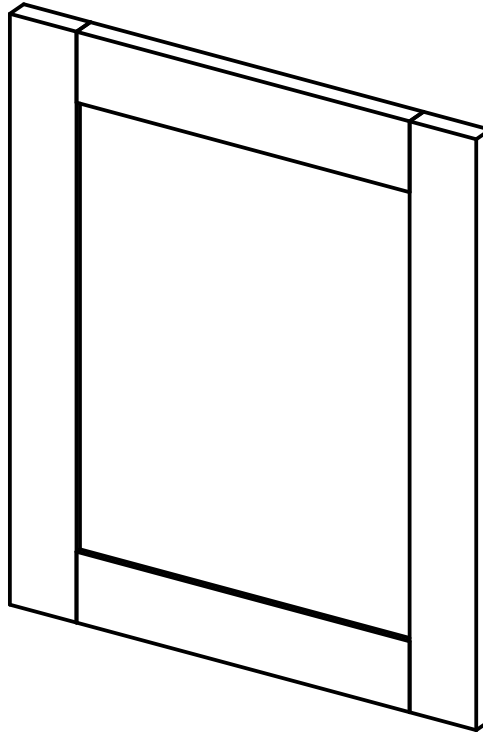


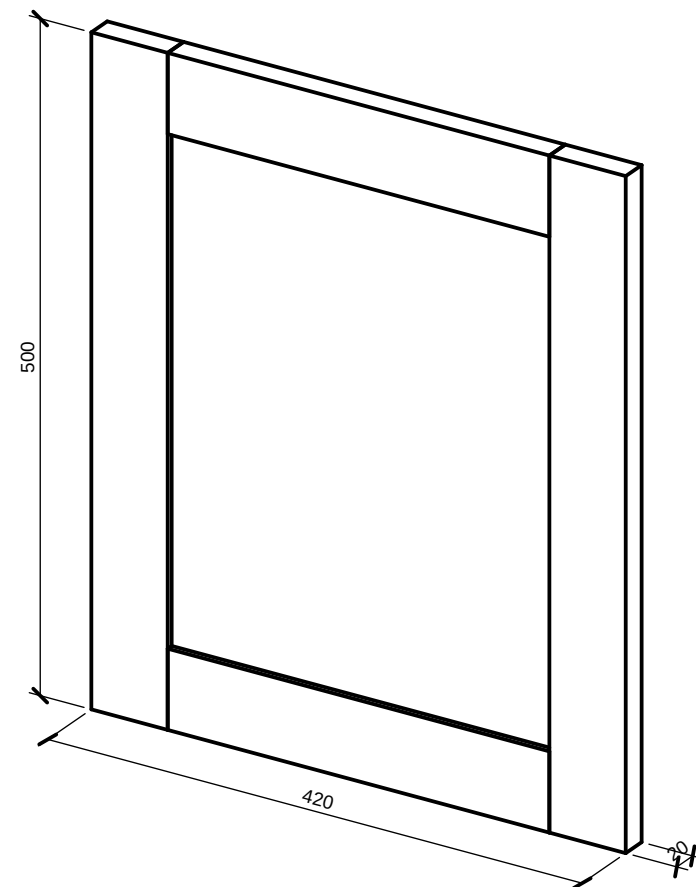
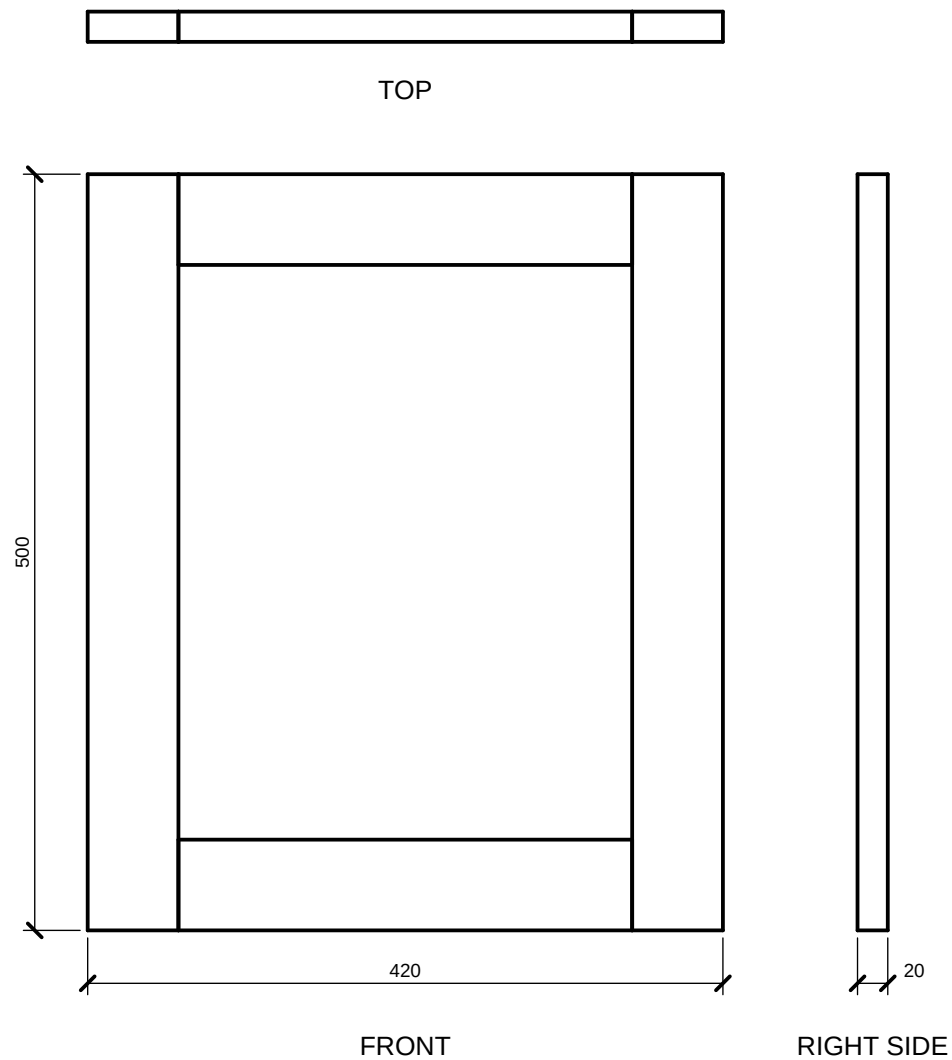
Butt frame and panel



parts	5 (3 different)
overall	420 x 20 x 500 (W x D x H)
material	oak
date	2026-10-25
made with	woodwright 0.9.0

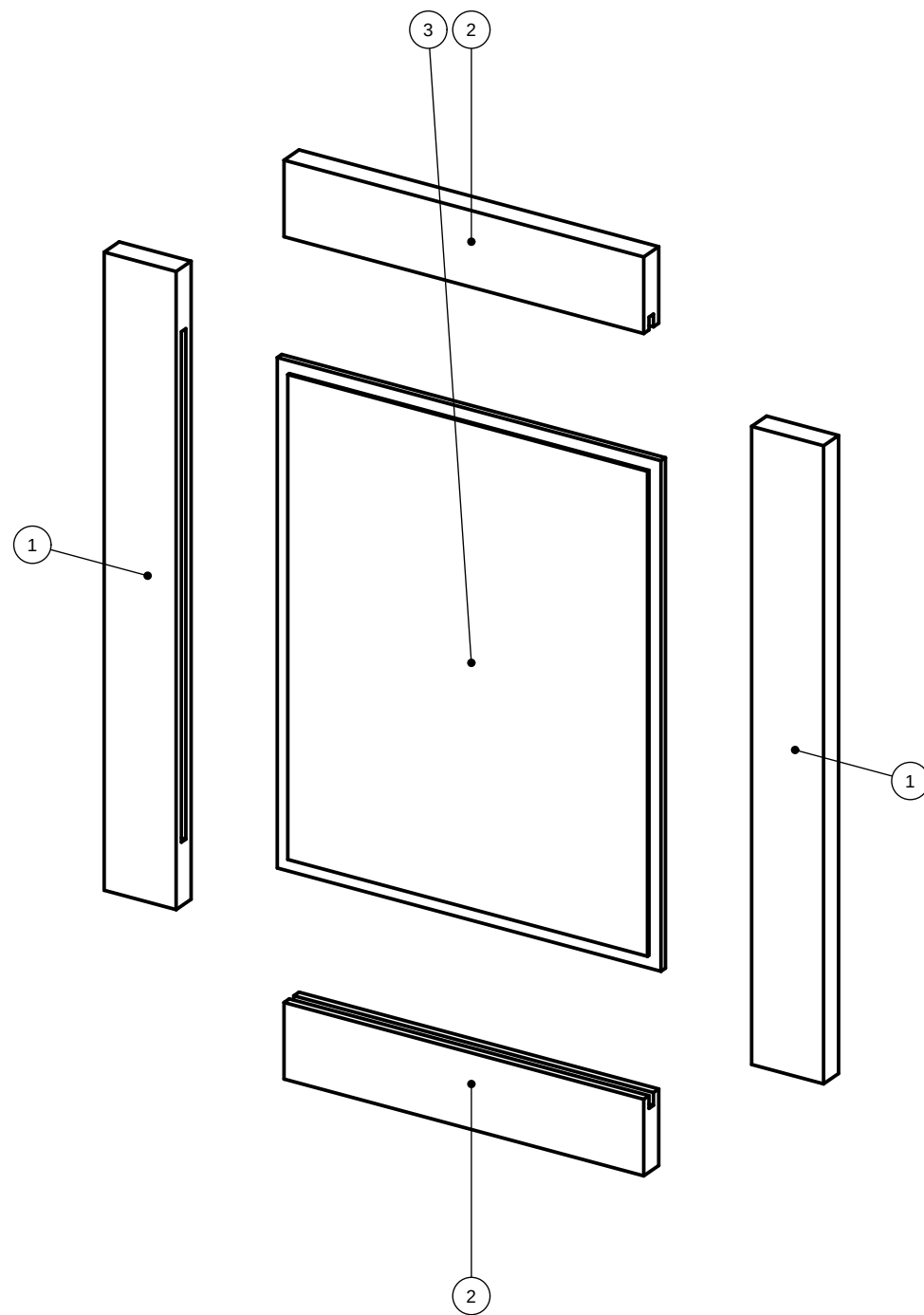
Contents

Drawings	3
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1 stile	5
2 rail	6
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ISOMETRIC

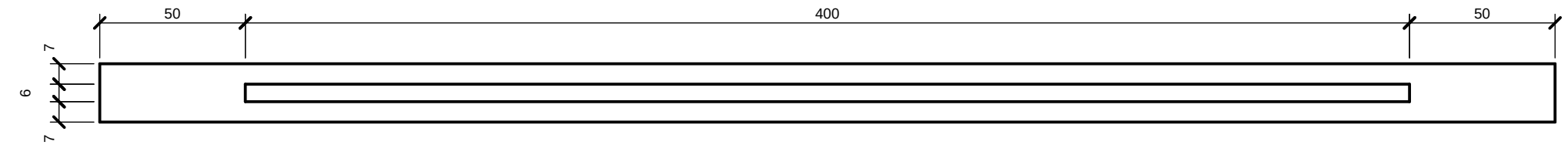
assembly	butt_frame_and_panel
parts	5 (3 different)
overall	420 x 20 x 500 (W x D x H)
material	oak
scale	1:5, mm



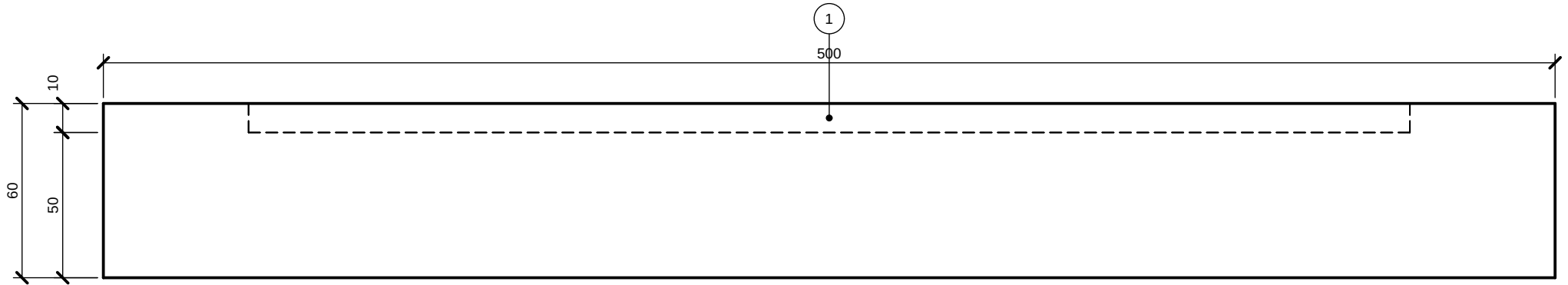
EXPLODED

no.	part	qty	cut size (L x W x T)	material
1	stile	2	500 x 60 x 20	oak
2	rail	2	300 x 60 x 20	oak
3	panel	1	400 x 320 x 10	oak

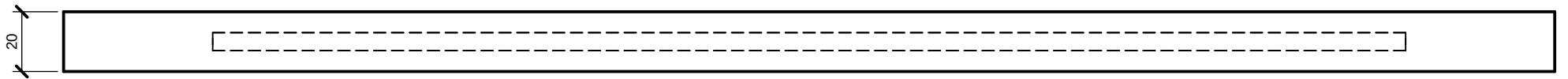
assembly	butt_frame_and_panel
parts	5 (3 different)
overall	420 x 20 x 500 (W x D x H)
material	oak
scale	not to scale, mm



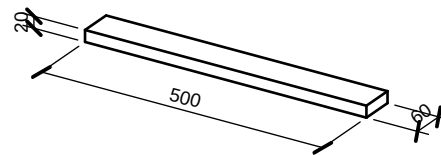
BACK EDGE



TOP FACE



FRONT EDGE

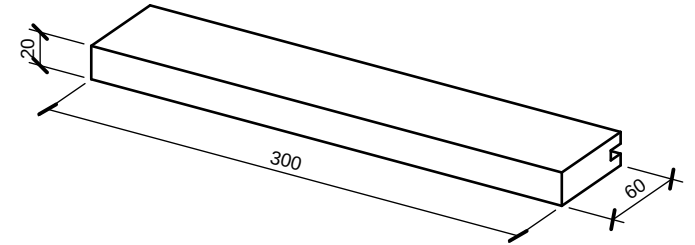
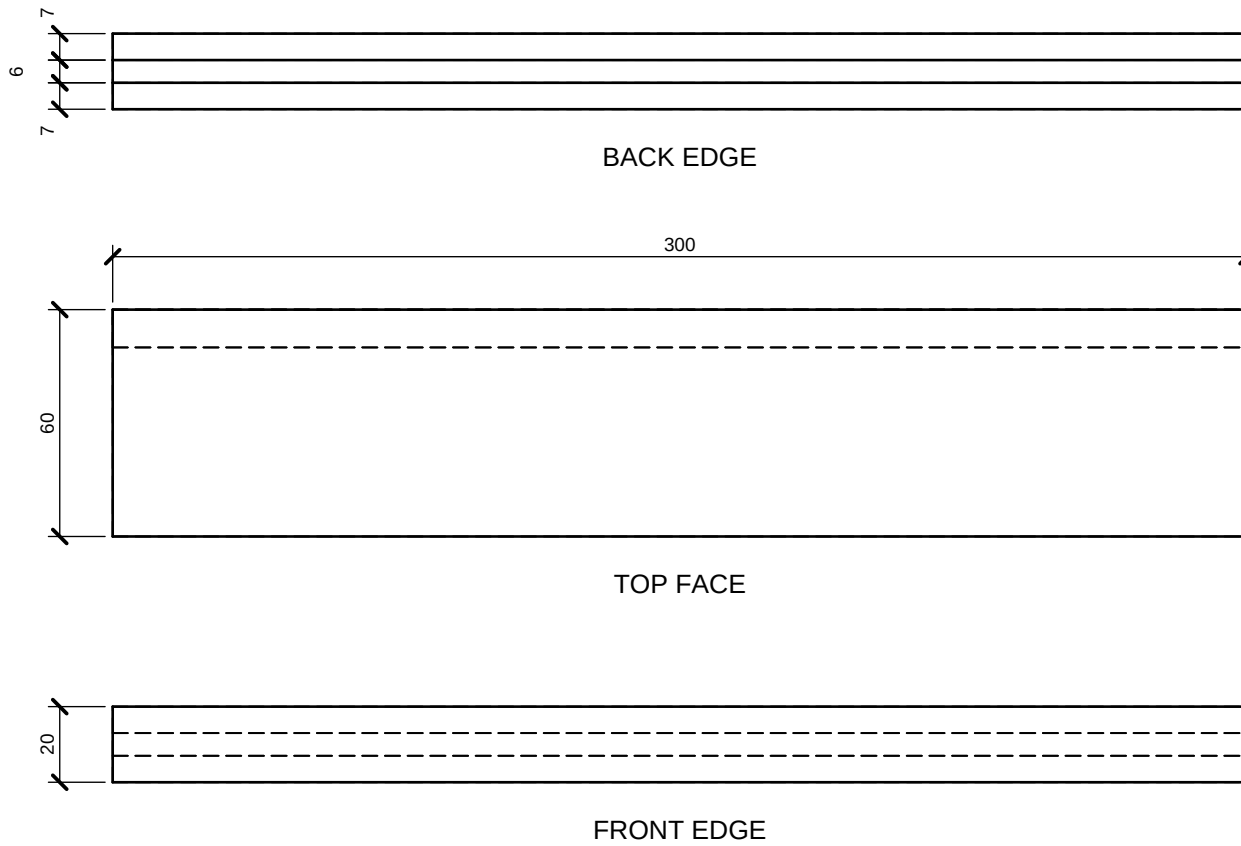


ISOMETRIC

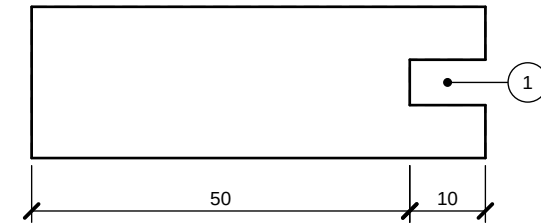
2 pieces: stile_left, stile_right

1 stopped groove 6 mm, 10 deep, in back_edge, 50 mm short of left_end and 50 mm short of right_end

part	stile
of	butt_frame_and_panel
make	2
cut size	500 x 60 x 20
material	oak
scale	1:2, mm



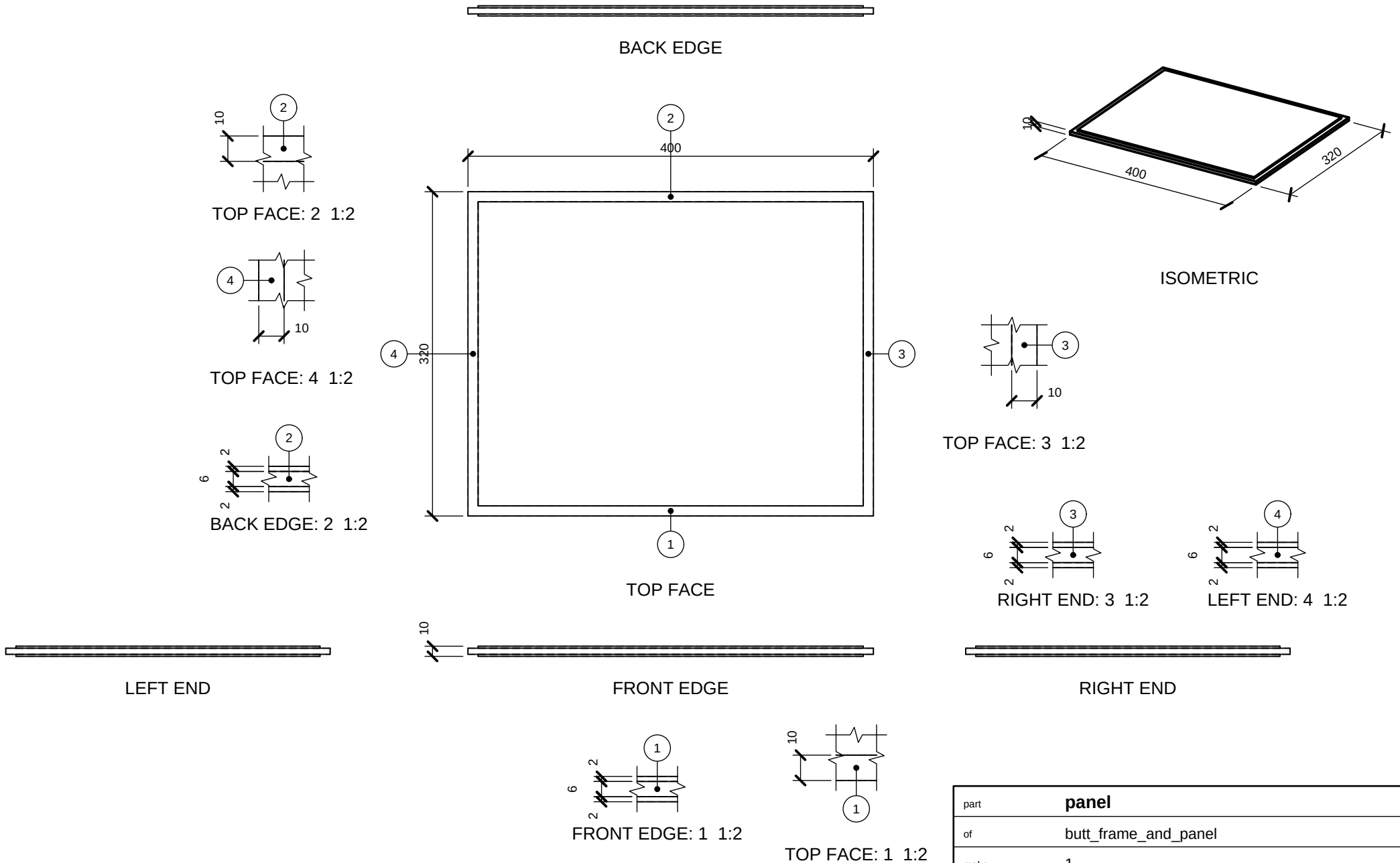
ISOMETRIC



RIGHT END 1:1

2 pieces: rail_top, rail_bottom
 1 groove 6 mm, 10 deep, in back_edge

part	rail
of	butt_frame_and_panel
make	2
cut size	300 x 60 x 20
material	oak
scale	1:2, mm



- 1 tongue 6 mm thick, 10 long, on front_edge
- 2 tongue 6 mm thick, 10 long, on back_edge
- 3 tongue 6 mm thick, 10 long, on right_end
- 4 tongue 6 mm thick, 10 long, on left_end

part	panel
of	butt_frame_and_panel
make	1
cut size	400 x 320 x 10
material	oak
scale	1:5, mm

Cut list

stile 500 x 60 x 20 mm oak, 2 pieces: stile_left, stile_right
- stopped groove 6 mm, 10 deep, in back_edge, 50 mm short of left_end and 50 mm short of right_end
rail 300 x 60 x 20 mm oak, 2 pieces: rail_top, rail_bottom
- groove 6 mm, 10 deep, in back_edge
panel 400 x 320 x 10 mm oak
- tongue 6 mm thick, 10 long, on front_edge
- tongue 6 mm thick, 10 long, on back_edge
- tongue 6 mm thick, 10 long, on right_end
- tongue 6 mm thick, 10 long, 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 frames.butt_frame_and_panel
```

frames.butt_frame_and_panel, in woodwright/examples/frames.py

```
def butt_frame_and_panel(
    stile_length: float = 500,
    rail_length: float = 300,
    width: float = 60,
    tongue_length: float = 10,
    stock: Stock = OAK,
    panel_stock: Stock = THIN_OAK,
) -> Assembly:
    """A frame butt-joined at the corners, a panel tongued on all four edges
    into grooves along its inside edges.

    The panel's design size is the opening of the frame, the tongues add to
    it; it is centered in the frame's thickness. The grooves in the rails
    run through, into those in the stiles, which are stopped where the
    rails' grooves meet them, so that they don't show at the stiles' ends.
    The glued corners hold little (end grain on long grain): a frame for a
    light panel, or one to be screwed or dowelled (not modelled).
    """

    def corner(rail_end: SideRef, stile_edge: SideRef, position: Position, outer: SideRef) -> Joint:
        return Butt(stile_edge, rail_end, position=position)

    asm, (stile_left, stile_right, rail_top, rail_bottom) = _frame(
        "butt_frame_and_panel", corner, stile_length, rail_length, width, stock
    )
    panel = asm.add(Board("panel", panel_stock, length=stile_length - 2 * width, width=rail_length))
    stop = width - tongue_length # where the rails' grooves end
    for groove, edge, stopped in [
        (
            stile_left.back_edge,
```

```

        panel.front_edge,
        {stile_left.left_end: stop, stile_left.right_end: stop},
    ),
    (
        stile_right.front_edge,
        panel.back_edge,
        {stile_right.left_end: stop, stile_right.right_end: stop},
    ),
    (rail_top.back_edge, panel.right_end, None),
    (rail_bottom.front_edge, panel.left_end, None),
]:
    asm.join(
        TongueAndGroove(
            tongue=edge,
            groove=groove,
            tongue_length=tongue_length,
            across=CENTERED,
            stopped=stopped,
        )
    )
return asm

```