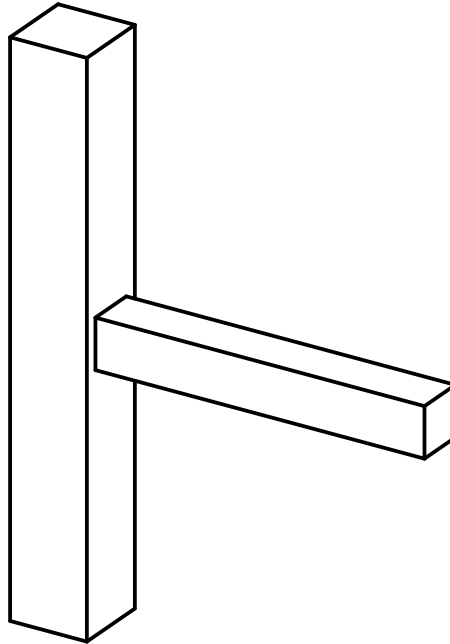


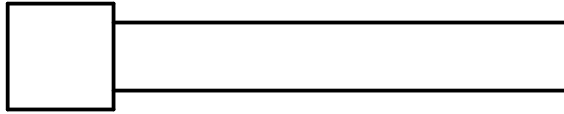
Thick rail tenons



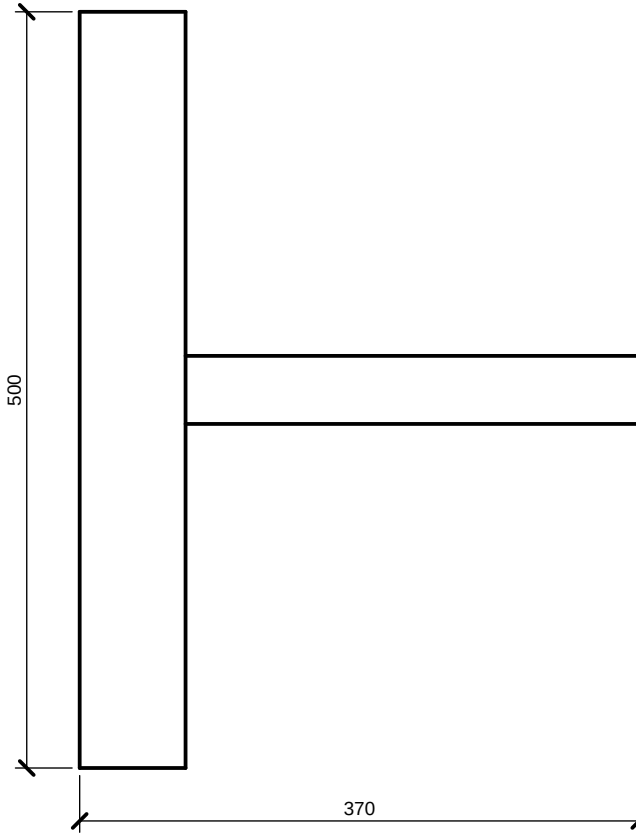
parts	2
overall	370 x 70 x 500 (W x D x H)
material	oak
date	2026-10-25
made with	woodwright 0.9.0

Contents

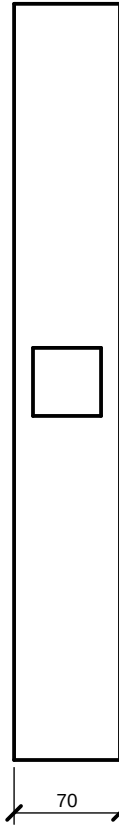
Drawings	3
Assembly	3
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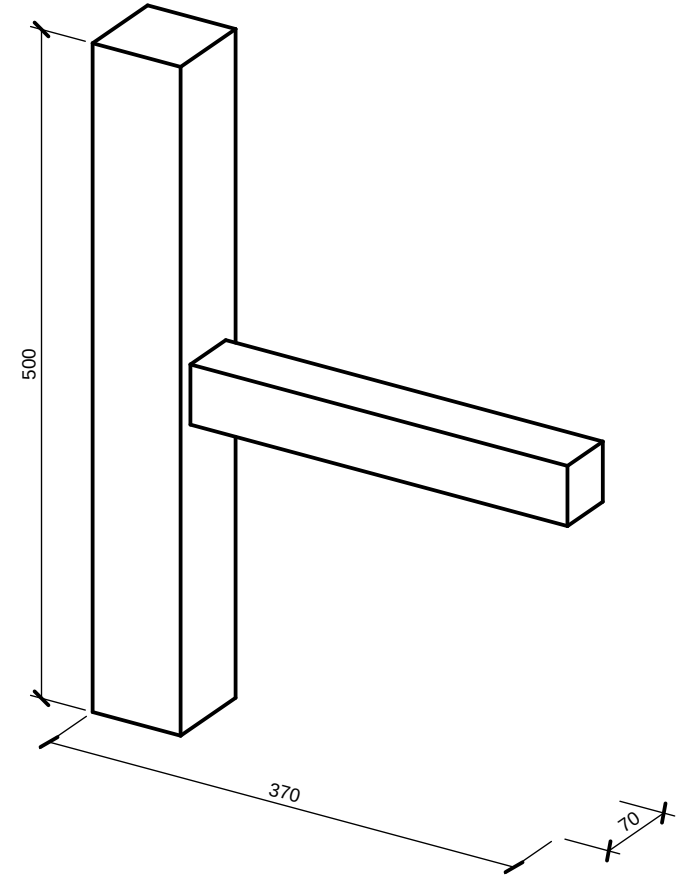
TOP



FRONT

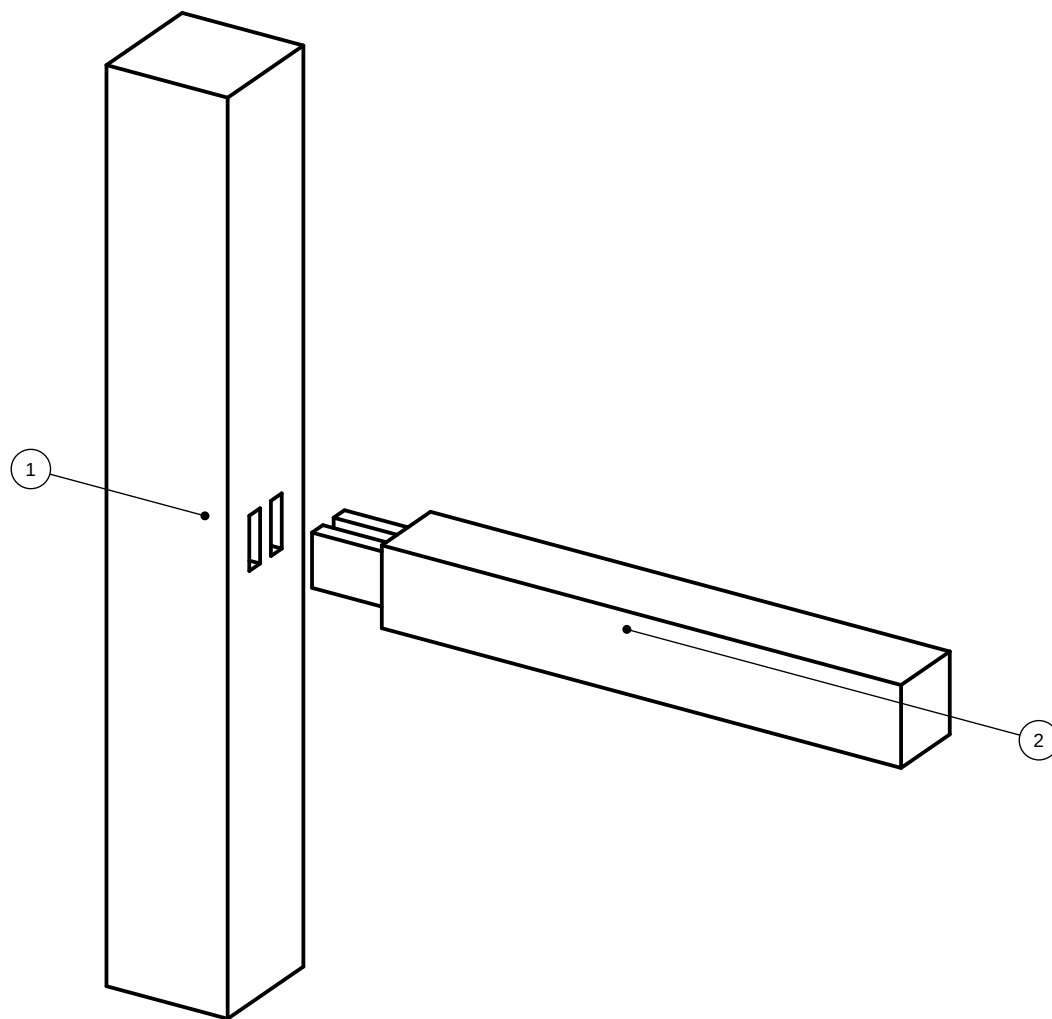


RIGHT SIDE



ISOMETRIC

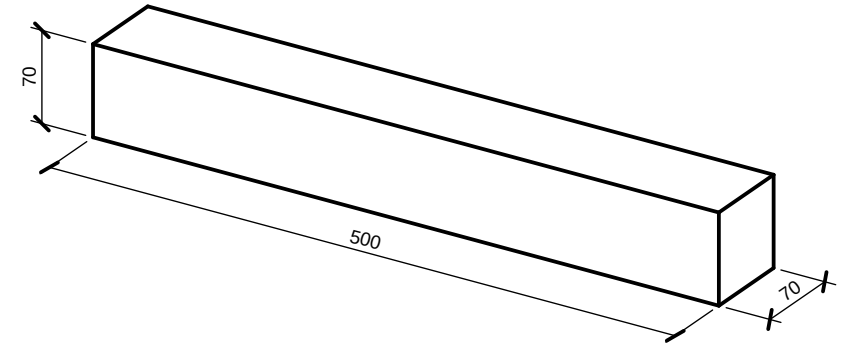
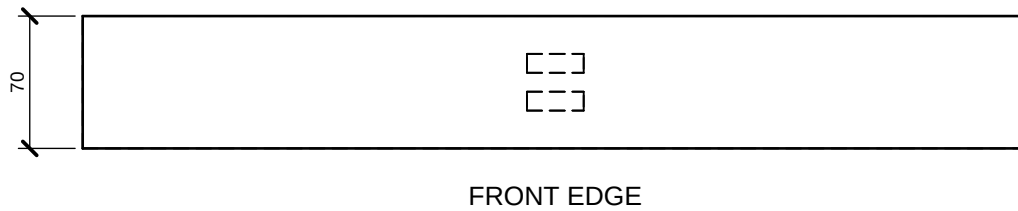
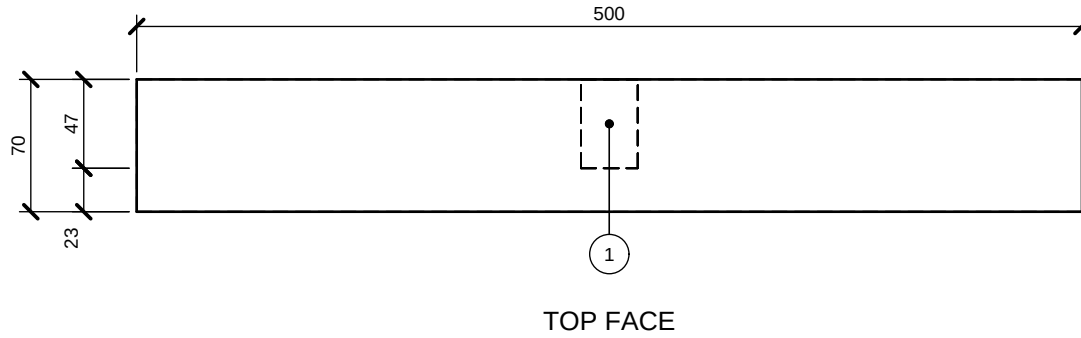
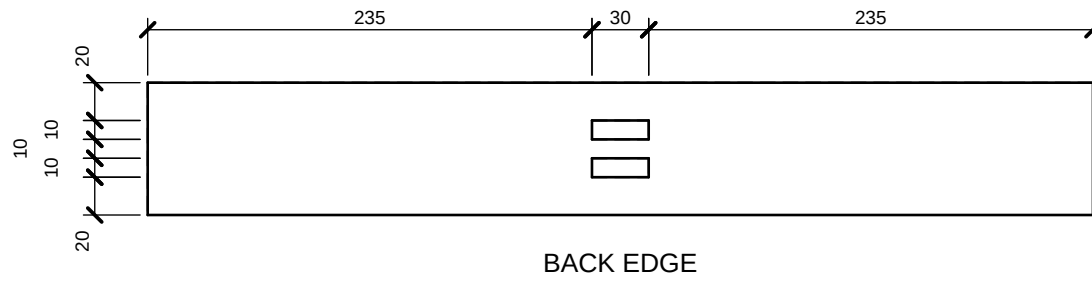
assembly	thick_rail_tenons
parts	2
overall	370 x 70 x 500 (W x D x H)
material	oak
scale	1:5, mm



no.	part	qty	cut size (L x W x T)	material
1	post	1	500 x 70 x 70	oak
2	rail	1	345 x 45 x 45	oak

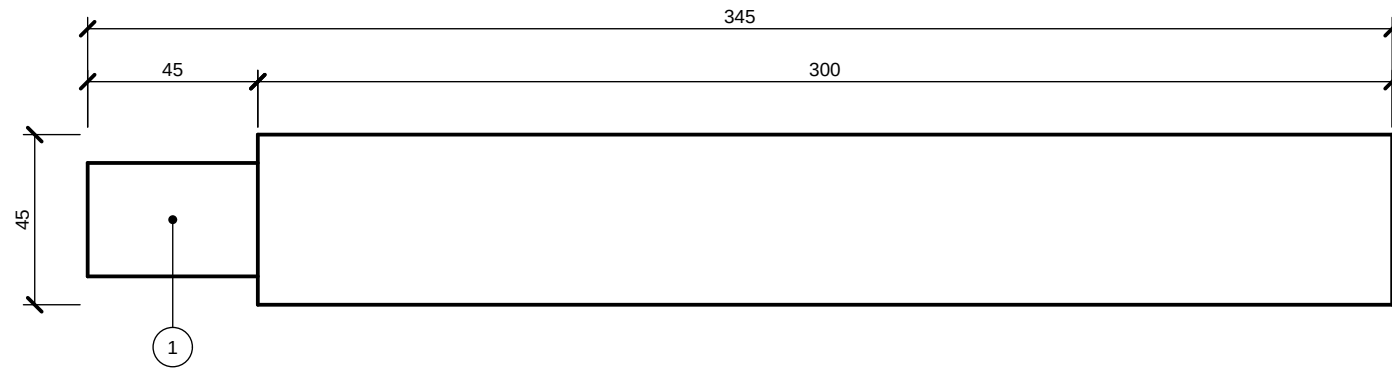
EXPLODED

assembly	thick_rail_tenons
parts	2
overall	370 x 70 x 500 (W x D x H)
material	oak
scale	not to scale, mm



1 2 x mortise 30 x 10 mm, 47 deep, in back_edge

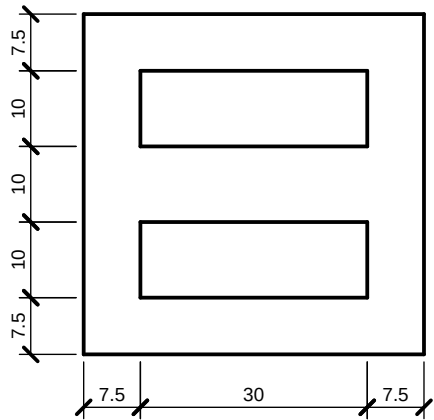
part	post
of	thick_rail_tenons
make	1
cut size	500 x 70 x 70
material	oak
scale	1:4, mm



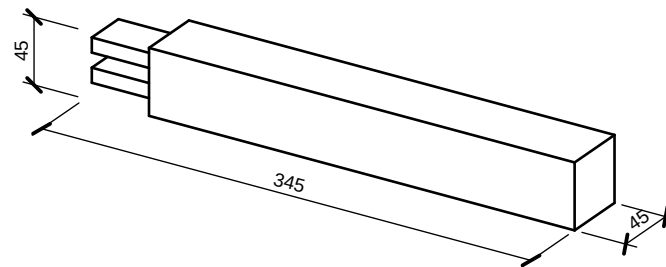
TOP FACE



FRONT EDGE



LEFT END 1:1



ISOMETRIC

part	rail
of	thick_rail_tenons
make	1
cut size	345 x 45 x 45
material	oak
scale	1:2, mm

1 2 tenons 30 x 10 mm, 45 long, 10 apart across the thickness, on left_end

Cut list

post 500 x 70 x 70 mm oak
- 2 x mortise 30 x 10 mm, 47 deep, in back_edge
rail 345 x 45 x 45 mm oak
- 2 tenons 30 x 10 mm, 45 long, 10 apart across the thickness, on left_end

Appendix: source

Made with woodwright 0.9.0, build123d 0.13.0, Python 3.14.4.

To make these plans again:

```
uvx --python 3.14 woodwright==0.9.0 export joints.thick_rail_tenons
```

joints.thick_rail_tenons, in woodwright/examples/joints.py

```
def thick_rail_tenons() -> Assembly:
    """A thick, square rail (e.g. a bench stretcher) tenoned into a post with
    two tenons one beside the other across its thickness.

    A single tenon a third of the rail thick would be weak in a square
    rail, a thicker one would leave thin mortise walls; two thinner tenons,
    each in its own mortise, give twice the glue area and keep the wood
    between them. Each is as thick as the gap between them and the
    shoulders, about a fifth of the rail; the shoulders at the edges are as
    deep as those at the cheeks.
    """
    return _post_and_thick_rail("thick_rail_tenons", tenons=1, thickness_tenons=2, shoulder=7.5)
```