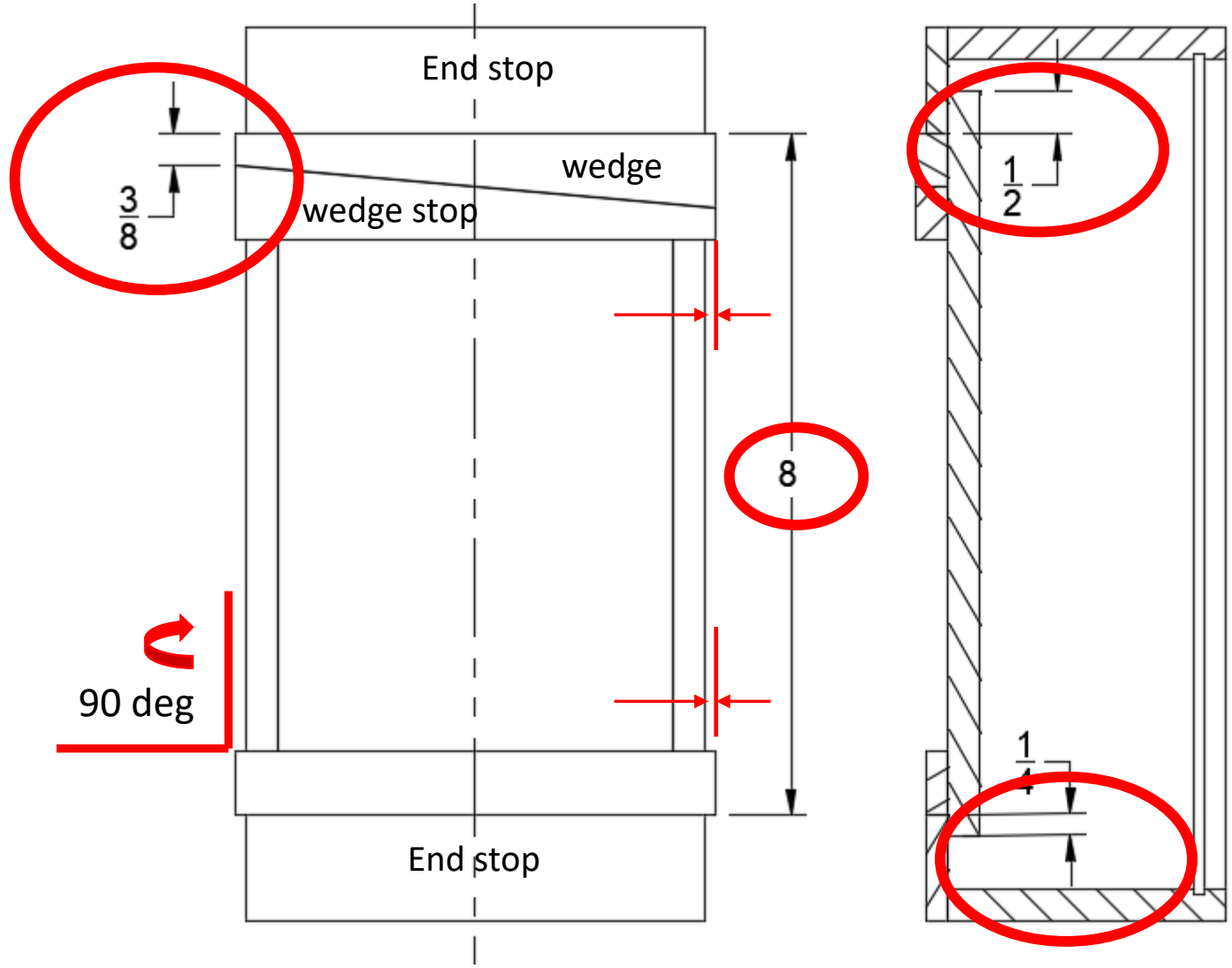
Japanese Toolbox build

October 2024

- Important dimensions:
  - Squareness
  - Lid interlock overlap
- Box sides:
  - Minimize trimming dovetails
  - Sizing dados for bottom of box
- Box end stops:
  - Start oversize, trim later
  - Fixture to get parts square and to specific spacing
- Wedge:
  - Getting correct angle on key and stop
  - Wedge and stop glue up
  - Aligning wedge with jigs

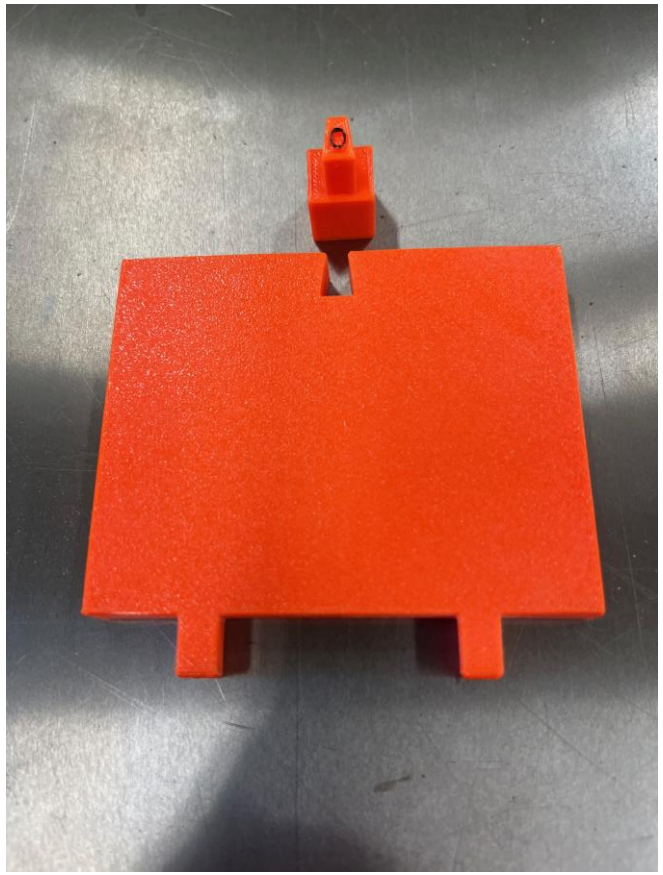
- Important dimensional relationships:



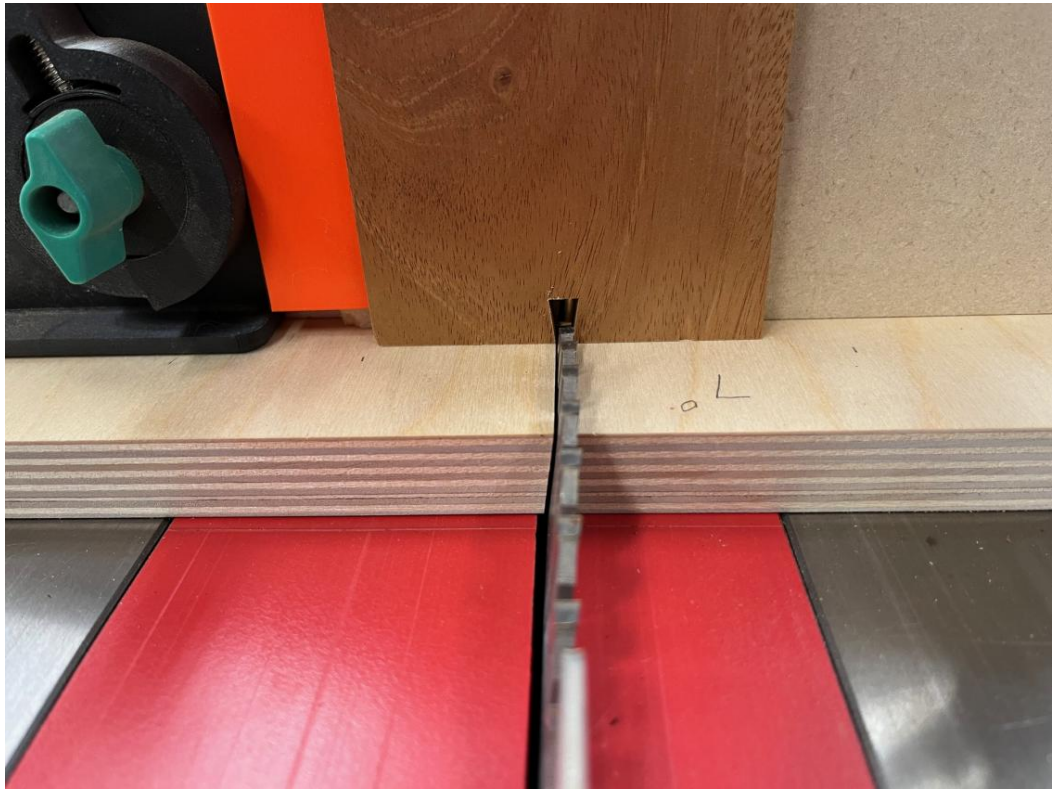
- Inexpensive digital gauge helps to get targeted part thickness

Cutting dovetails

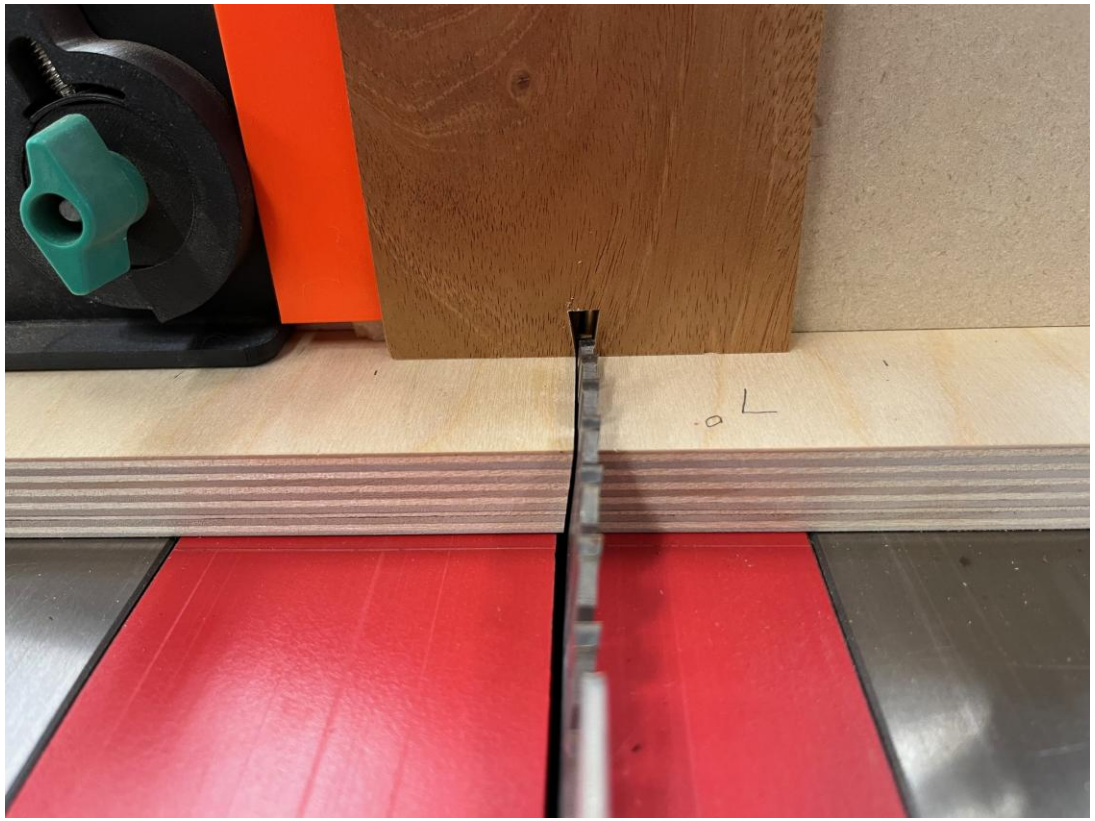
- Custom gauges allow faster setup of dovetail fixture with fewer iterations in actual side pieces.



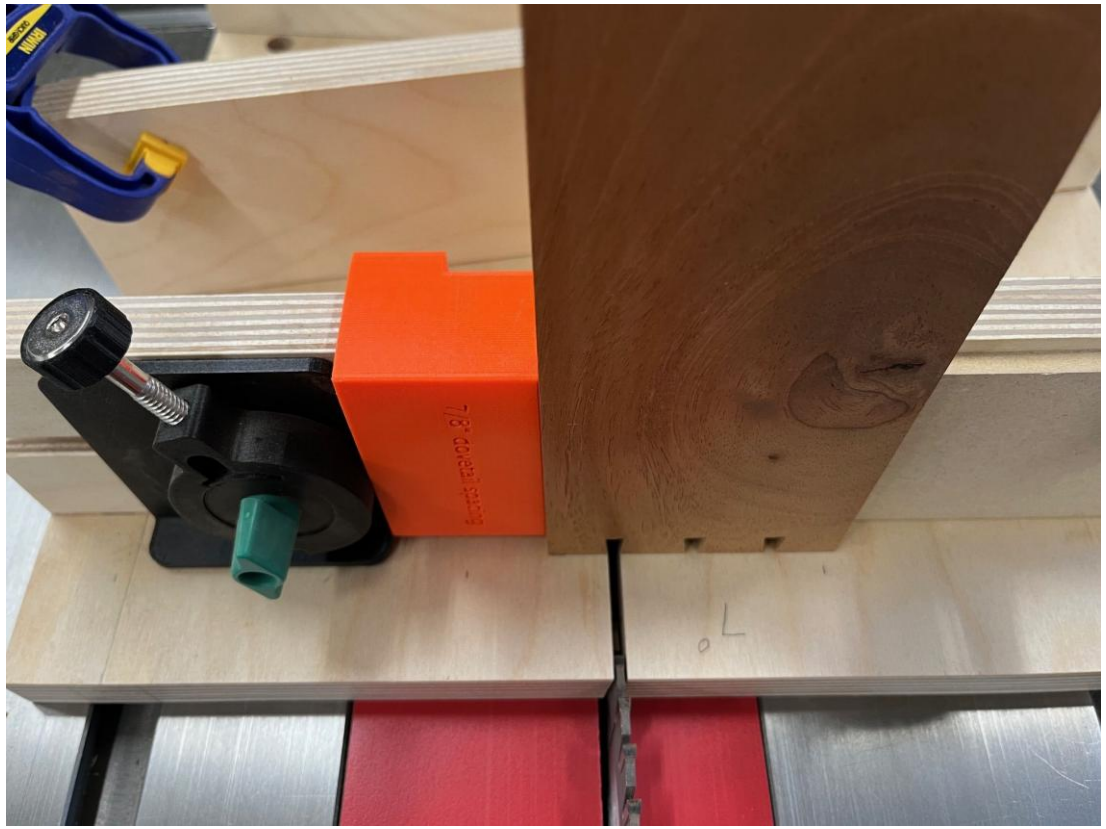
- Tails are cut first. Fixture makes them symmetric and evenly spaced.



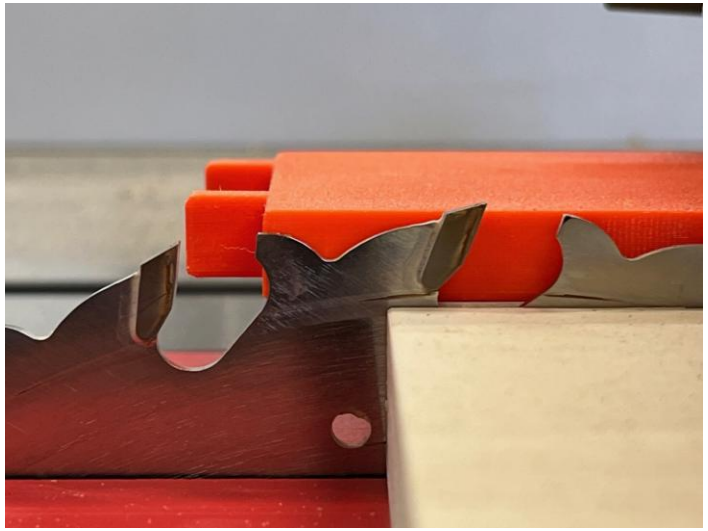
- Use spacer to cut center clearance first.
- Check with gauge and correct as needed with eccentric adjuster.

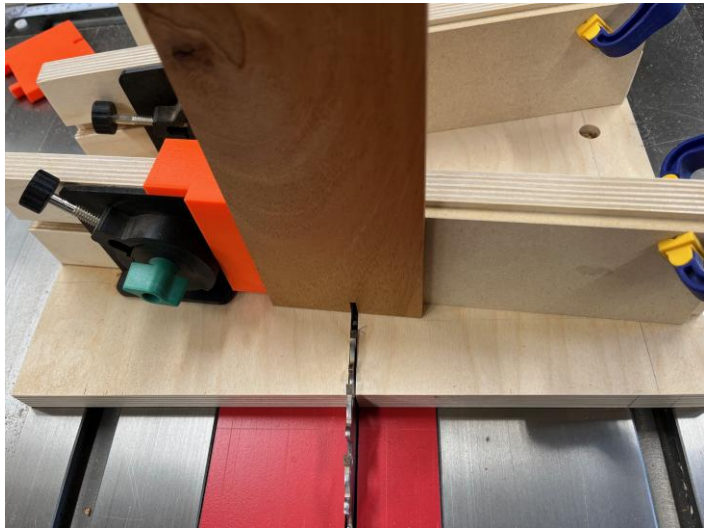


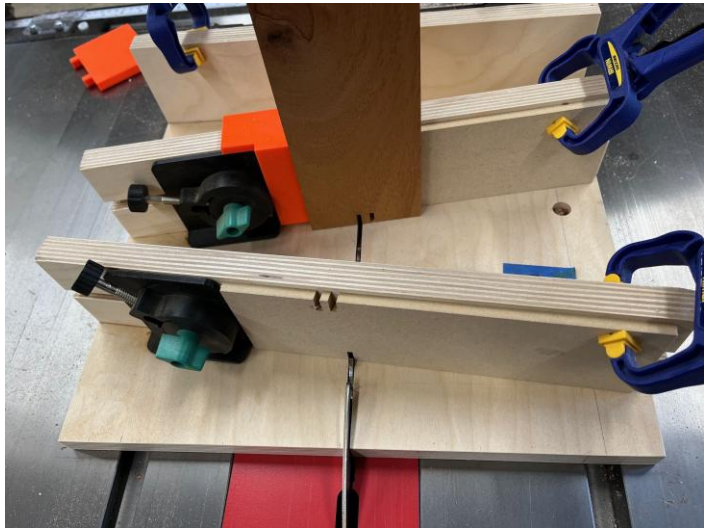
- Part is flipped front to back and top to bottom, creating symmetry.



- Pins are cut next.
- Set length of pin first, then cut center pin to check size
- One cut on each angled fence.

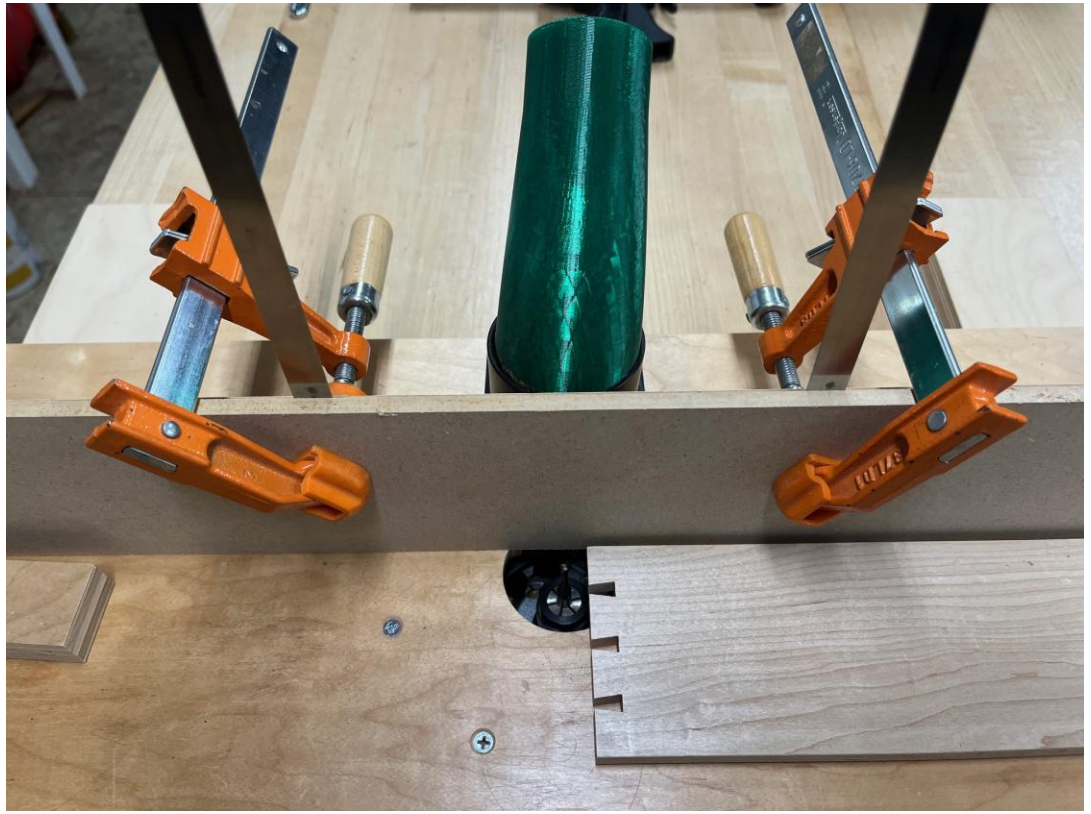




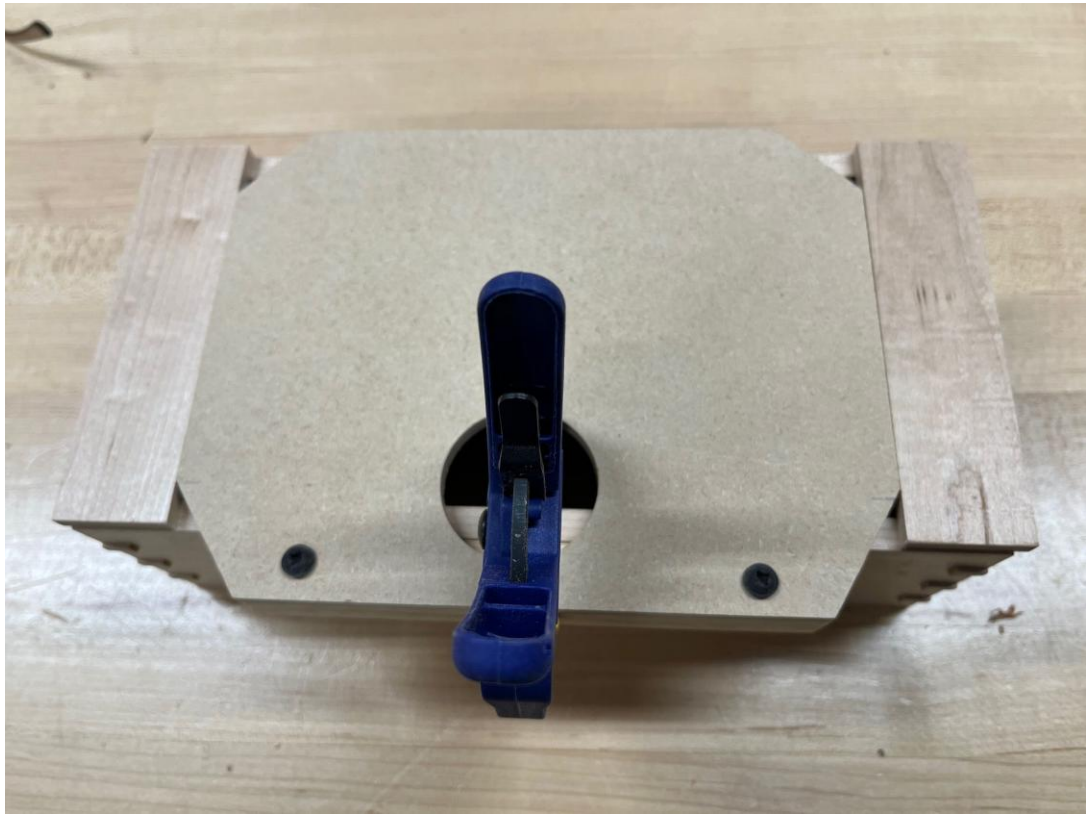


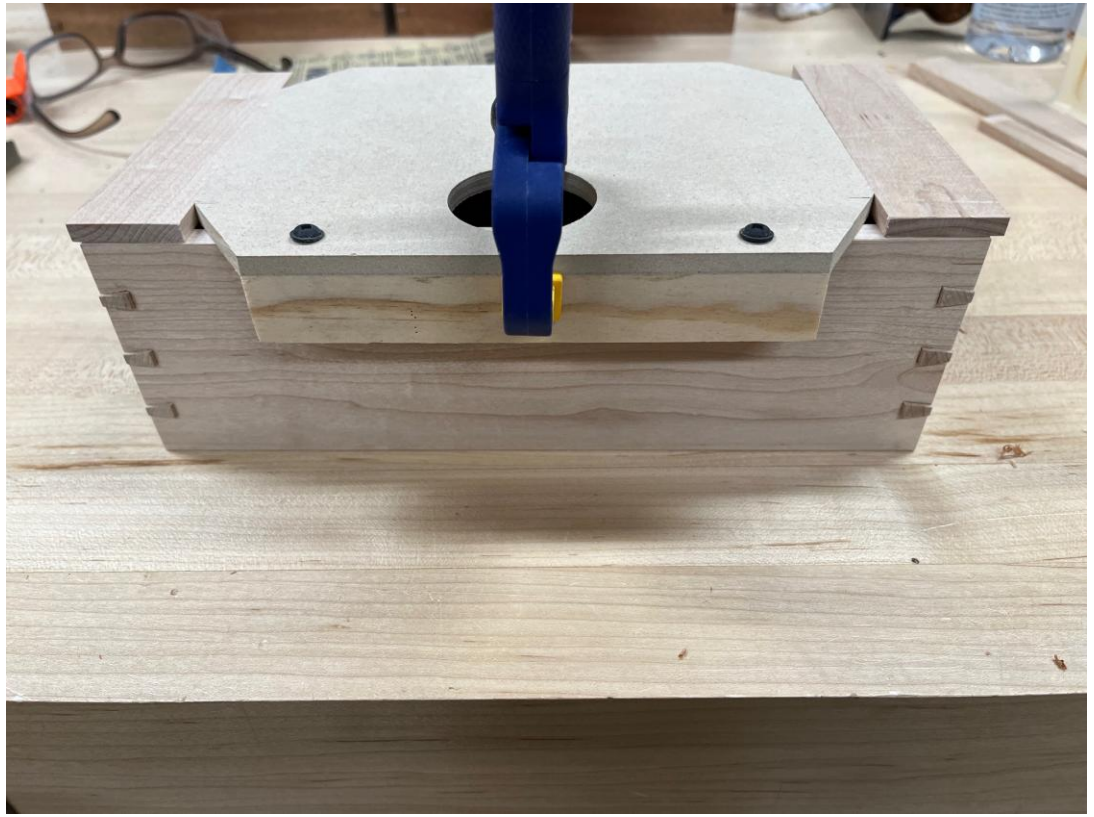
- Measuring pin, adjust fixture as needed:

- Cut stopped dado for bottom of box.
- Plywood thickness doesn’t match router bit – take 2 passes, moving fence between cuts with shim stock:

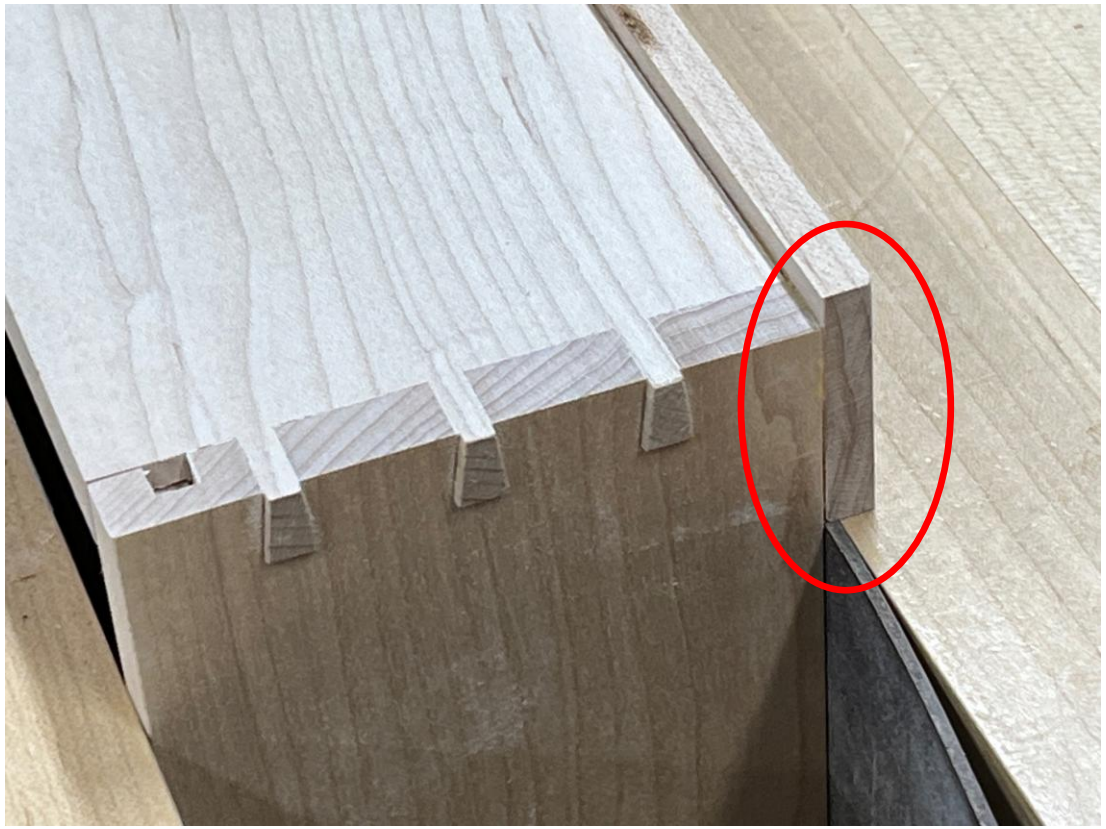


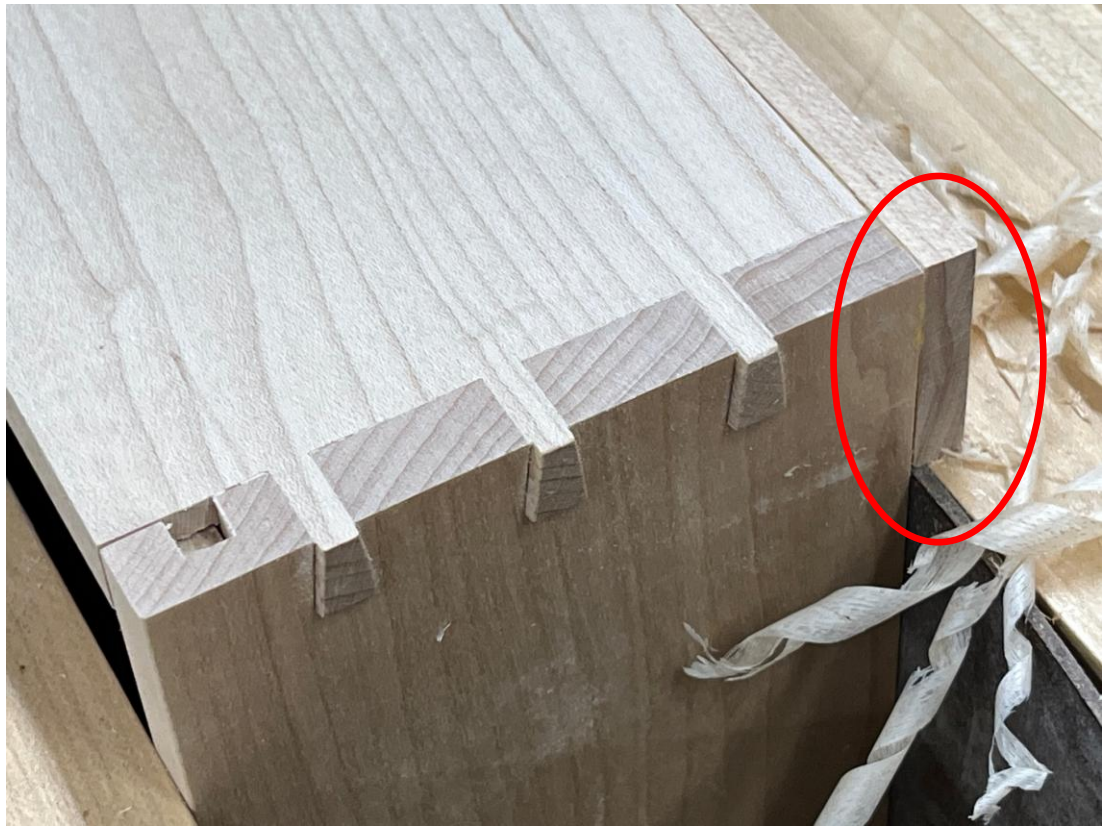
- Set top end stop distance and squareness





- Trim flush to end of box – allows for tolerance



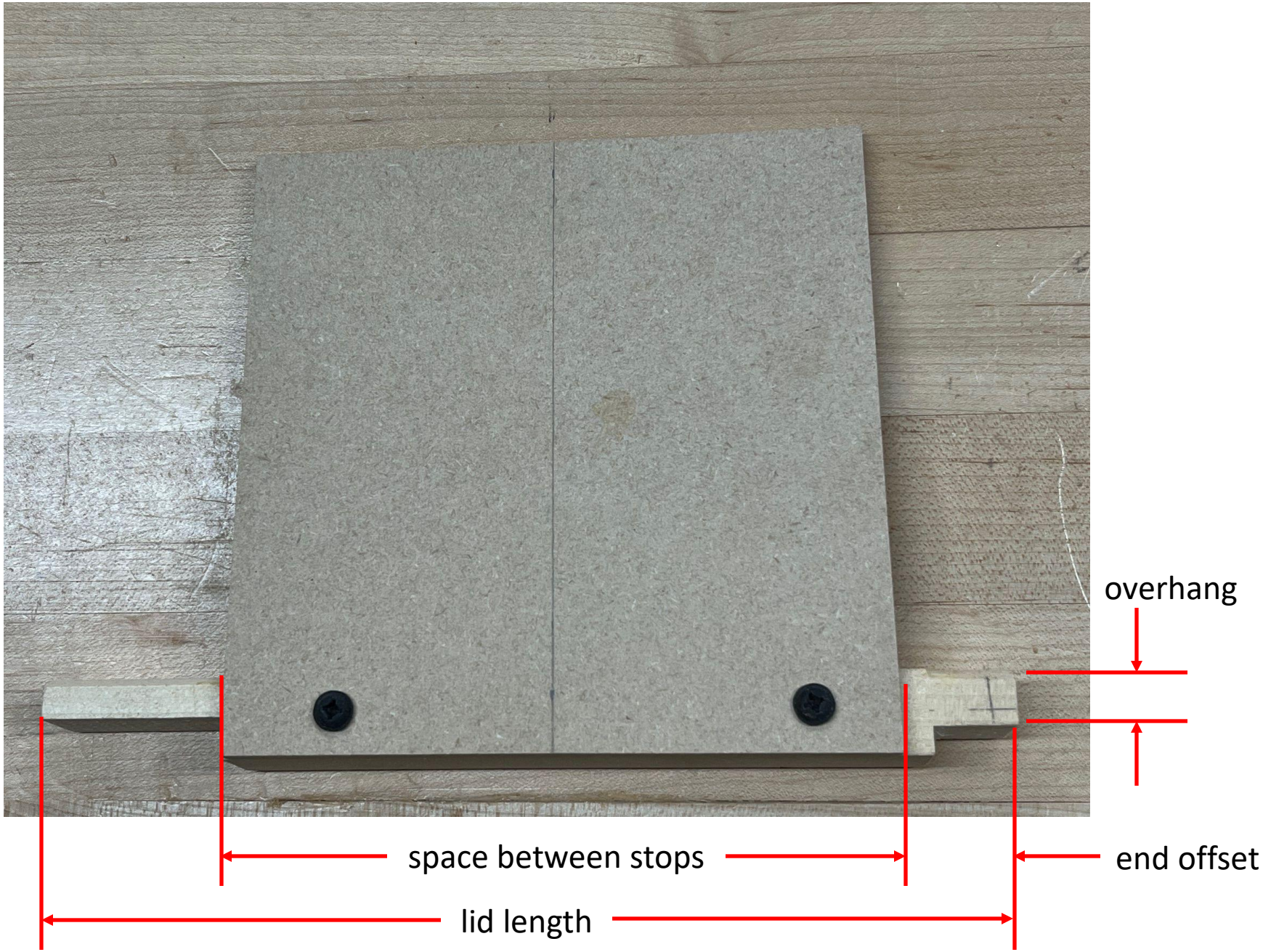


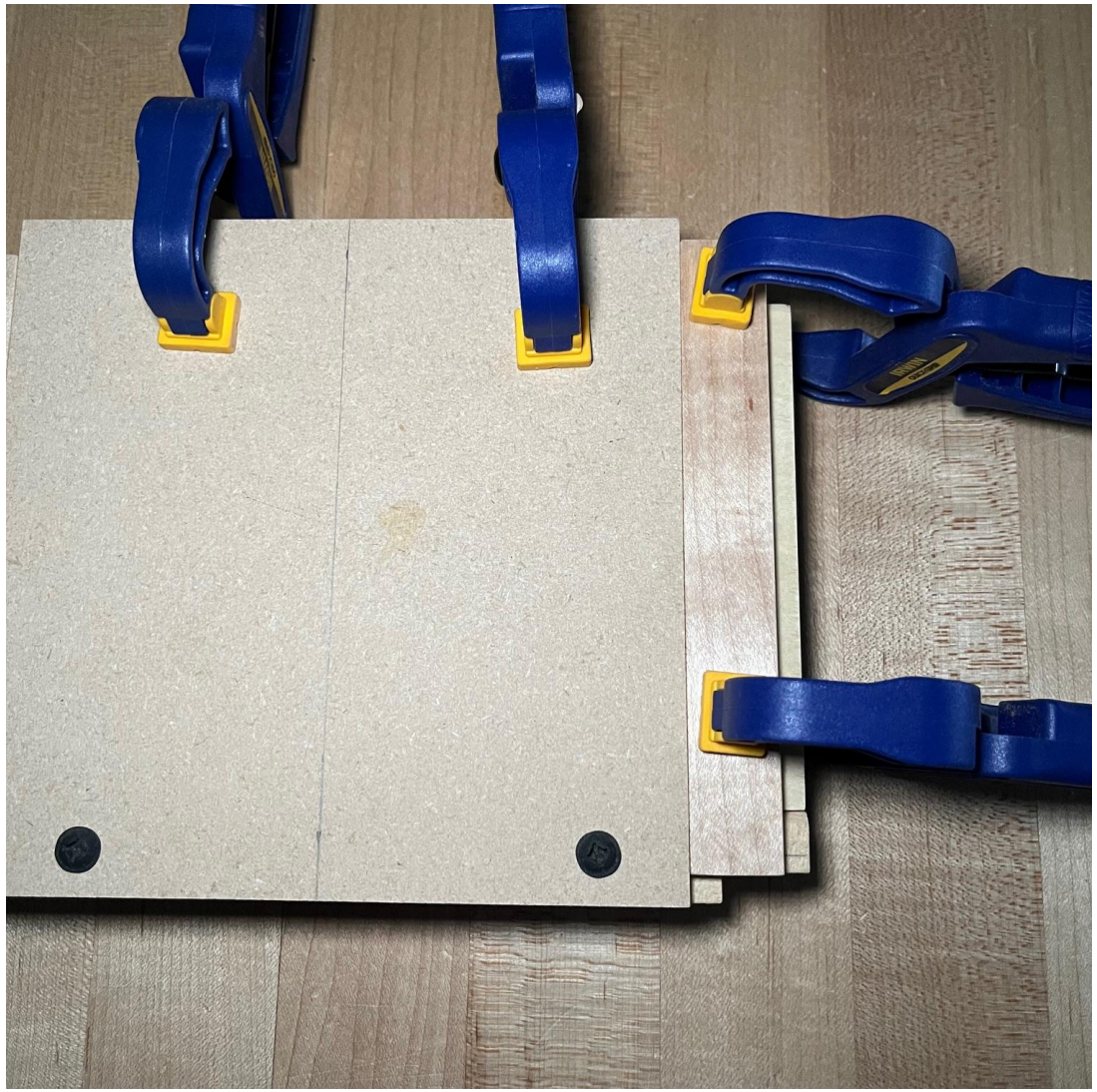
- Angle on wedge and wedge stop need to match.

These edges need to be parallel and at a specific distance apart

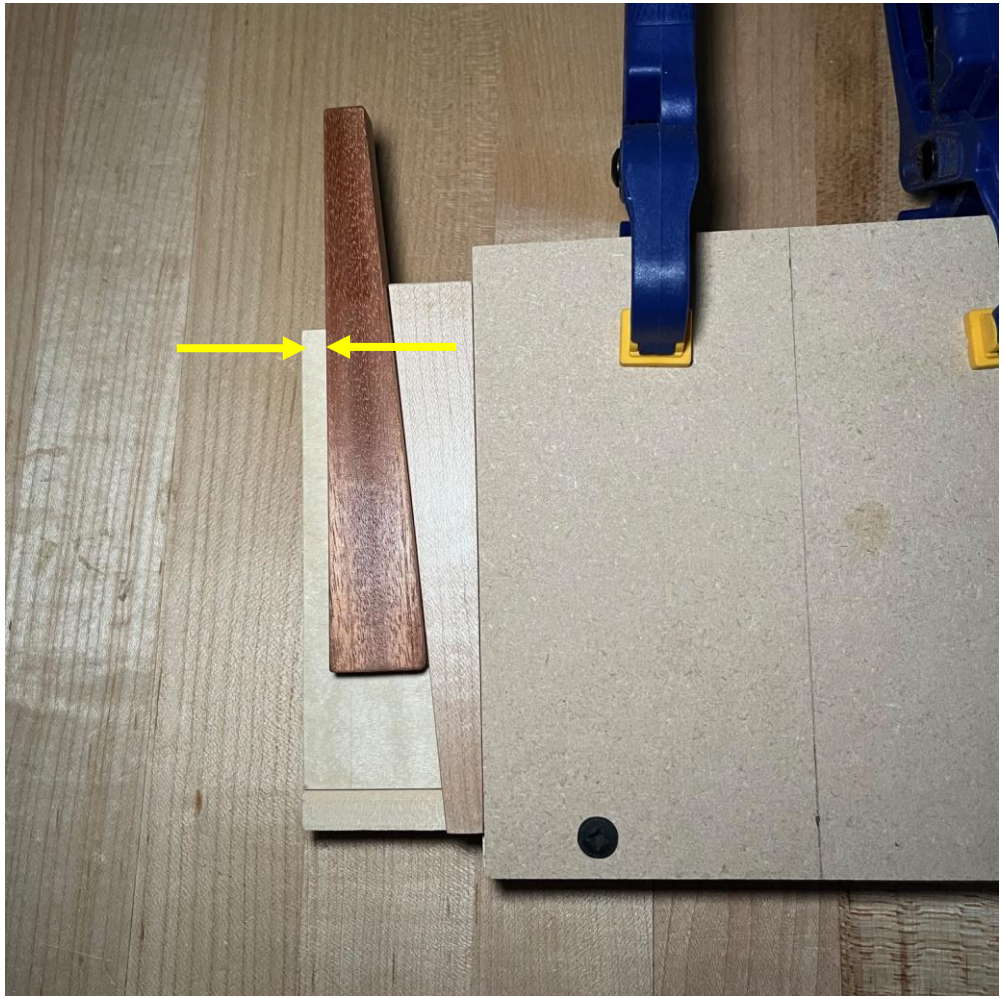
- Fixture for routing wedge and wedge stop.
- Center part has parallel sides and is set to correct angle.
- Wedge and wedge stop are pattern routed on opposite sides of fixture.

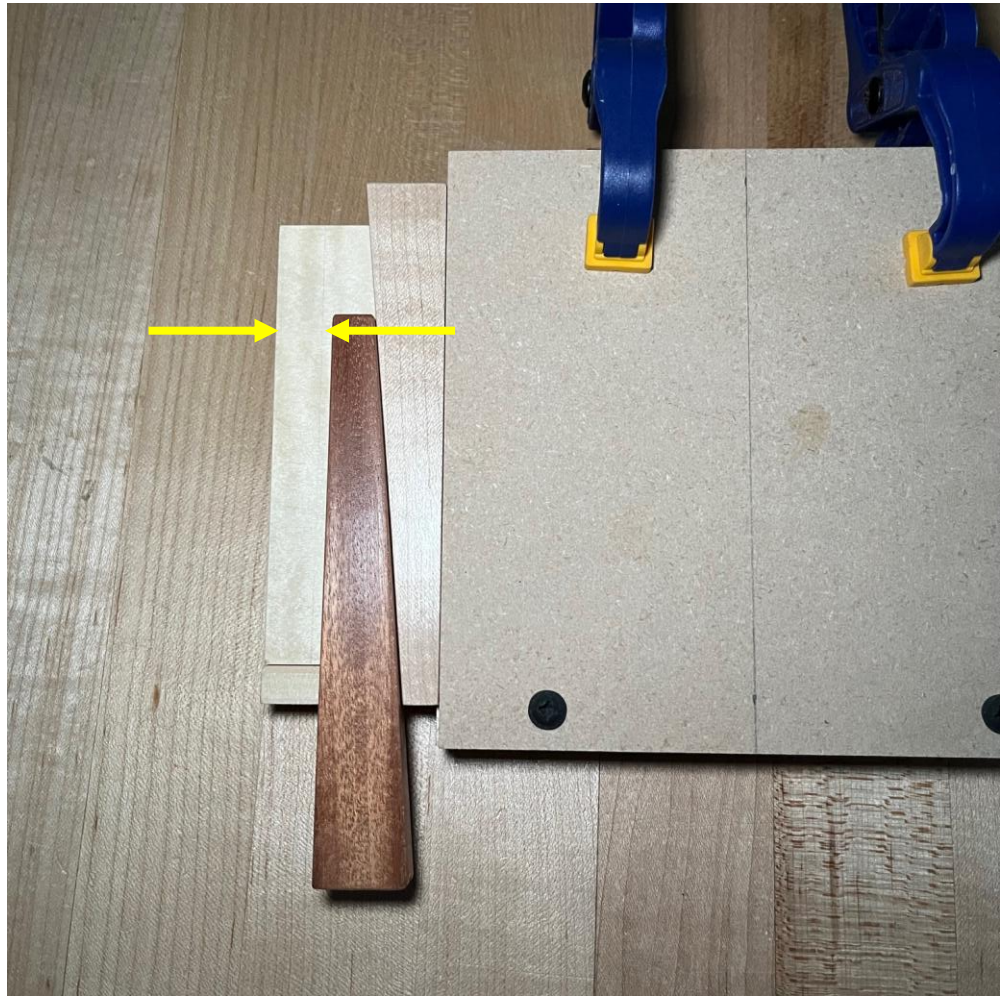
- Jig for alignment of parts on lid:

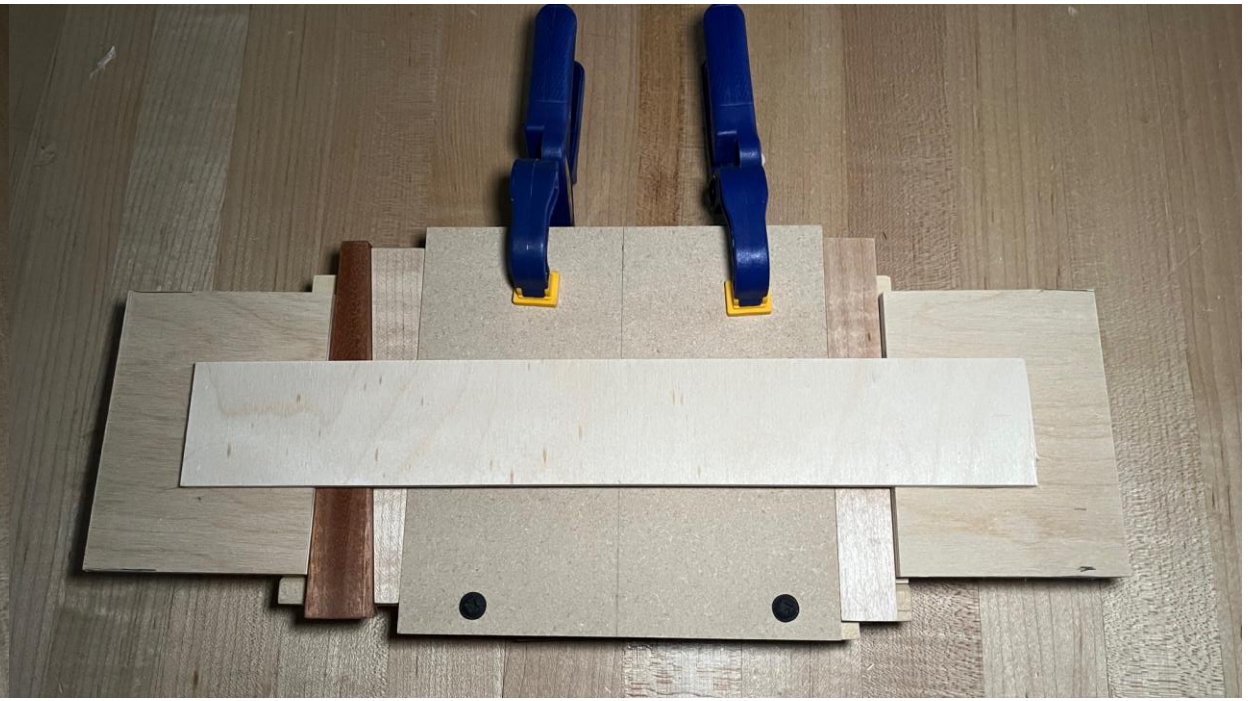




- With spacing correct, wedge engagement still needs to be set







distance between end stops