.makercase.com/>
<http://boxmaker.connectionlab.org/>
<http://makeabox.io/>

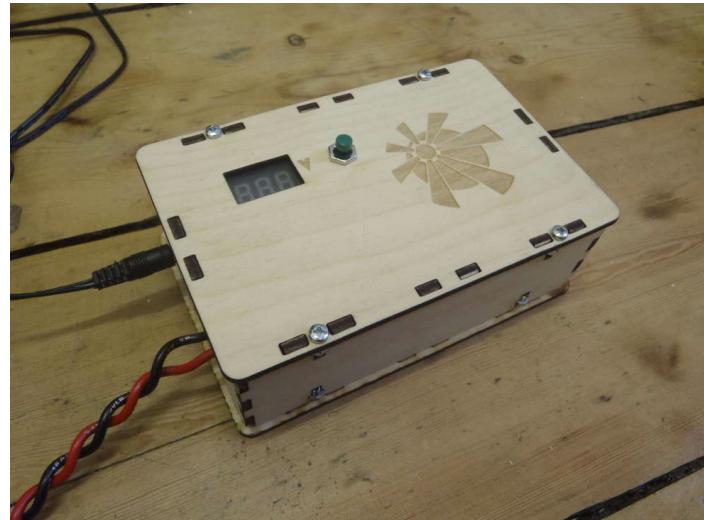
Finger joints are simple, strong but can be very distracting from an aesthetic standpoint. You can simplify by reducing the number of actual notches



Tab and Slot

Edges can also be joined by Tab and Slot joints.

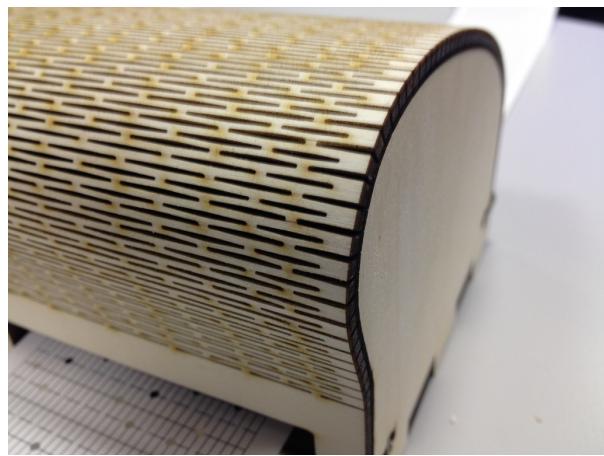
As titled, tab and slots consist of a part or wall of a box with a positive tab that aligns with a corresponding slot in the other part or wall.



Tab and slot can be modified to allow a fastener to be used. Fasteners allow for disassembly.

Flexible/Radius

Joining walls can be eliminated by reducing the number of parts and bending the material where a corner is desired. Ridgid sheet material can be made flexible by cutting relief slots in the material which allows it to flex. The radius of the bend depends on the percentage of material removed and can be fixed by the other panels of the enclosure (top and bottom, if the vertical corners are radii, Sides or end caps if the horizontal corners are radii).





Patterns and more information on flexible sheet cuts can be found here:

<http://www.instructables.com/id/Curved-laser-bent-wood/>

You can also glue together edges in a Lap Joint or Butt Joint but the strength is limited .
CNC joinery shares much in common with laser cut joining so I include this reference for CNC Joints:

<http://makezine.com/2012/04/13/cnc-panel-joinery-notebook/>

The image deck from class lecture is Link on the Class page