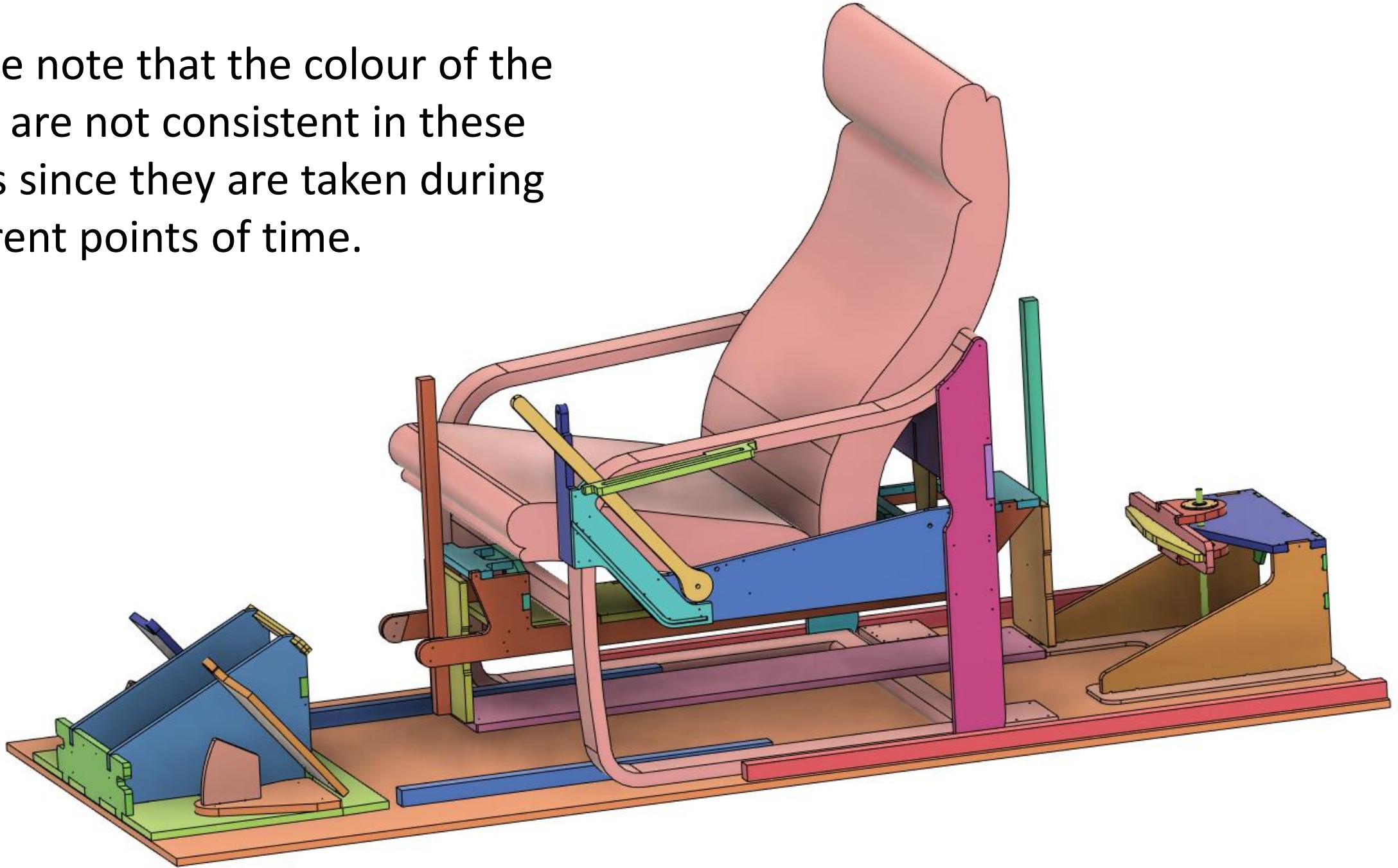
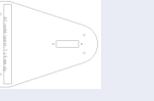
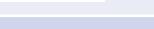
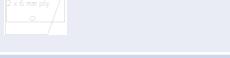


Please note that the colour of the parts are not consistent in these slides since they are taken during different points of time.



| Name | Count | Sum = 12 |
|------|-------|---|
| A1 | 1 |  |
| A2 | 2 |  |
| A3 | 2 |  |
| A4 | 2 |  |
| A5 | 1 |  |
| A6 | 1 |  |
| A7 | 1 |  |
| A8 | 2 |  |

| Name | Count | Sum = 15 |
|------|-------|---|
| B1 | 2 |  |
| B2 | 1 |  |
| B3 | 2 |  |
| B4 | 1 |  |
| B5 | 1 |  |
| B6 | 2 |  |
| B7 | 1 |  |
| B8 | 2 |  |
| B9 | 2 |  |
| B10 | 1 |  |

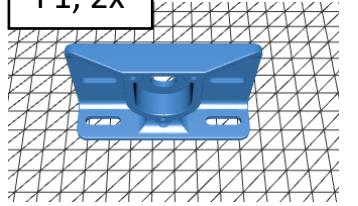
| Name | Count | Sum = 5 |
|------|-------|---|
| C1 | 2 |  |
| C2 | 2 |  |
| C3 | 1 |  |

| Name | Count | |
|------|-------|---|
| D1 | 1 |  |
| D2 | 1 |  |
| D3 | 1 |  |
| D4 | 1 |  |
| D5 | 1 |  |

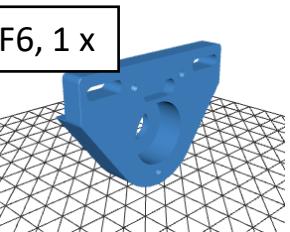
| Name | Count | Sum = 15 |
|------|-------|---|
| E1 | 1 |  |
| E2 | 2 |  |
| E3 | 1 |  |
| E4 | 1 |  |
| E5 | 1 |  |
| E6 | 2 |  |
| E7 | 1 |  |
| E8 | 4 |  |
| E9 | 2 |  |

Redesigned, will be
3D-printed instead

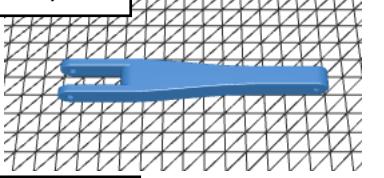
F1, 2x



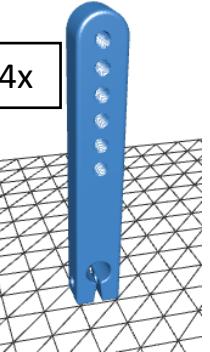
F6, 1 x



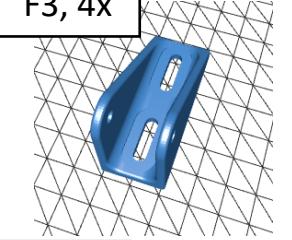
F2, 2x



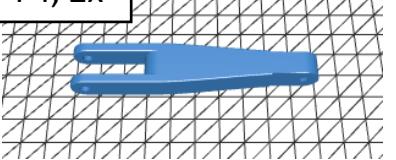
F7, 4x



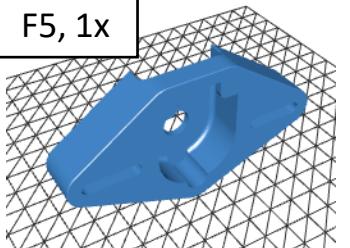
F3, 4x



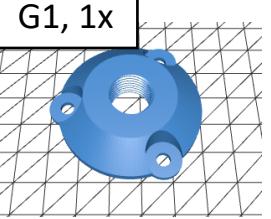
F4, 2x



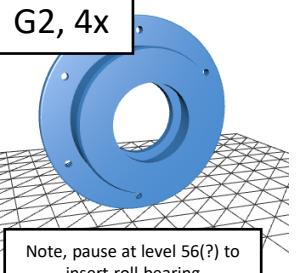
F5, 1x



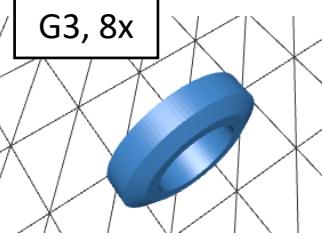
G1, 1x



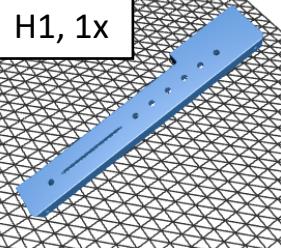
G2, 4x



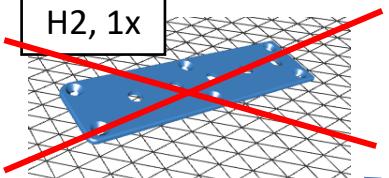
G3, 8x



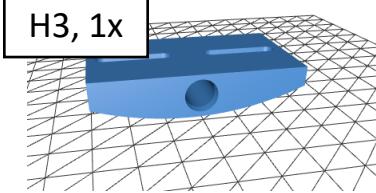
H1, 1x



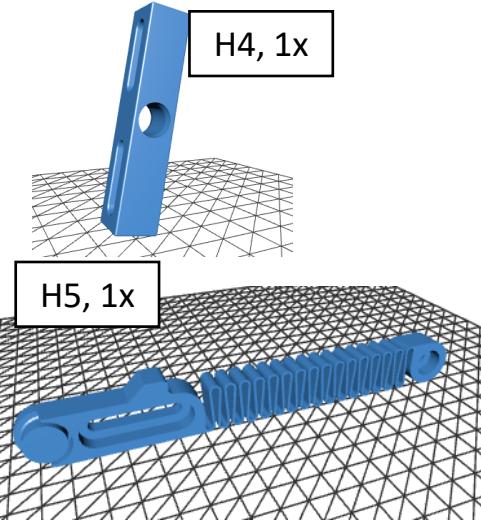
H2, 1x



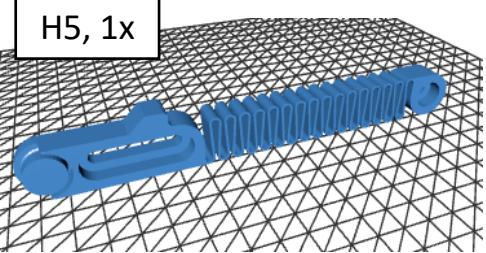
H3, 1x



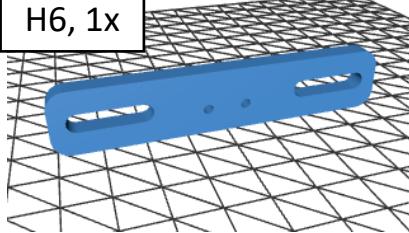
H4, 1x



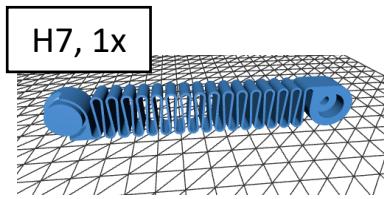
H5, 1x



H6, 1x



H7, 1x

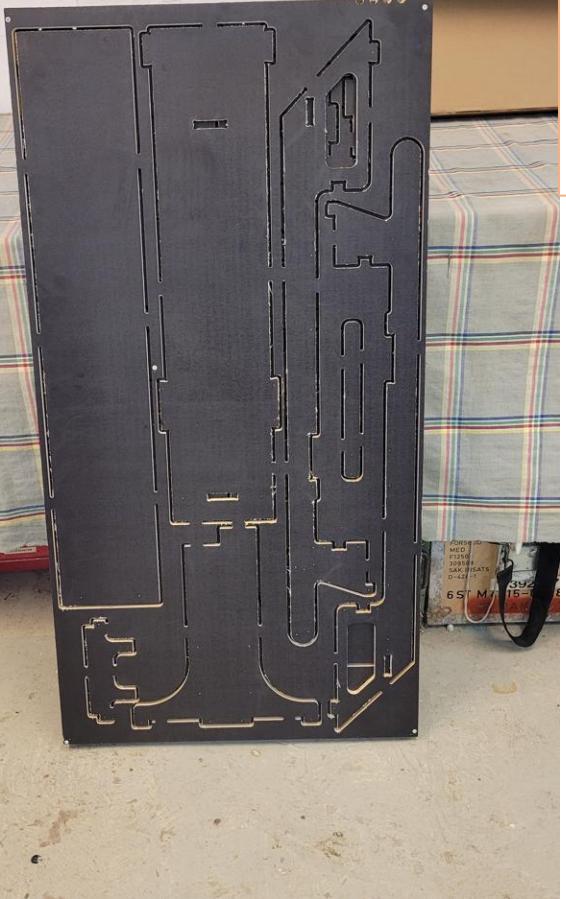


Discontinued: H1, H2 and D4 is combined together into H1

Step 1, preparations

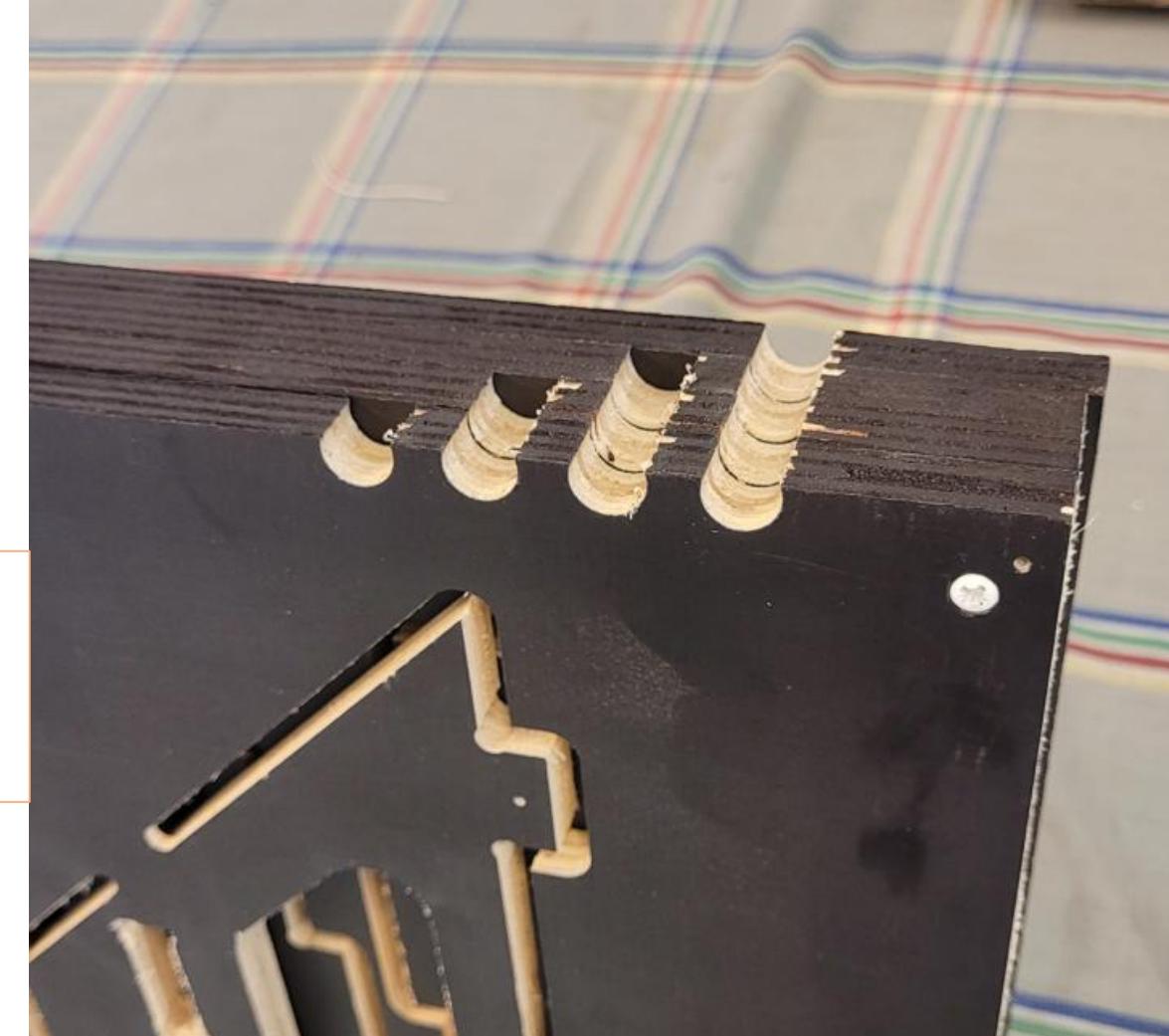
List of tools here:

- Poke saw
- Drill
- Drill bits
- ..



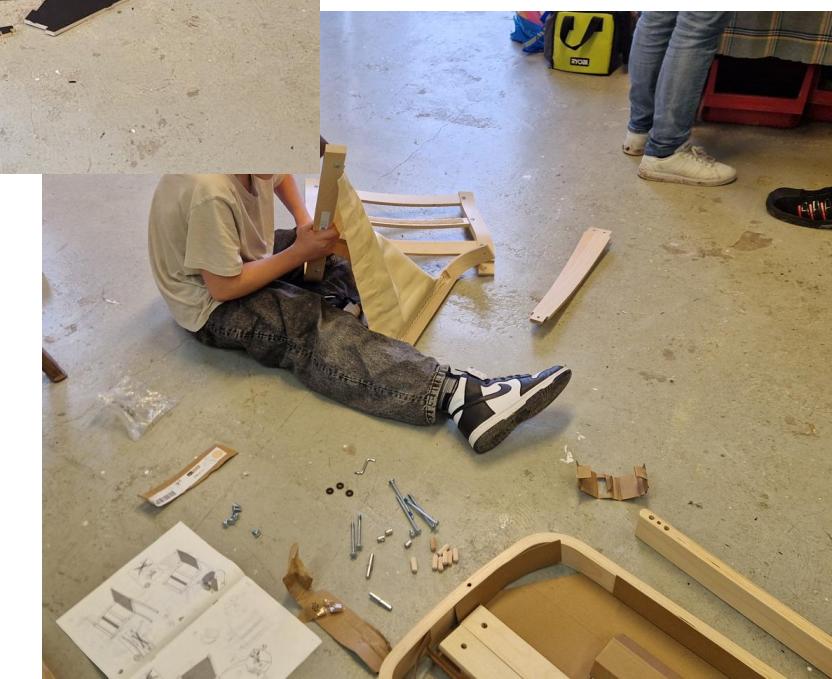
The cutouts consists of
4 plywood boards
(1200 x 620 mm)
screwed together.

Each plywood board
has a different number
of semi circles in order
to identify the boards.



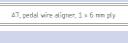


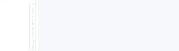
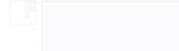
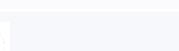
5 screws from each side. 10 in total placed in the corners and in the middle.

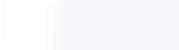
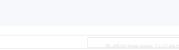


Step 2, front pedals

...

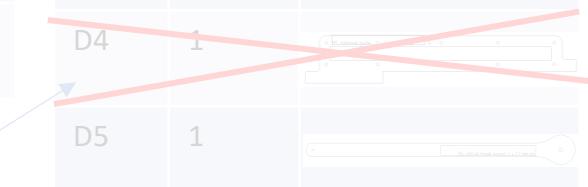
| Name | Count | Sum = 12 |
|------|-------|---|
| A1 | 1 |  |
| A2 | 2 |  |
| A3 | 2 |  |
| A4 | 2 |  |
| A5 | 1 |  |
| A6 | 1 |  |
| A7 | 1 |  |
| A8 | 2 |  |

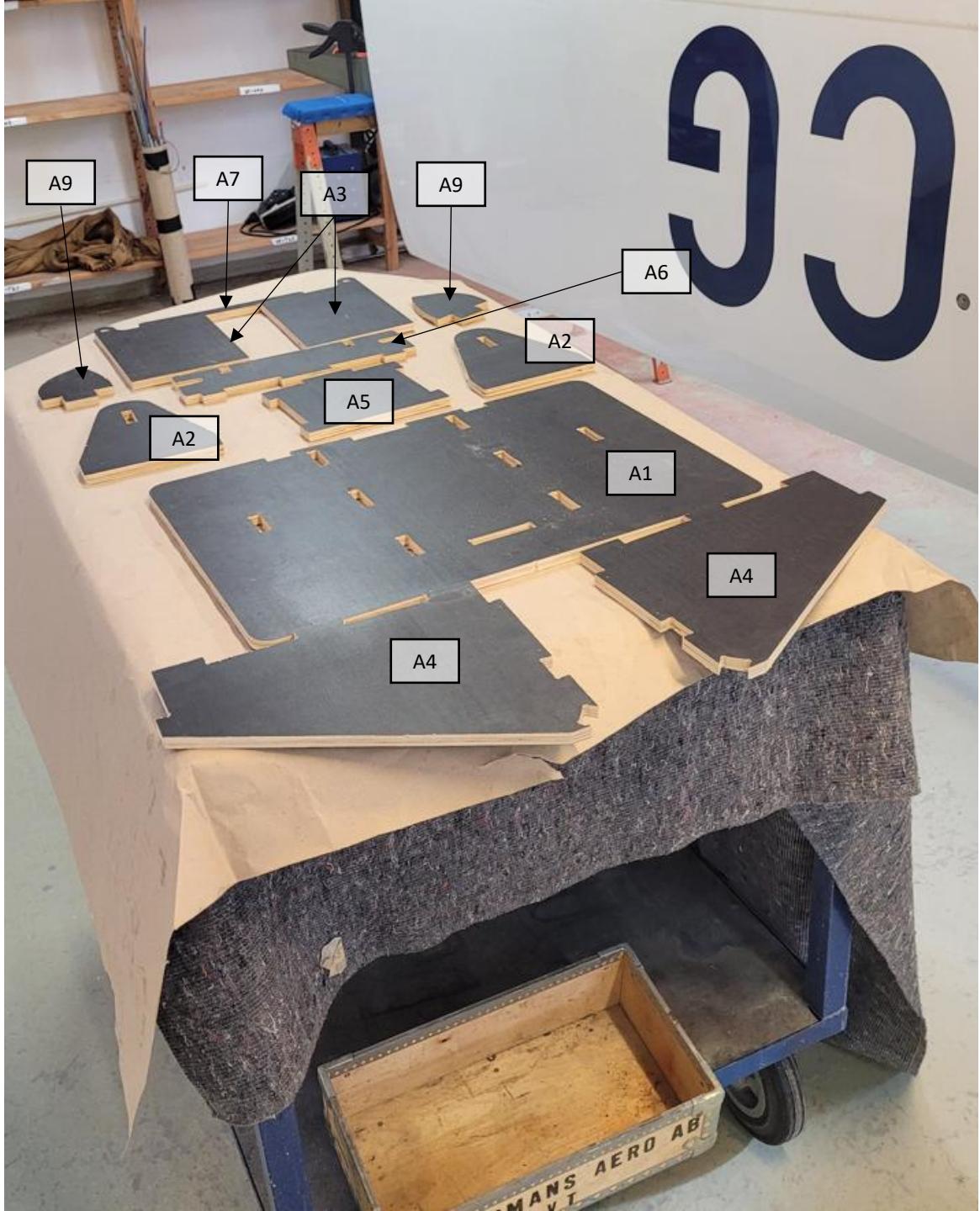
| Name | Count | Sum = 15 |
|------|-------|--|
| B1 | 2 |  |
| B2 | 1 |  |
| B3 | 2 |  |
| B4 | 1 |  |
| B5 | 1 |  |
| B6 | 2 |  |
| B7 | 1 |  |
| B8 | 2 |  |
| B9 | 2 |  |
| B10 | 1 |  |

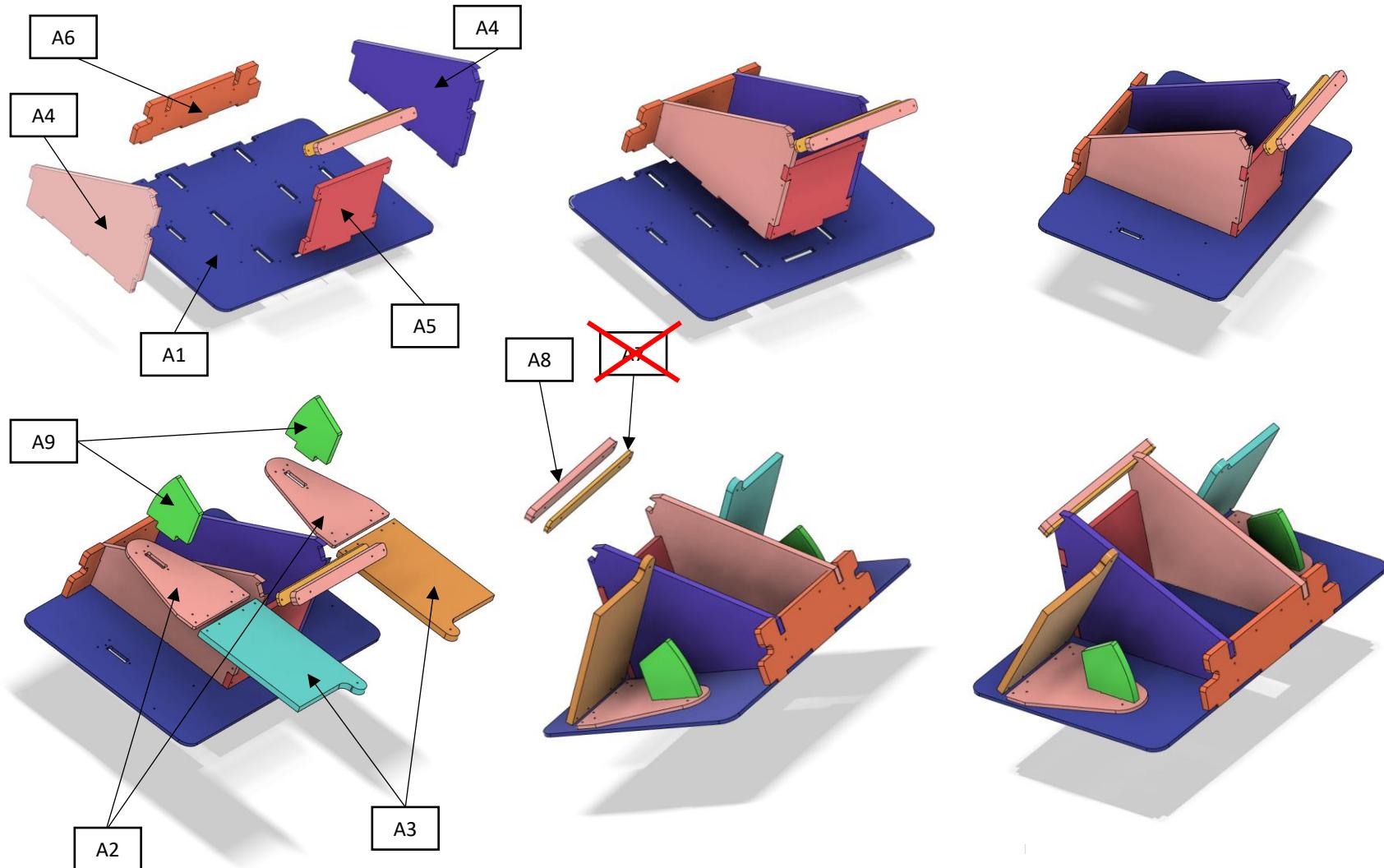
| Name | Count | Sum = 5 |
|------|-------|---|
| C1 | 2 |  |
| C2 | 2 |  |
| C3 | 1 |  |
| Name | Count | |
| D1 | 1 |  |
| D2 | 1 |  |
| D3 | 1 |  |
| D4 | 1 |  |
| D5 | 1 |  |

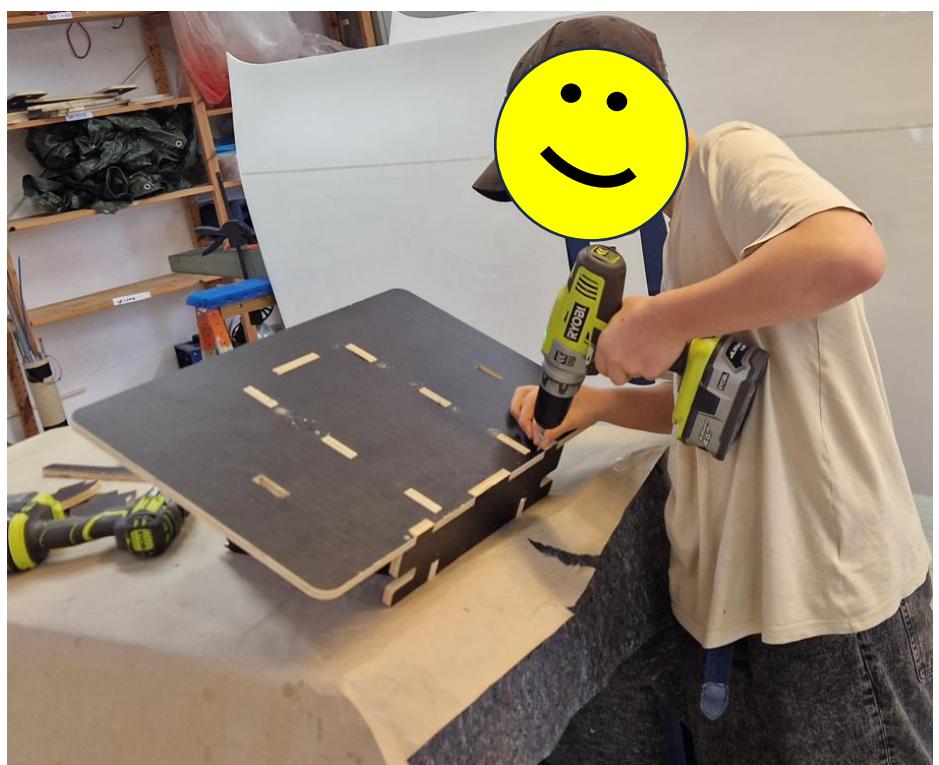
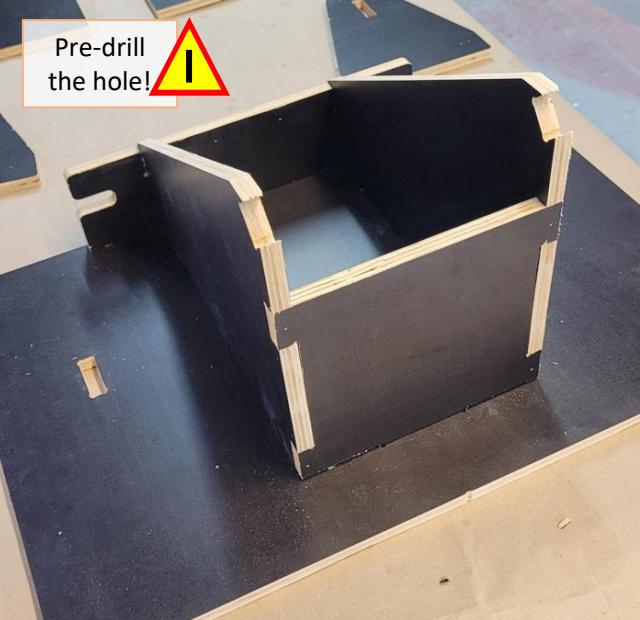
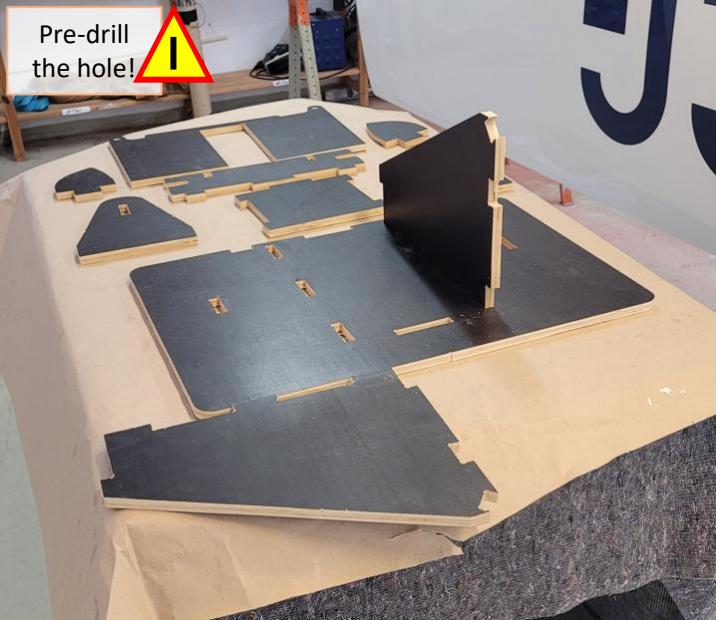
| Name | Count | Sum = 15 |
|------|-------|---|
| E1 | 1 |  |
| E2 | 2 |  |
| E3 | 1 |  |
| E4 | 1 |  |
| E5 | 1 |  |
| E6 | 2 |  |
| E7 | 1 |  |
| E8 | 4 |  |
| E9 | 2 |  |

Redesigned, will be
3D-printed instead



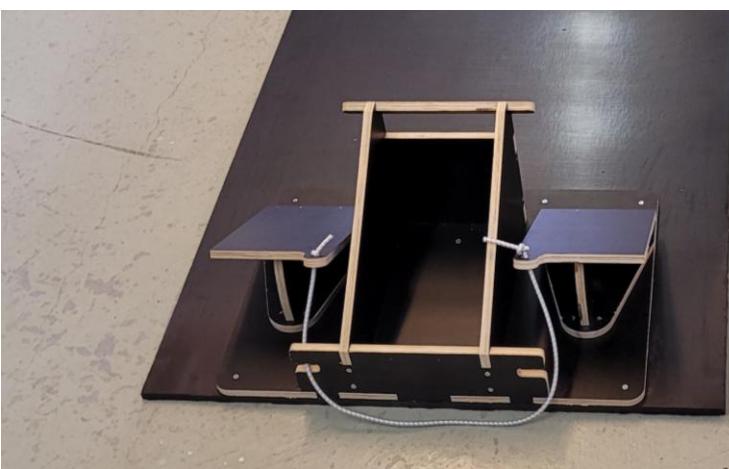
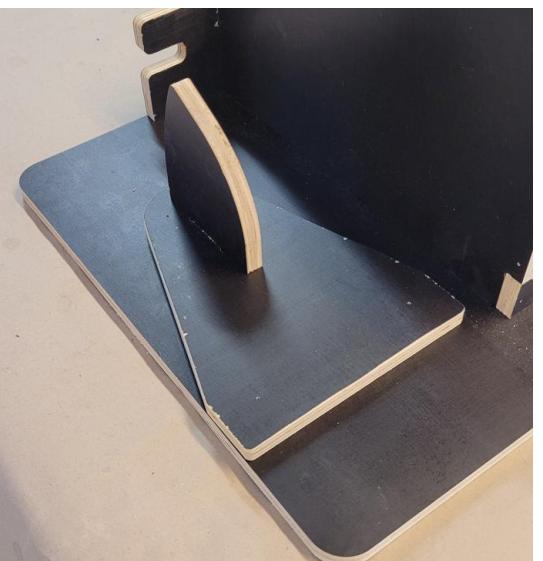
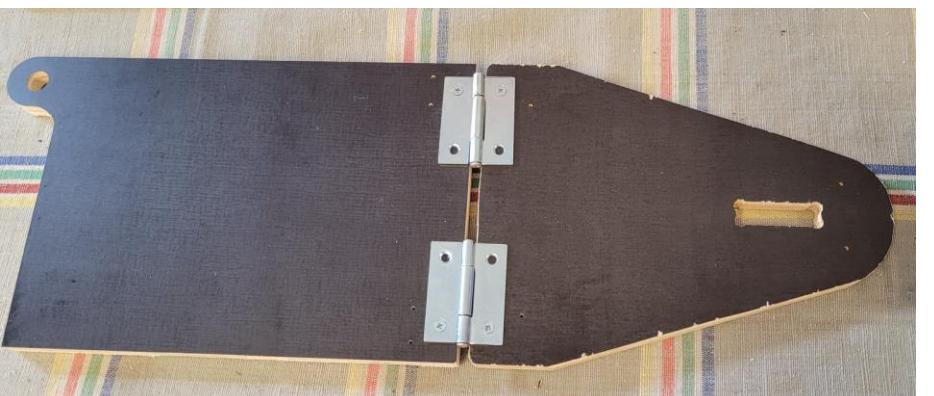


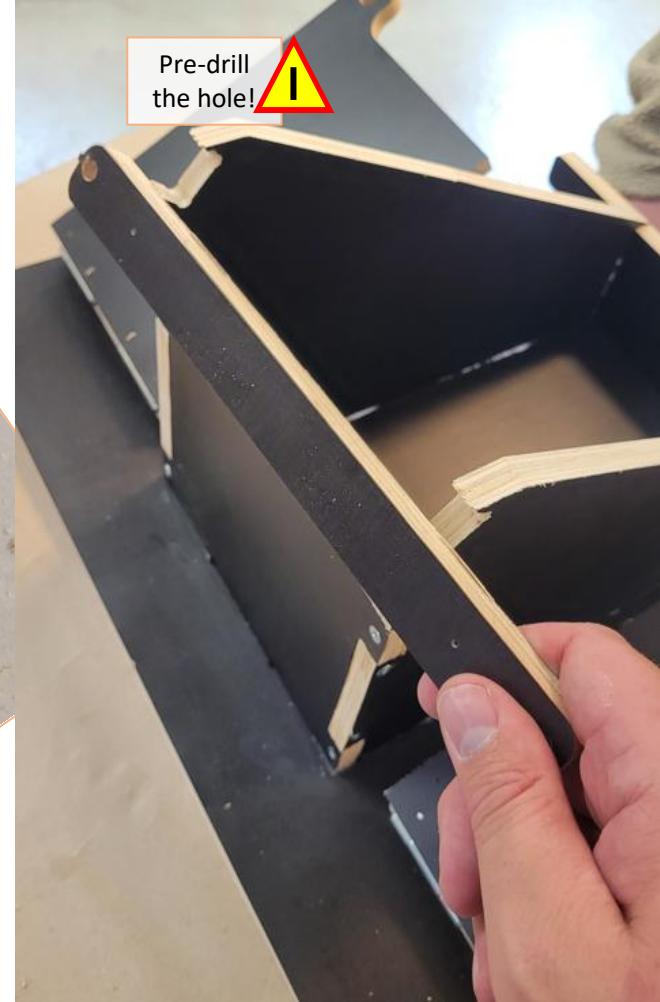
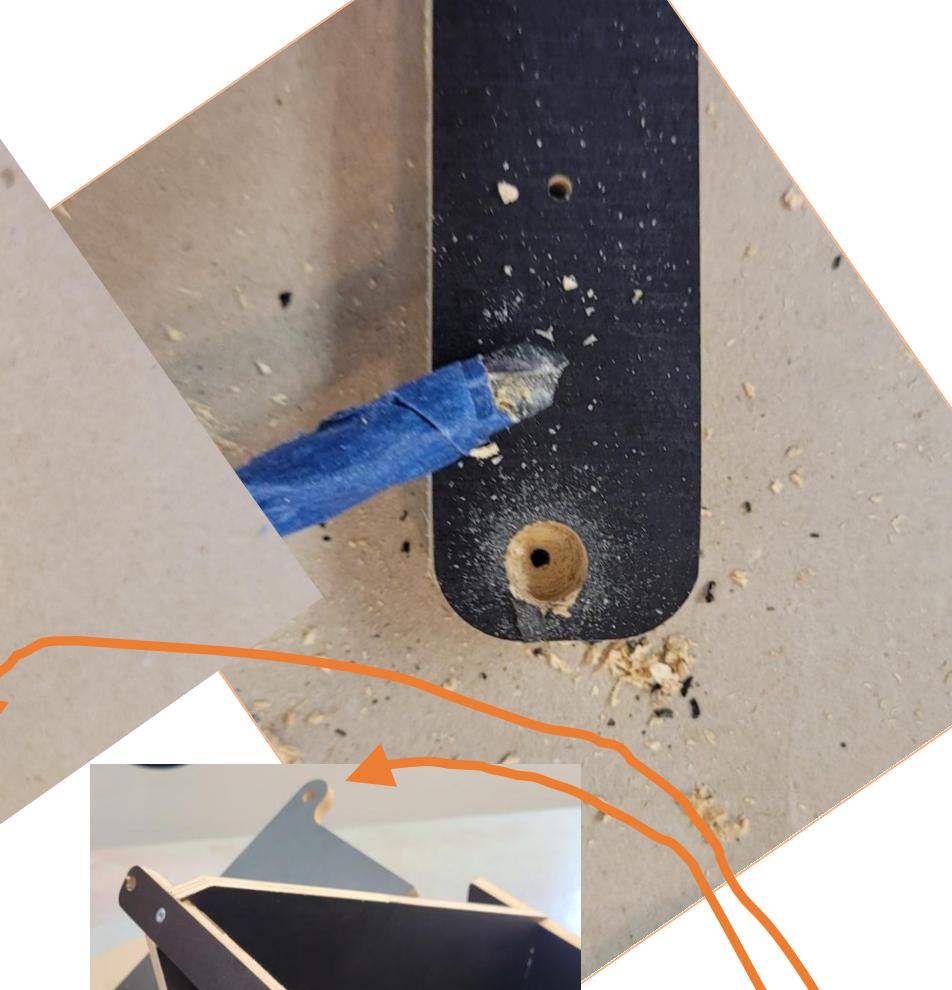
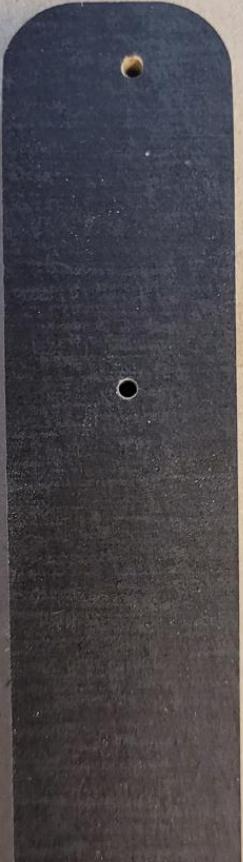






Note: the supplied screws are too long. Use other screws or shorten them by sanding the tip.

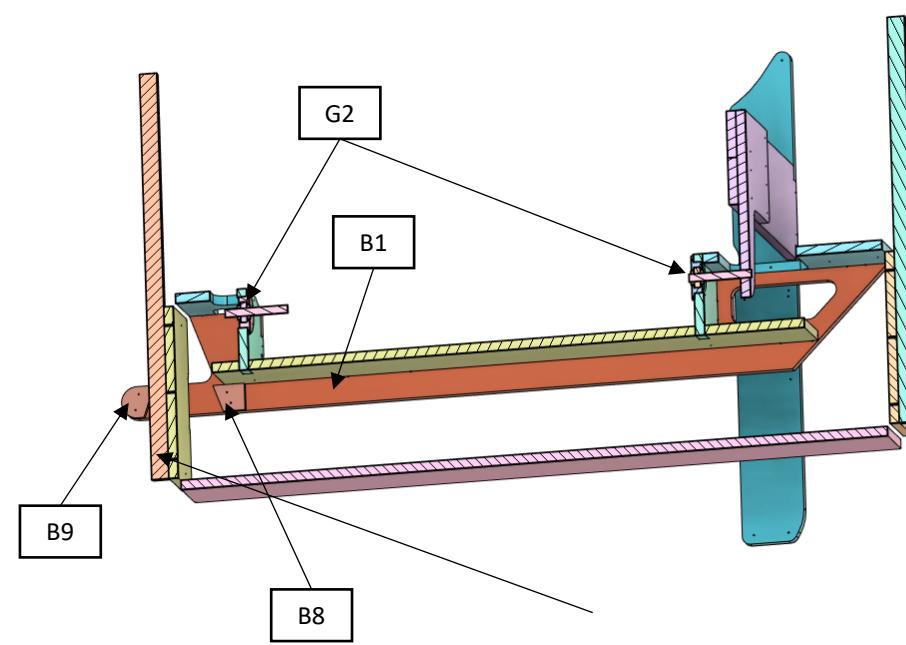
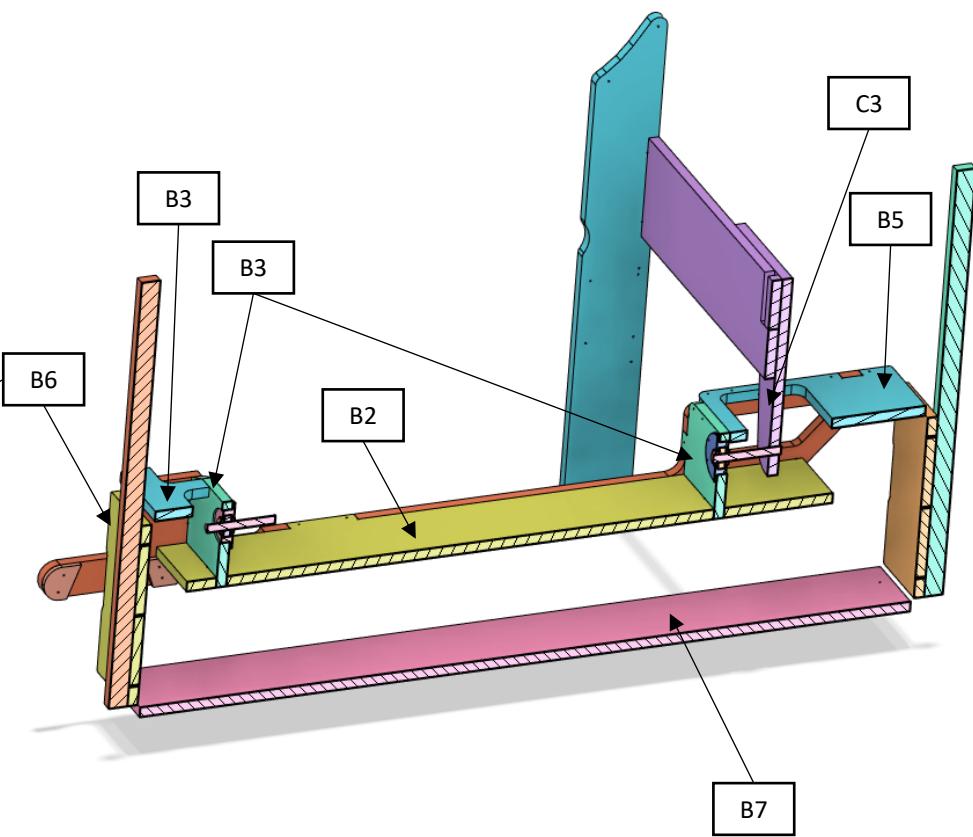
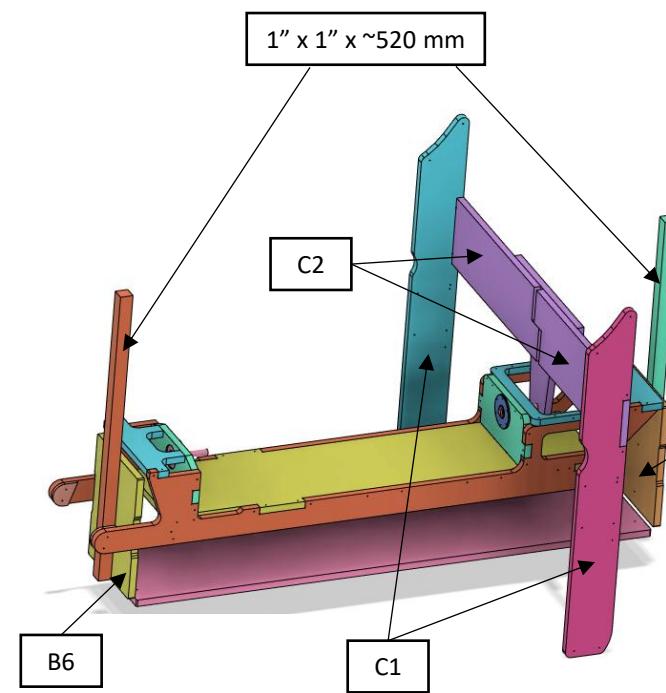
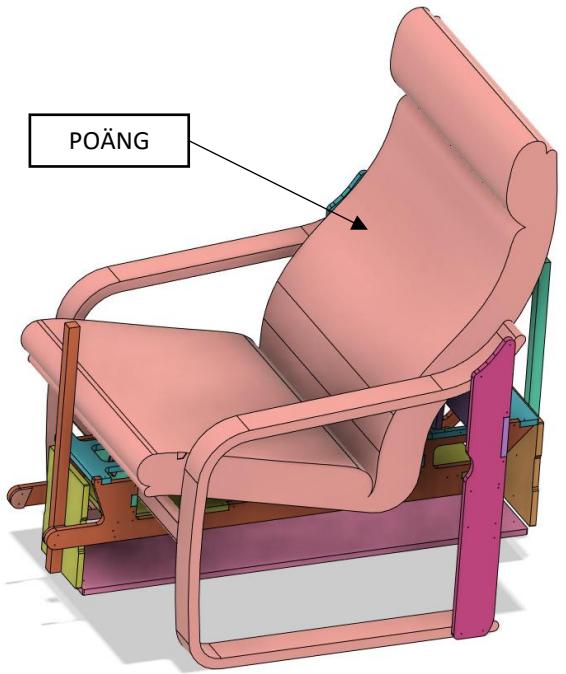




Note: Pedal is flipped the wrong way in the picture

Step 3, control assembly

...



| Name | Count | Sum = 12 |
|------|-------|----------|
| A1 | 1 | |
| A2 | 2 | |
| A3 | 2 | |
| A4 | 2 | |
| A5 | 1 | |
| A6 | 1 | |
| A7 | 1 | |
| A8 | 2 | |

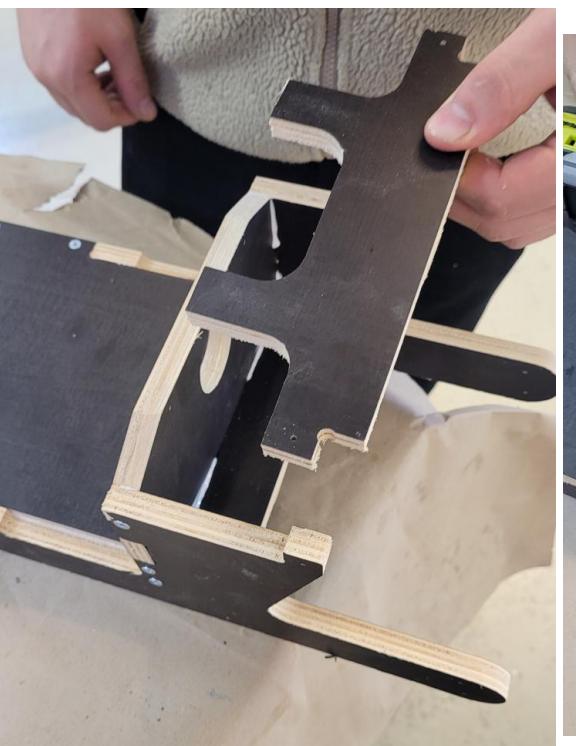
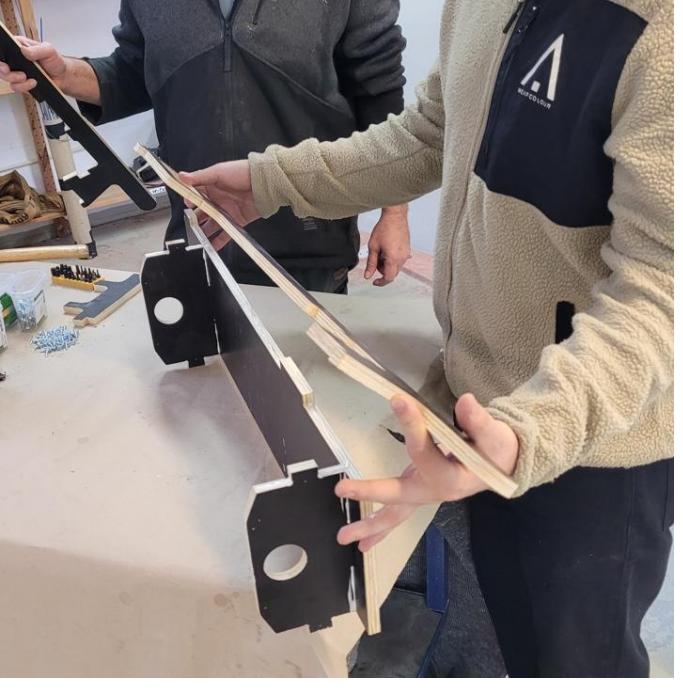
| Name | Count | Sum = 15 |
|------|-------|----------|
| B1 | 2 | |
| B2 | 1 | |
| B3 | 2 | |
| B4 | 1 | |
| B5 | 1 | |
| B6 | 2 | |
| B7 | 1 | |
| B8 | 2 | |
| B9 | 2 | |
| B10 | 1 | |

| Name | Count | Sum = 5 |
|------|-------|---------|
| C1 | 2 | |
| C2 | 2 | |
| C3 | 1 | |

| Name | Count | |
|------|-------|--|
| D1 | 1 | |
| D2 | 1 | |
| D3 | 1 | |
| D4 | 1 | |
| D5 | 1 | |

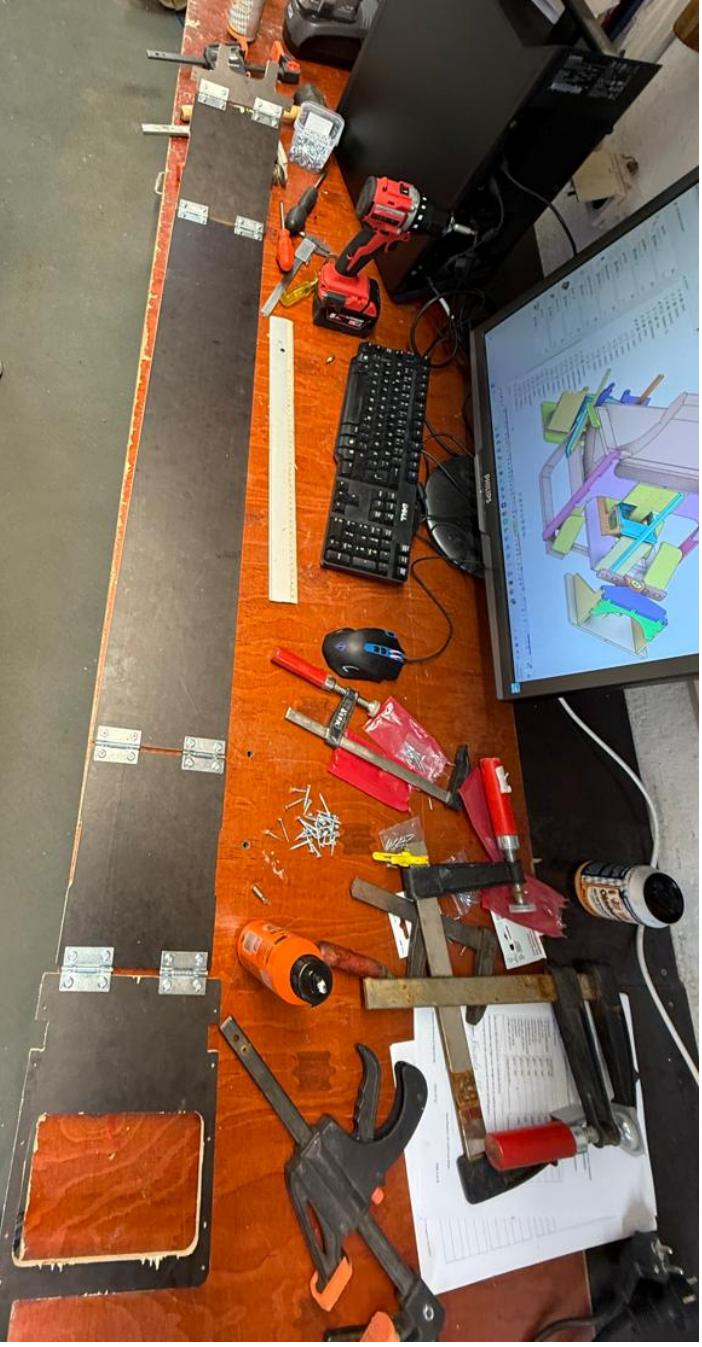
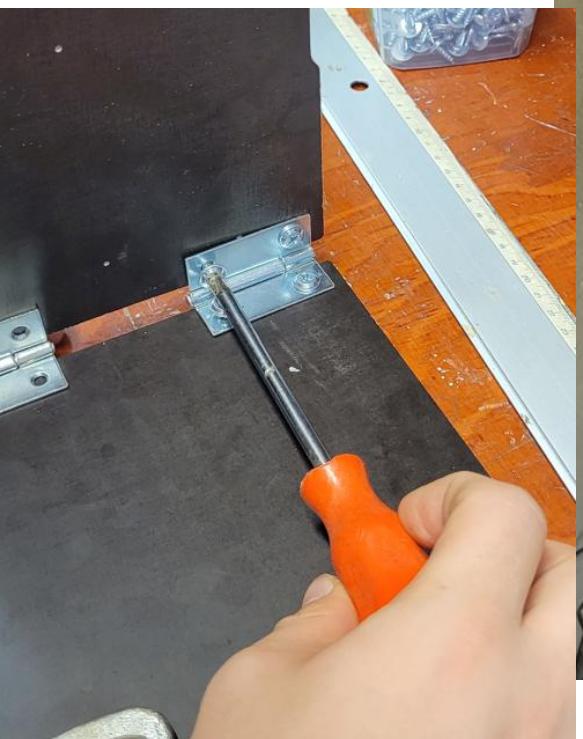
| Name | Count | Sum = 15 |
|------|-------|----------|
| E1 | 1 | |
| E2 | 2 | |
| E3 | 1 | |
| E4 | 1 | |
| E5 | 1 | |
| E6 | 2 | |
| E7 | 1 | |
| E8 | 4 | |
| E9 | 2 | |

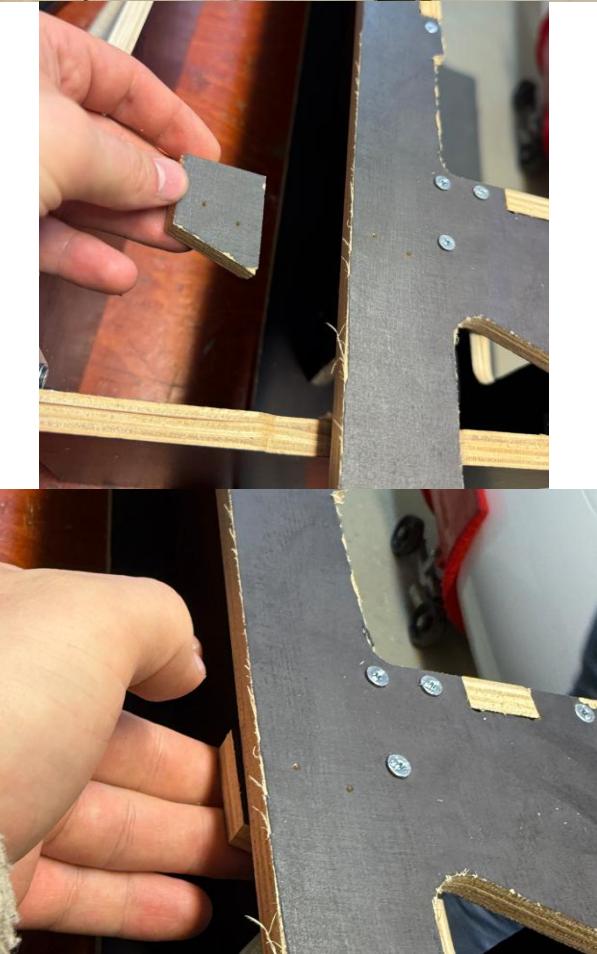
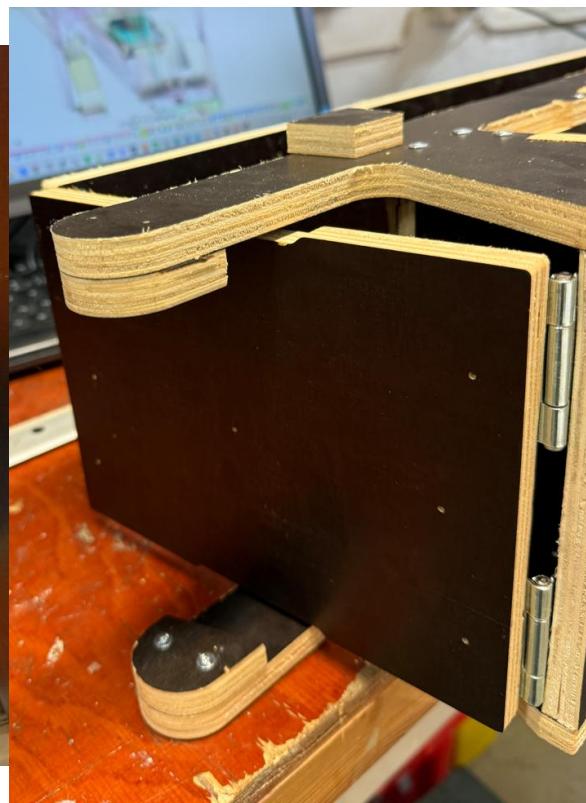
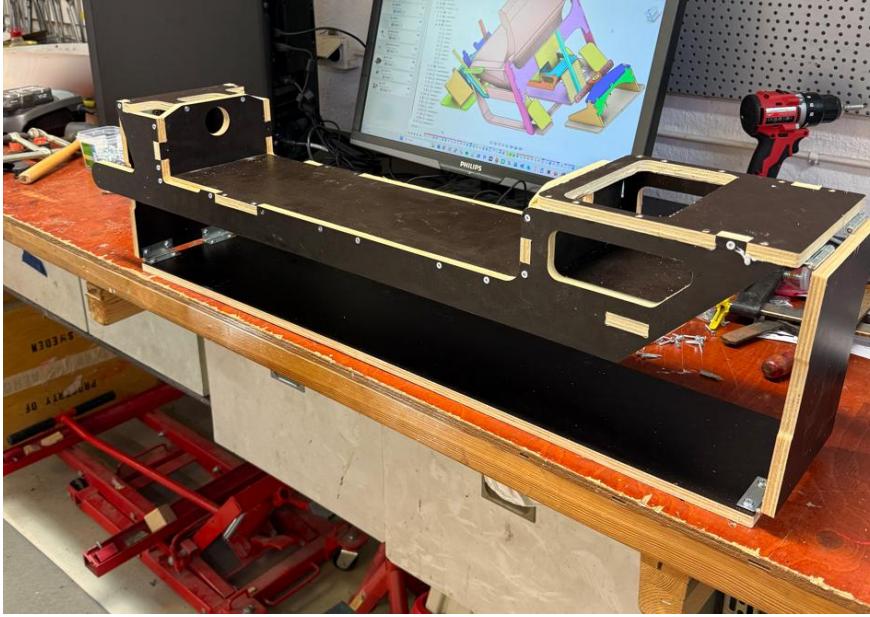
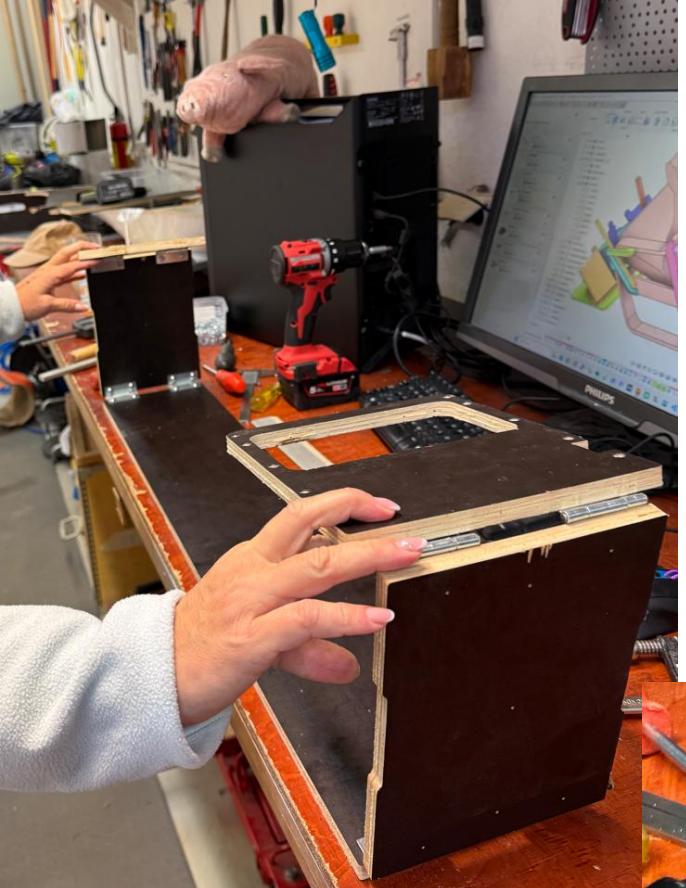
Redesigned, will be
3D-printed instead





Tighten the screws on the hinges at 90° in order to align the hinges

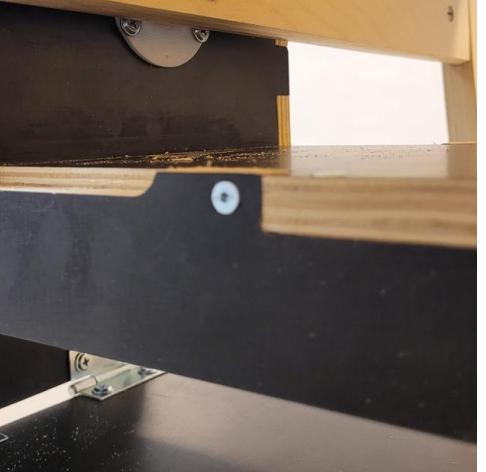
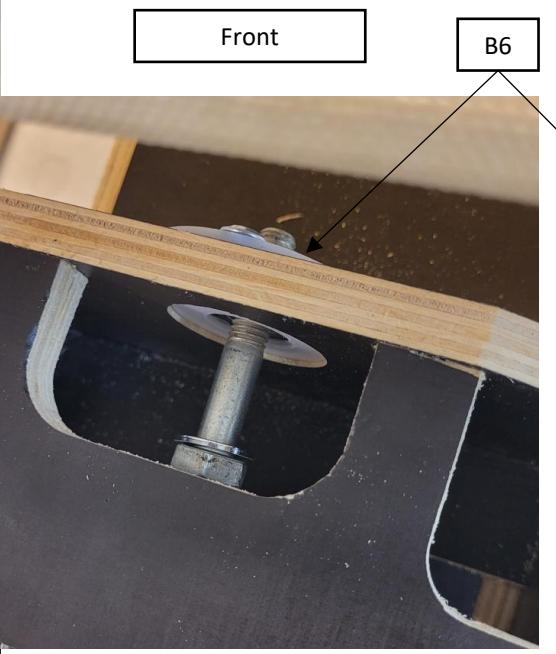
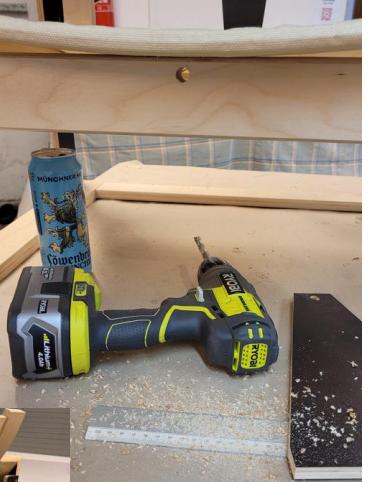
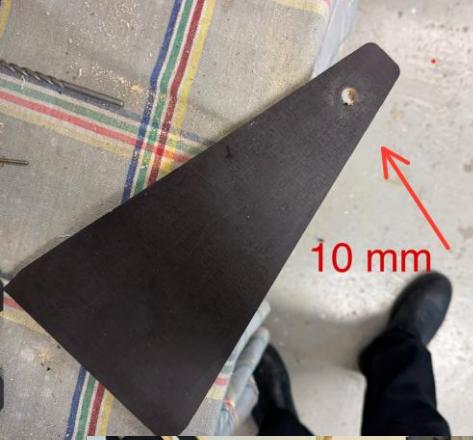


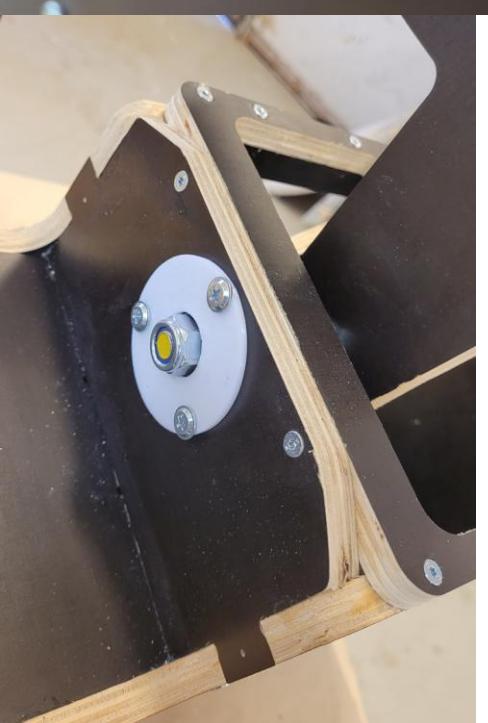
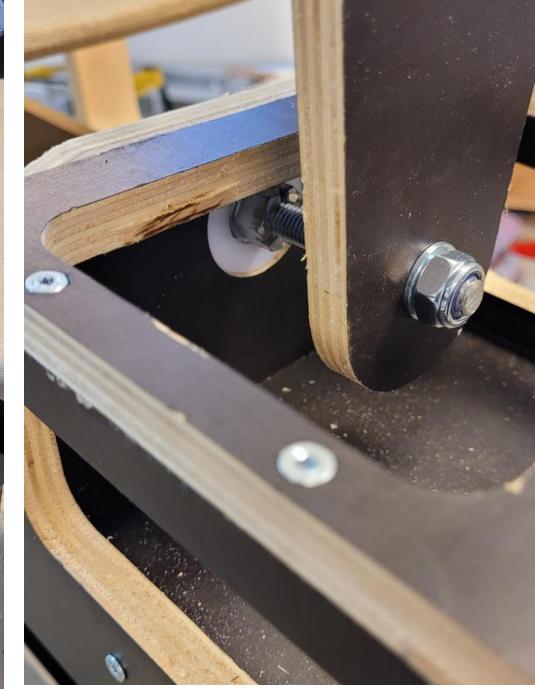
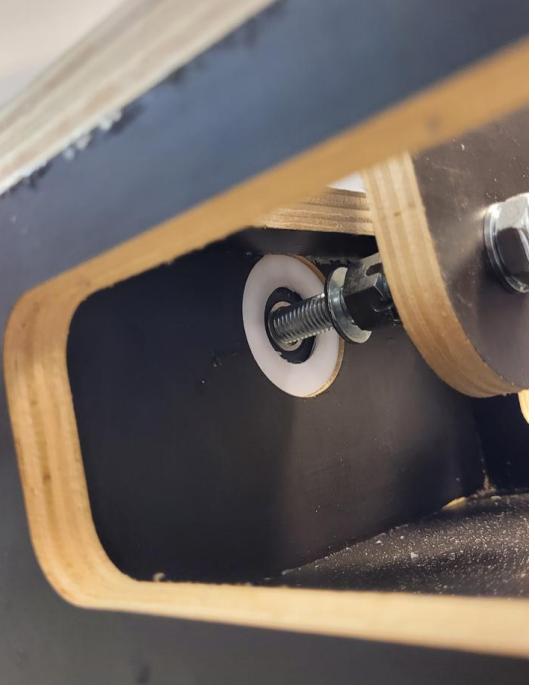
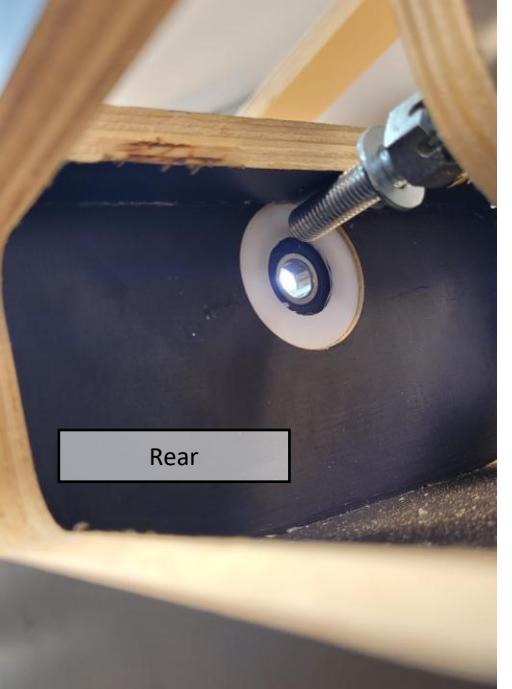




Yes, it looks like it's
container ship

Oops. We found a design flaw when assembling the prototype. This has been corrected since then.





Step 4, rear pedals

...

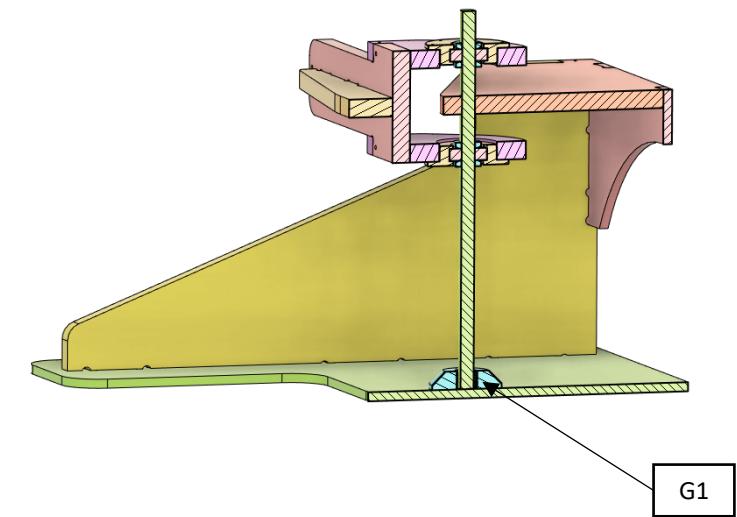
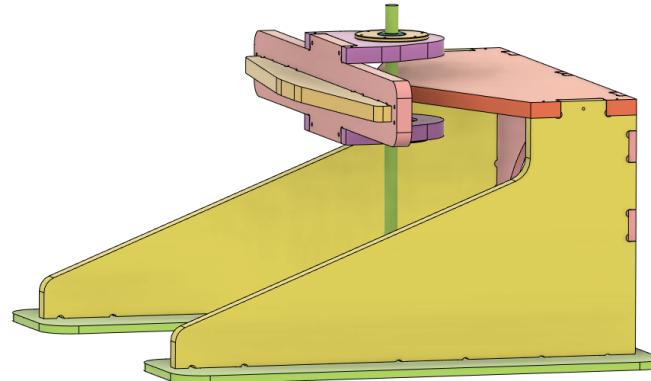
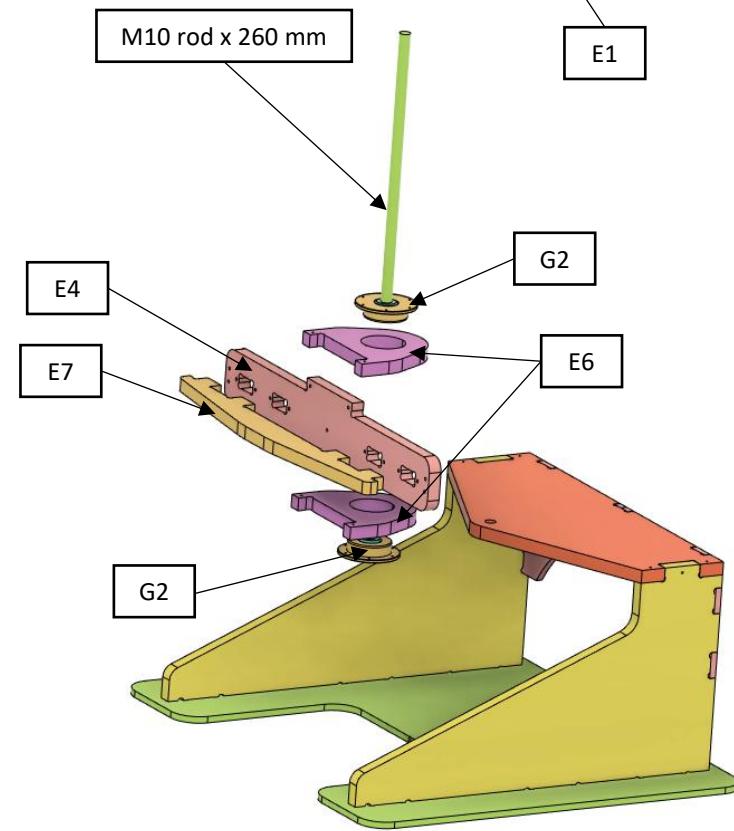
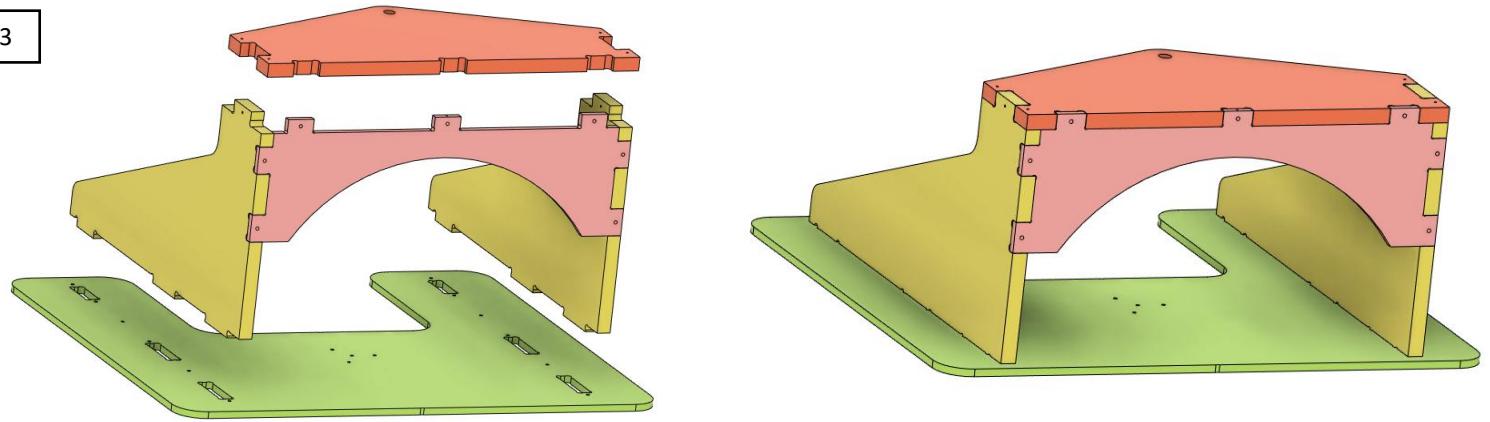
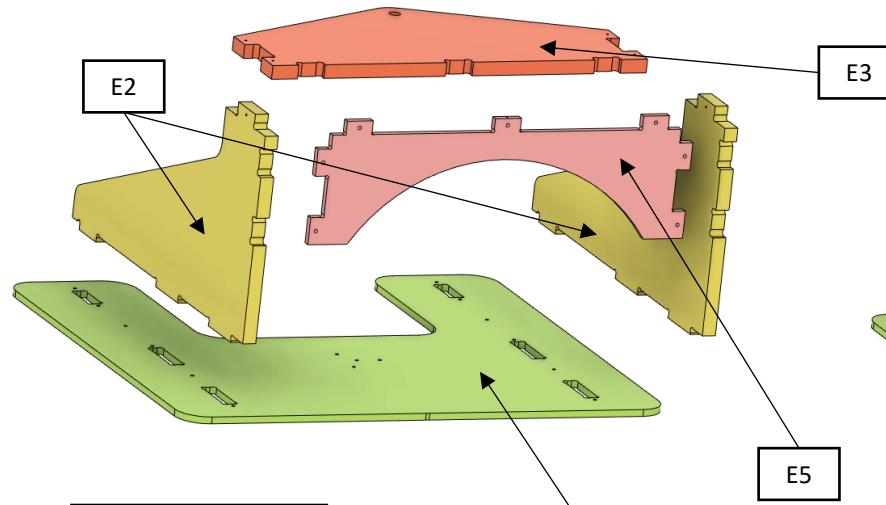
| Name | Count | Sum = 12 |
|------|-------|----------|
| A1 | 1 | |
| A2 | 2 | |
| A3 | 2 | |
| A4 | 2 | |
| A5 | 1 | |
| A6 | 1 | |
| A7 | 1 | |
| A8 | 2 | |

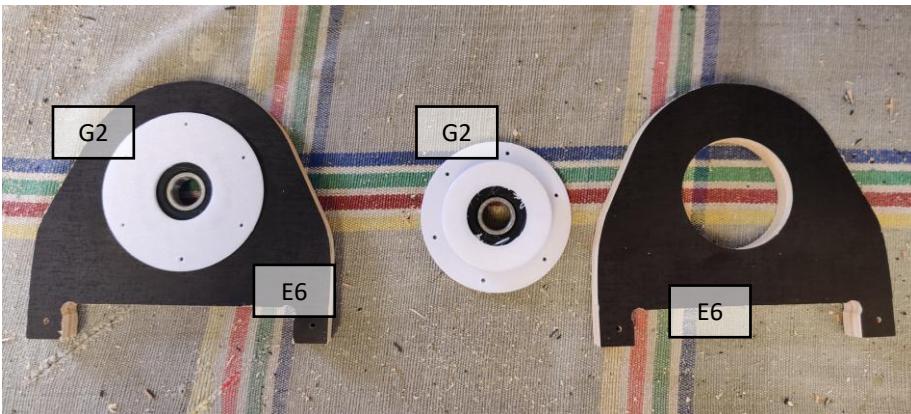
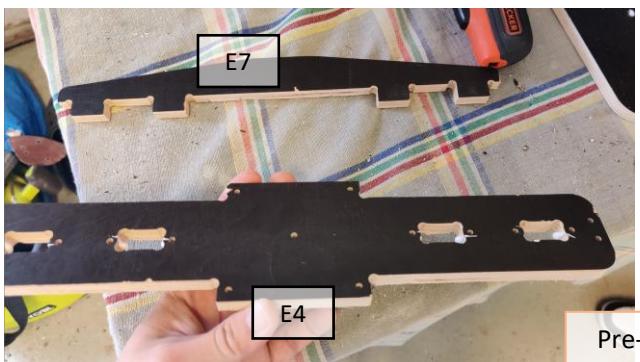
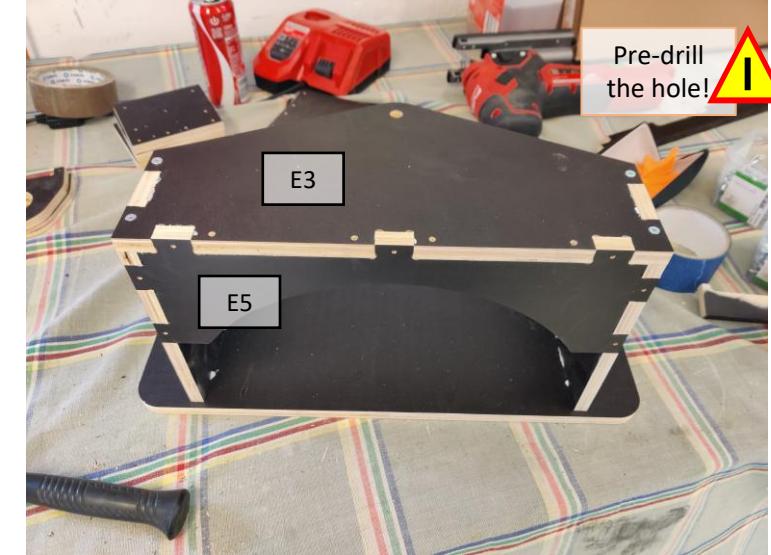
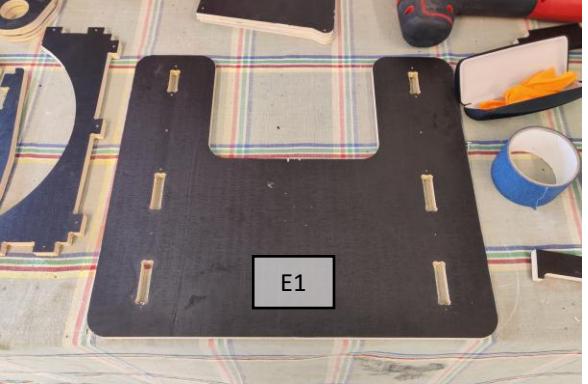
| Name | Count | Sum = 15 |
|------|-------|----------|
| B1 | 2 | |
| B2 | 1 | |
| B3 | 2 | |
| B4 | 1 | |
| B5 | 1 | |
| B6 | 2 | |
| B7 | 1 | |
| B8 | 2 | |
| B9 | 2 | |
| B10 | 1 | |

| Name | Count | Sum = 5 |
|------|-------|---------|
| C1 | 2 | |
| C2 | 2 | |
| C3 | 1 | |
| Name | Count | |
| D1 | 1 | |
| D2 | 1 | |
| D3 | 1 | |
| D4 | 1 | |
| D5 | 1 | |

| Name | Count | Sum = 15 |
|------|-------|----------|
| E1 | 1 | |
| E2 | 2 | |
| E3 | 1 | |
| E4 | 1 | |
| E5 | 1 | |
| E6 | 2 | |
| E7 | 1 | |
| E8 | 4 | |
| E9 | 2 | |

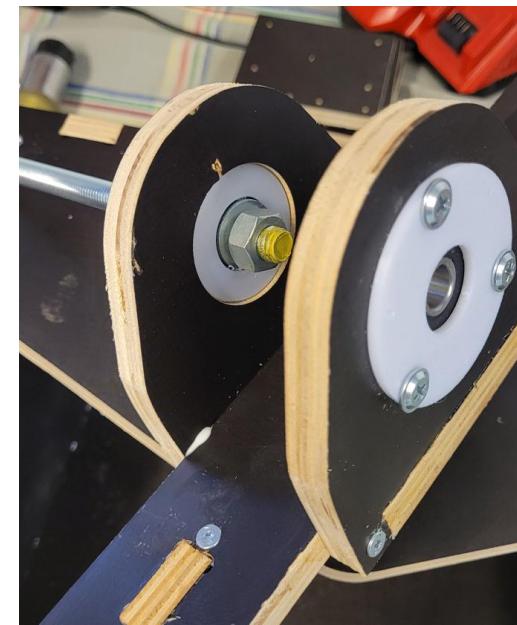
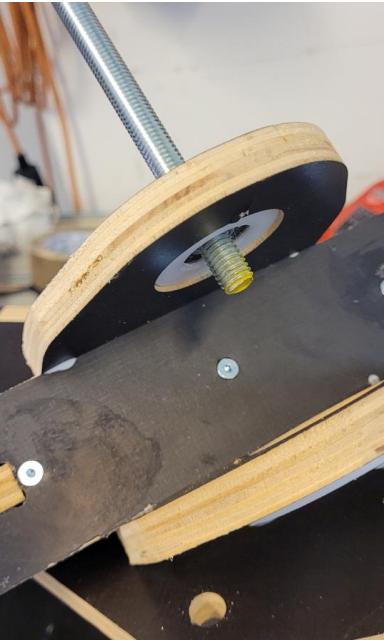
Redesigned, will be
3D-printed instead

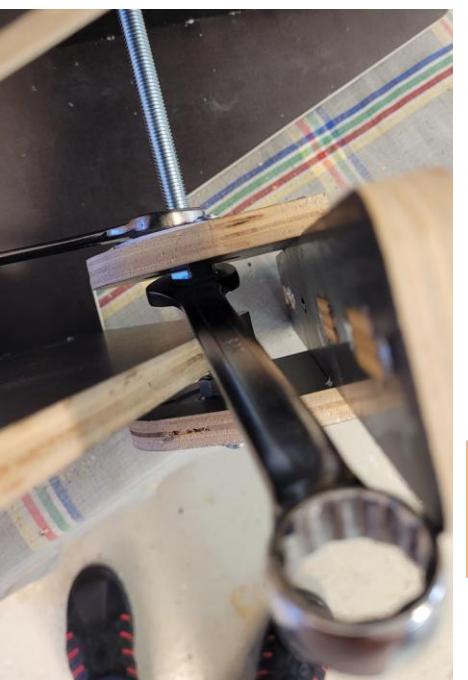
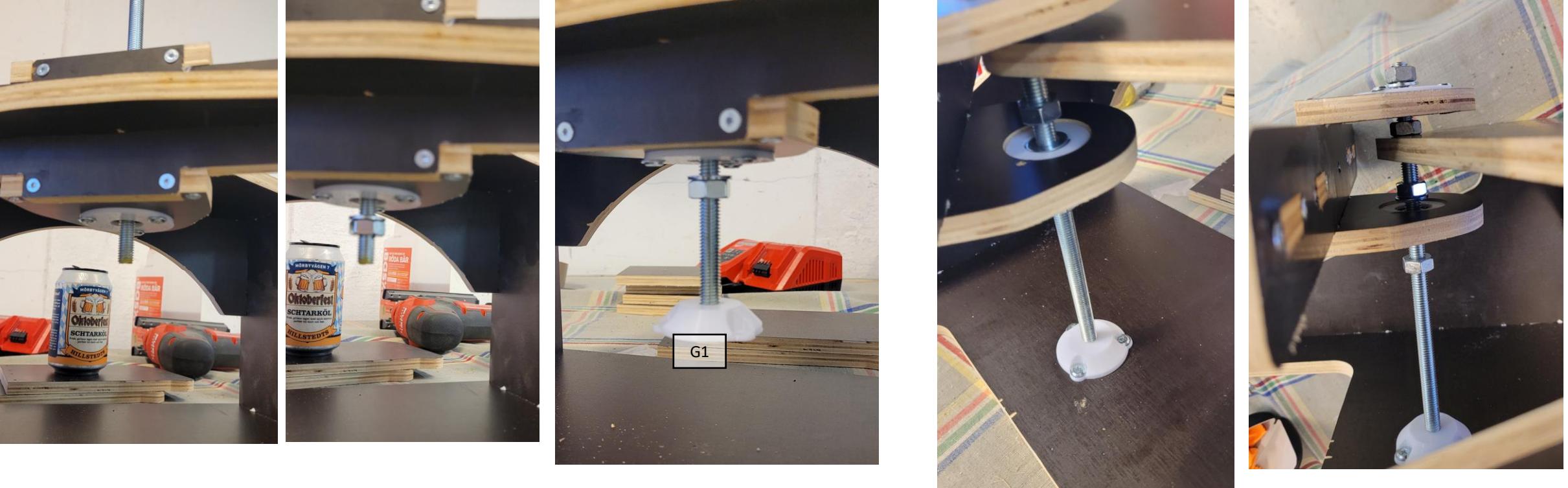




Make sure the screws
of G2 in on outside ...

Measure proper length of M10 rod

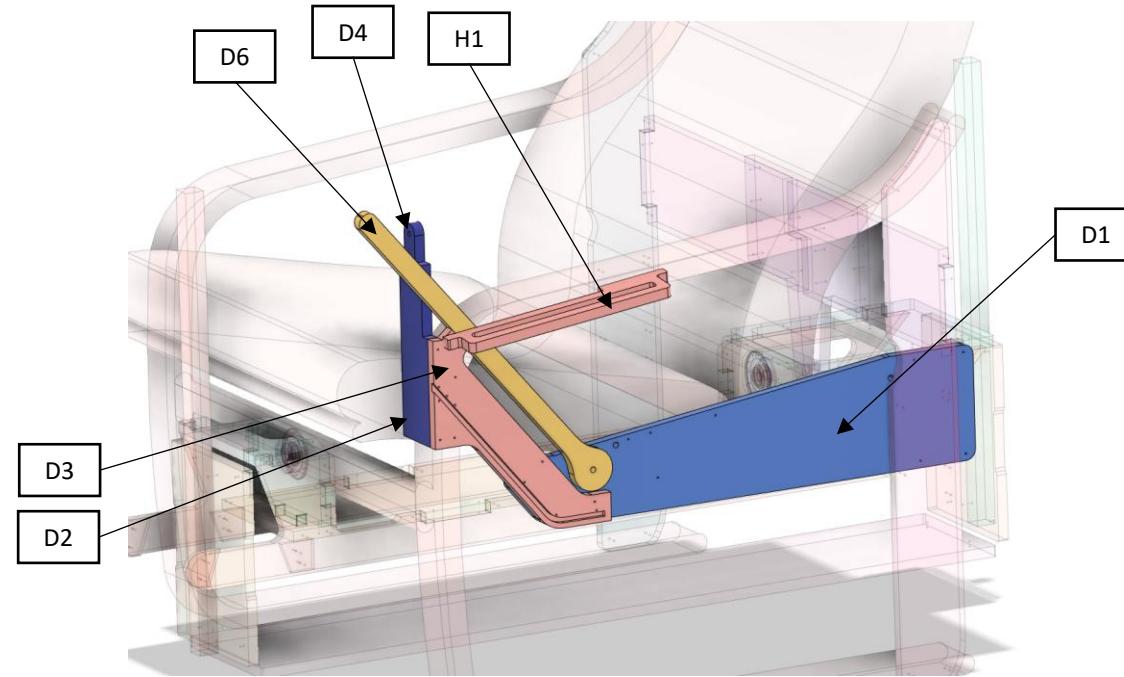


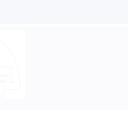


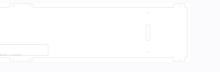
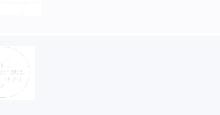
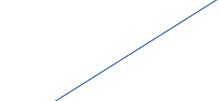
Tighten all
4 nuts.

Step 5, chair and side

...



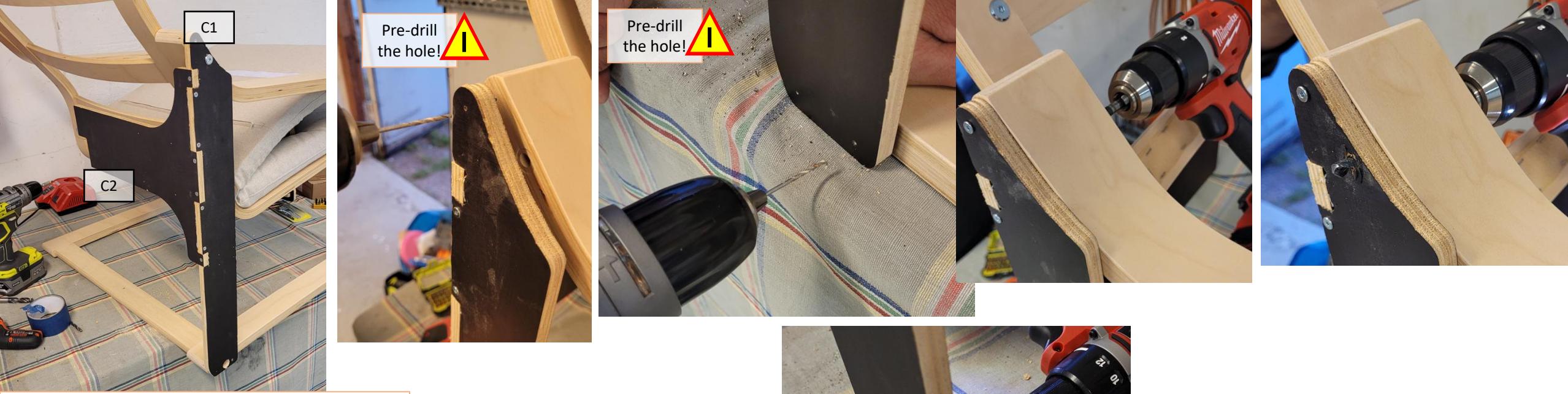
| Name | Count | Sum = 12 |
|------|-------|--|
| A1 | 1 |  |
| A2 | 2 |  |
| A3 | 2 |  |
| A4 | 2 |  |
| A5 | 1 |  |
| A6 | 1 |  |
| A7 | 1 | |
| A8 | 2 |  |

| Name | Count | Sum = 15 |
|------|-------|--|
| B1 | 2 |  |
| B2 | 1 |  |
| B3 | 2 |  |
| B4 | 1 |  |
| B5 | 1 |  |
| B6 | 2 |  |
| B7 | 1 |  |
| B8 | 2 |  |
| B9 | 2 |  |
| B10 | 1 |  |

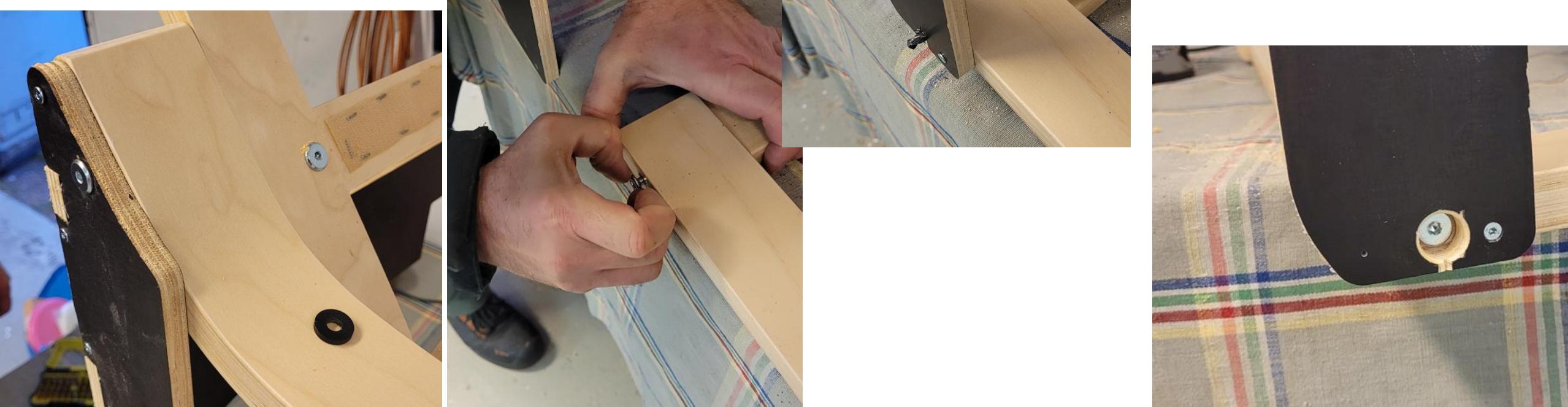
| Name | Count | Sum = 5 |
|------|-------|---|
| C1 | 2 |  |
| C2 | 2 |  |
| C3 | 1 |  |
| Name | Count | |
| D1 | 1 |  |
| D2 | 1 |  |
| D3 | 1 |  |
| D4 | 1 |  |
| D5 | 1 |  |

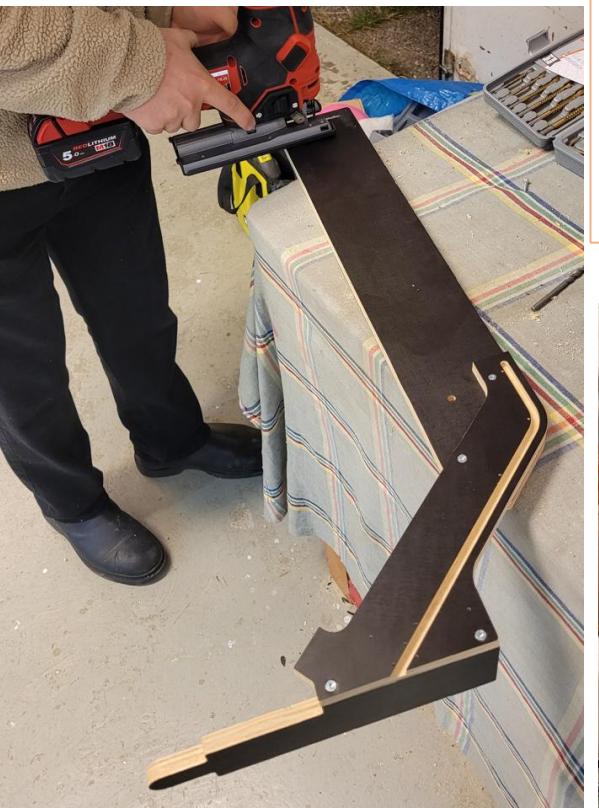
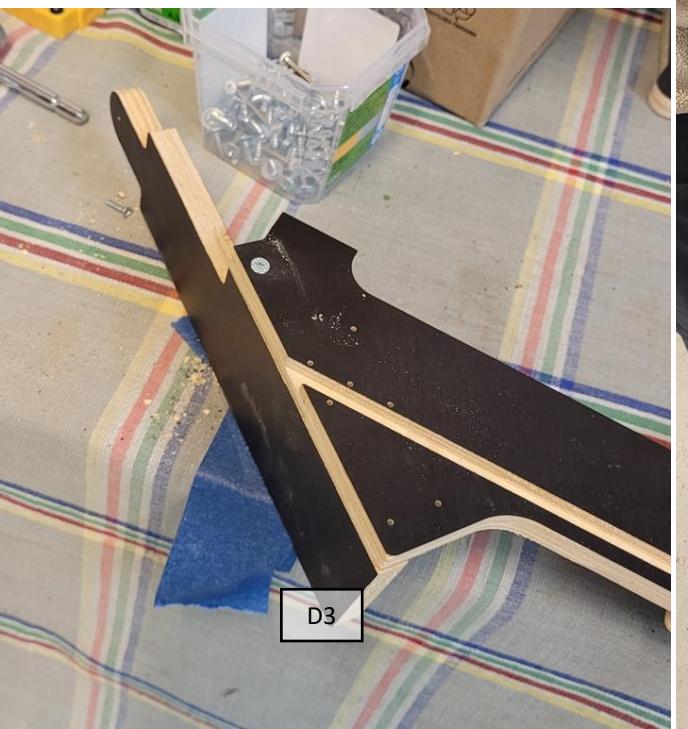
| Name | Count | Sum = 15 |
|------|-------|--|
| E1 | 1 |  |
| E2 | 2 |  |
| E3 | 1 |  |
| E4 | 1 |  |
| E5 | 1 |  |
| E6 | 2 |  |
| E7 | 1 |  |
| E8 | 4 |  |
| E9 | 2 |  |

Redesigned, will be
3D-printed instead

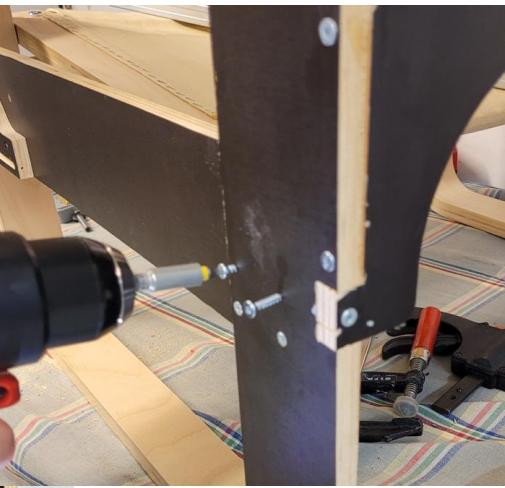


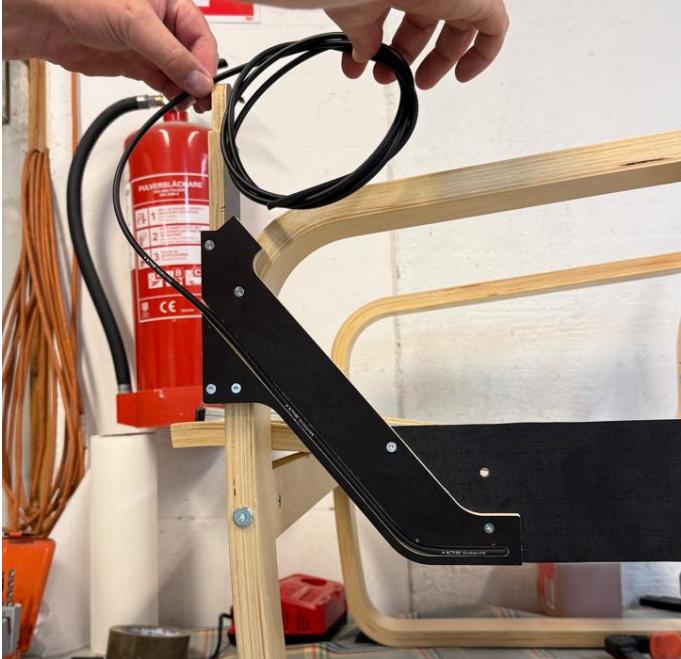
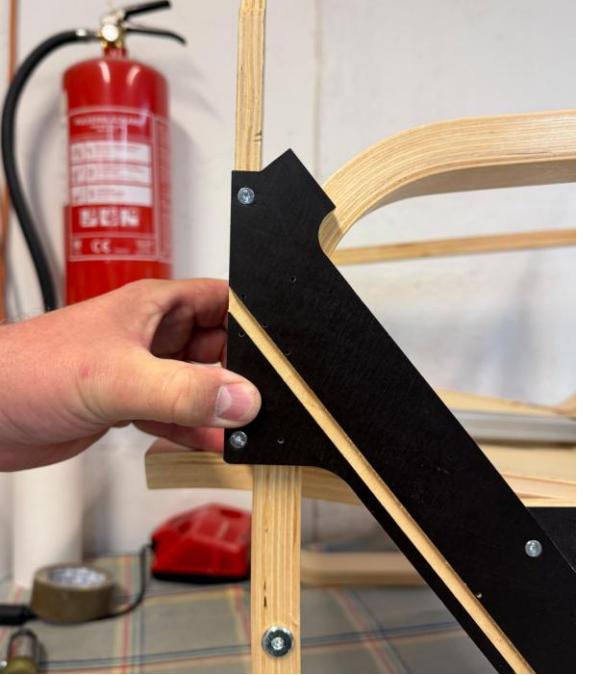
We forgot to take pictures, but assemble C1 and C2, both sides.



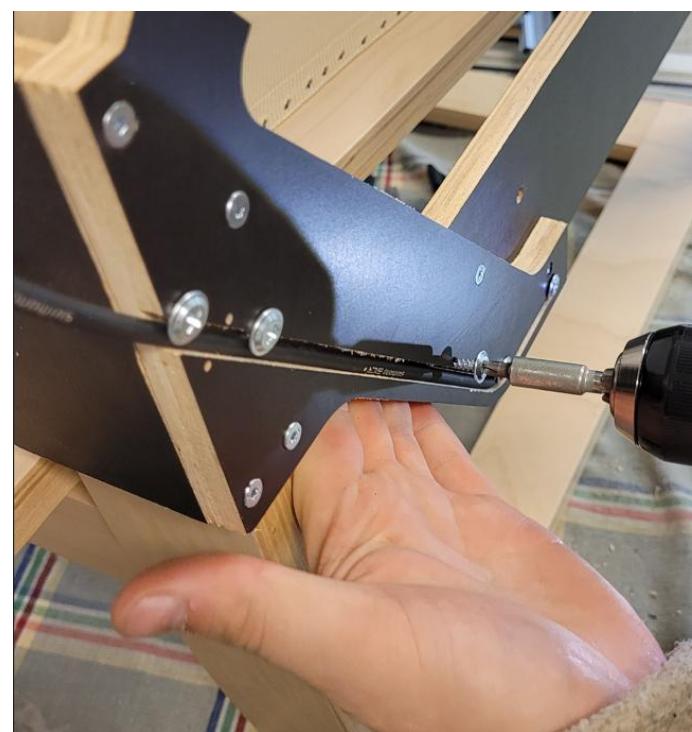
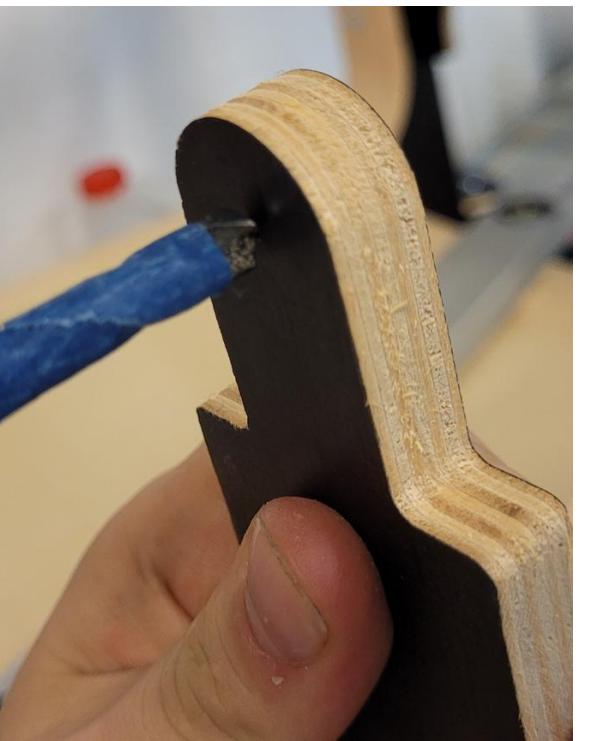


D2 may be a bit
too long. Adjust
at your own
discretion



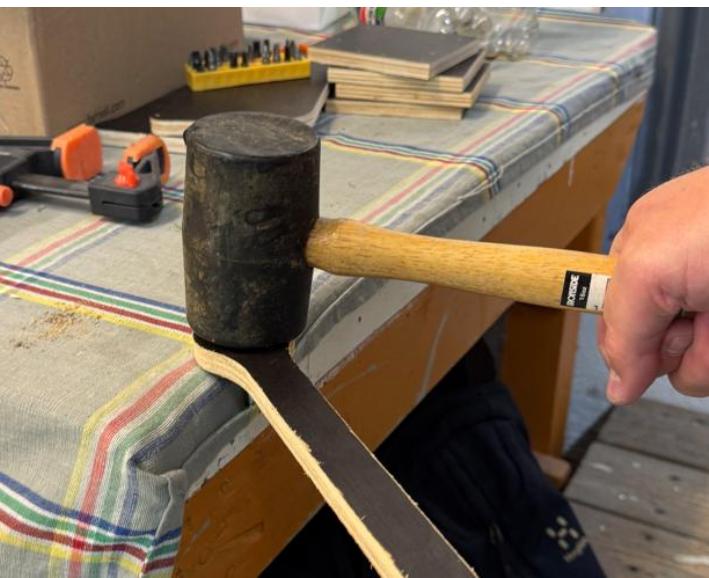
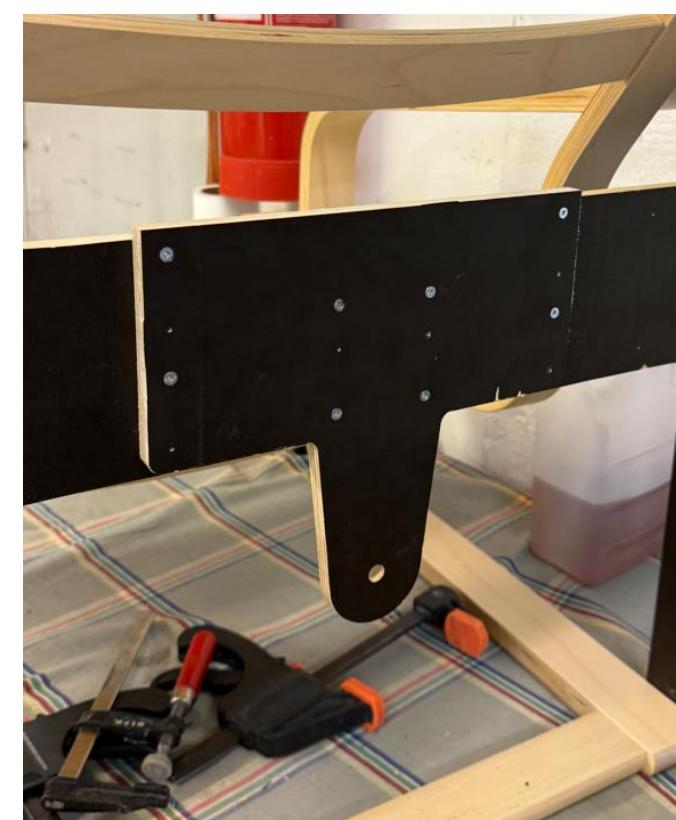


Drill Ø: 6.5 mm
No deeper than
6 mm. The end
of Bowden cable
shall fit.

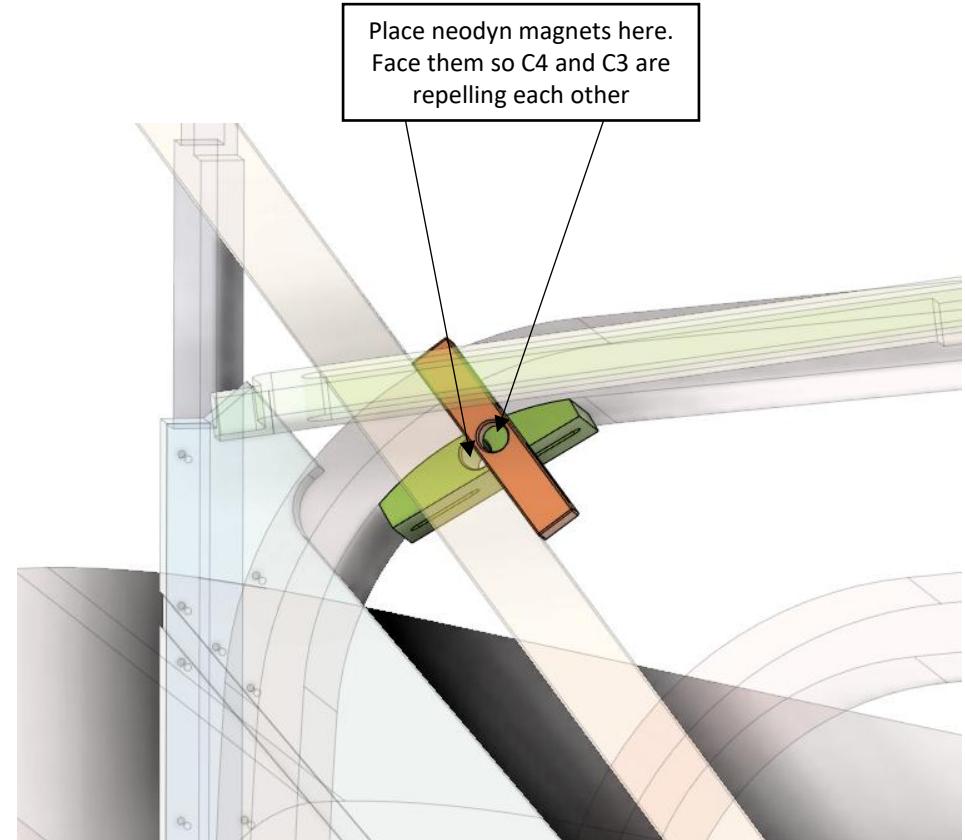
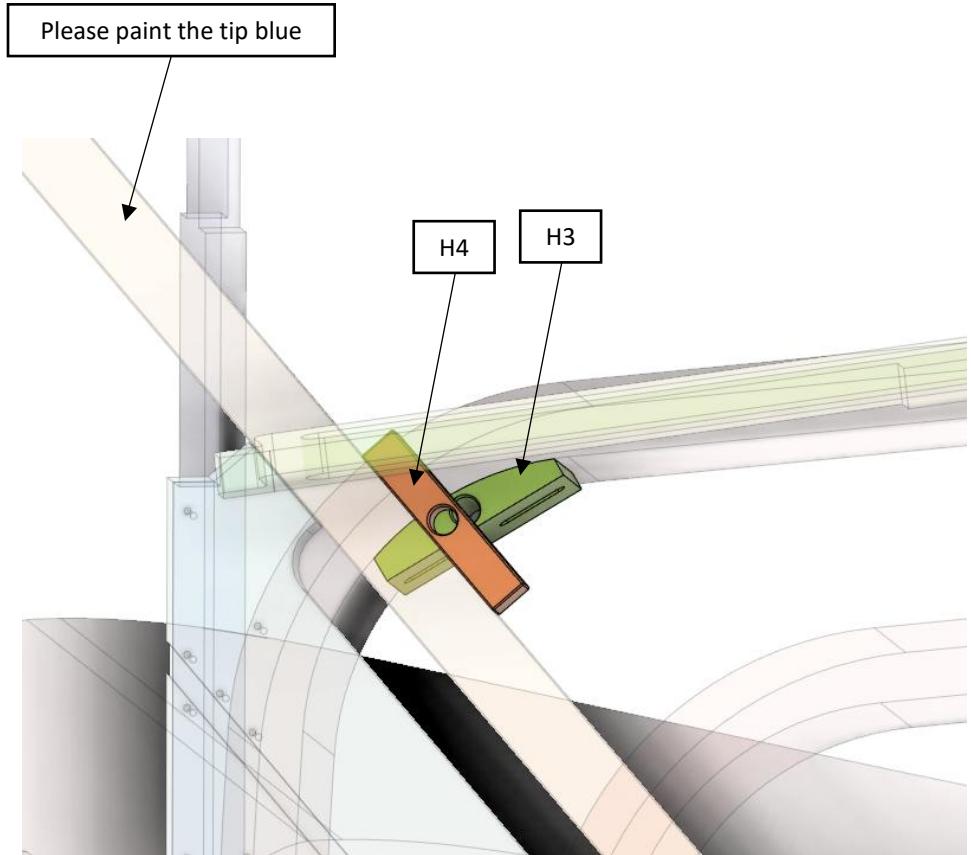
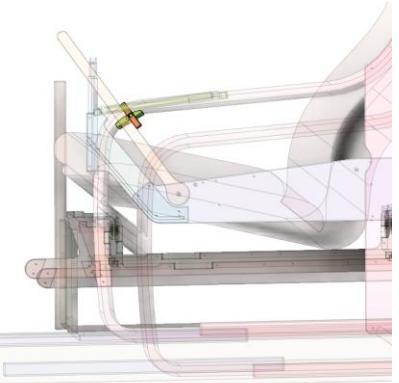




Find the center.

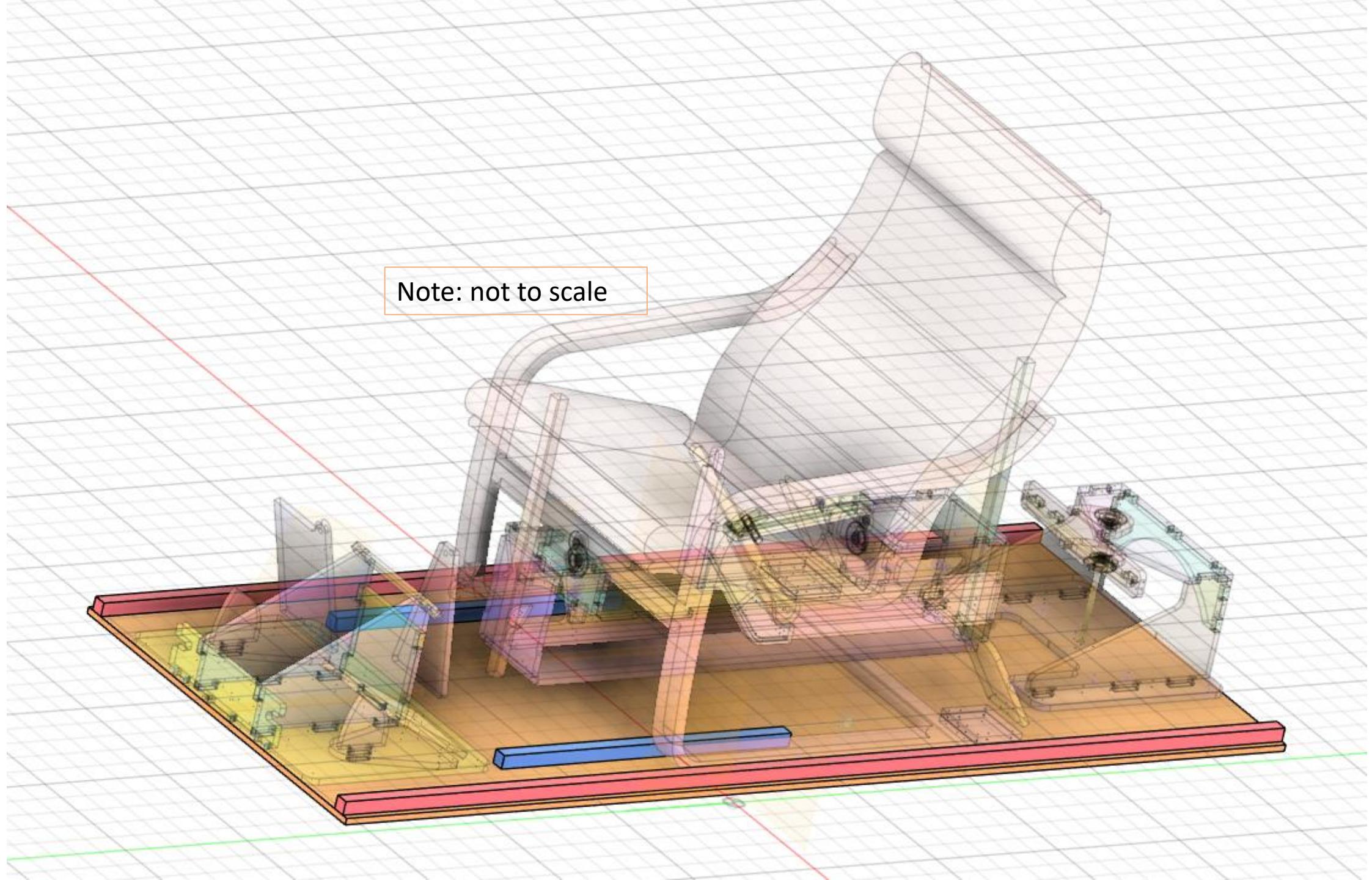


This is to simulate the air brake leaver lock.



Step 6, base plate

...



| Name | Count | Sum = 12 |
|------|-------|----------|
| A1 | 1 | |
| A2 | 2 | |
| A3 | 2 | |
| A4 | 2 | |
| A5 | 1 | |
| A6 | 1 | |
| A7 | 1 | |
| A8 | 2 | |

| Name | Count | Sum = 15 |
|------|-------|----------|
| B1 | 2 | |
| B2 | 1 | |
| B3 | 2 | |
| B4 | 1 | |
| B5 | 1 | |
| B6 | 2 | |
| B7 | 1 | |
| B8 | 2 | |
| B9 | 2 | |
| B10 | 1 | |

| Name | Count | Sum = 5 |
|------|-------|---------|
| C1 | 2 | |
| C2 | 2 | |
| C3 | 1 | |
| D1 | 1 | |
| D2 | 1 | |
| D3 | 1 | |
| D4 | 1 | |
| D5 | 1 | |

| Name | Count | Sum = 15 |
|------|-------|----------|
| E1 | 1 | |
| E2 | 2 | |
| E3 | 1 | |
| E4 | 1 | |
| E5 | 1 | |
| E6 | 2 | |
| E7 | 1 | |
| E8 | 4 | |
| E9 | 2 | |

Redesigned, will be
3D-printed instead

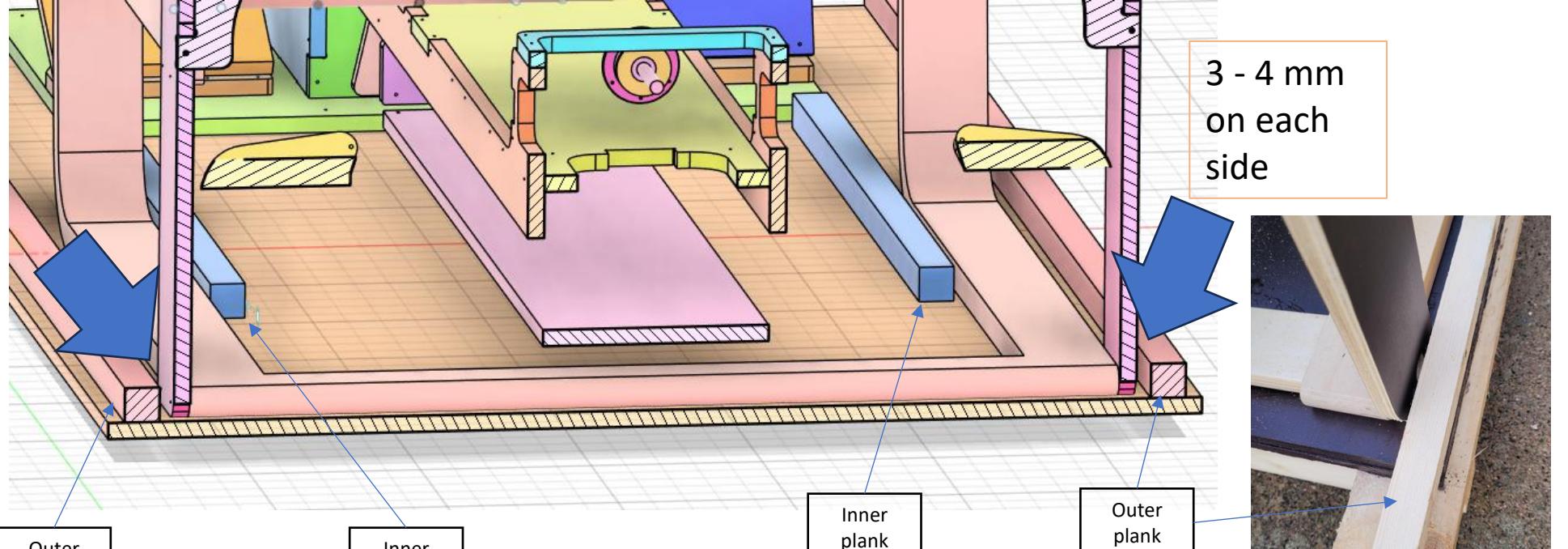


Mount front pedals to the front aligned in the centre.



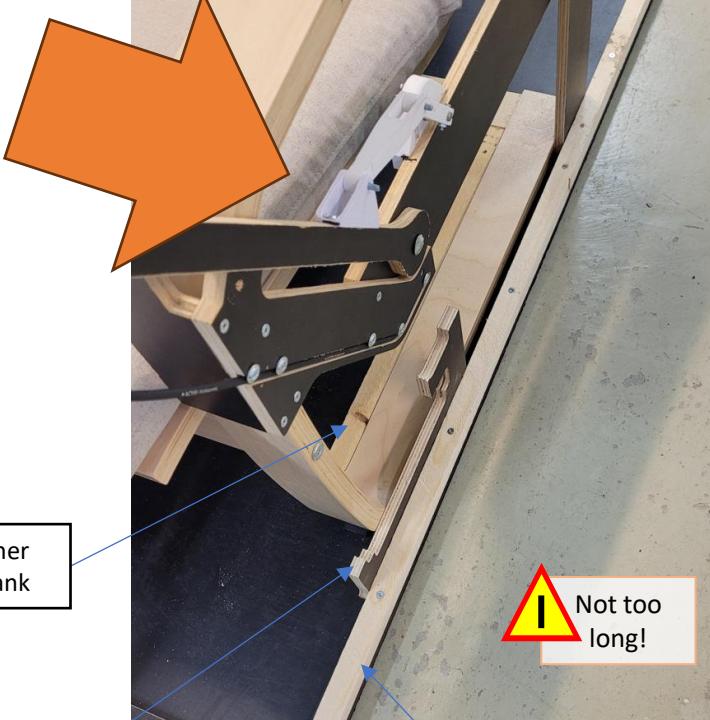
Since the base plate shall be on the floor, make sure the screws are in adequate length. If they are too long they will damage the floor.







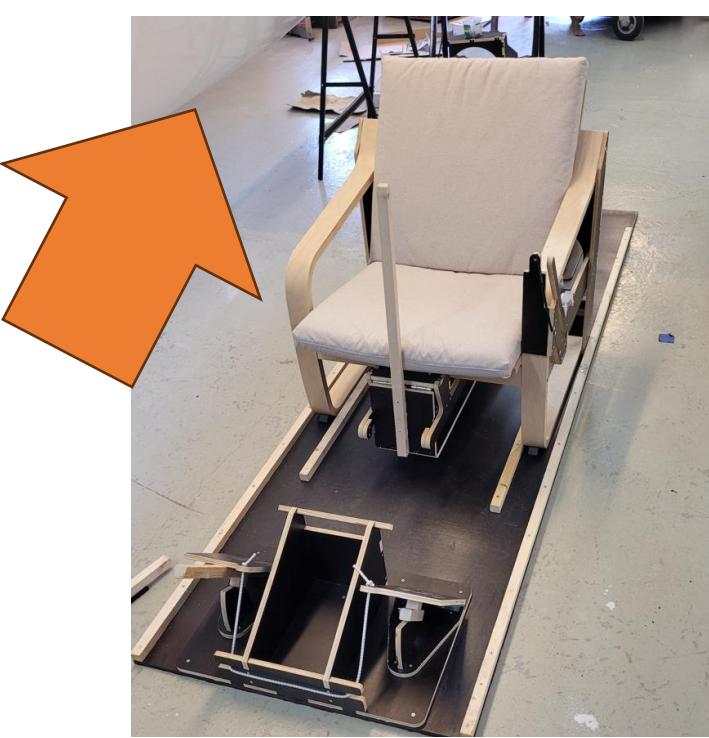
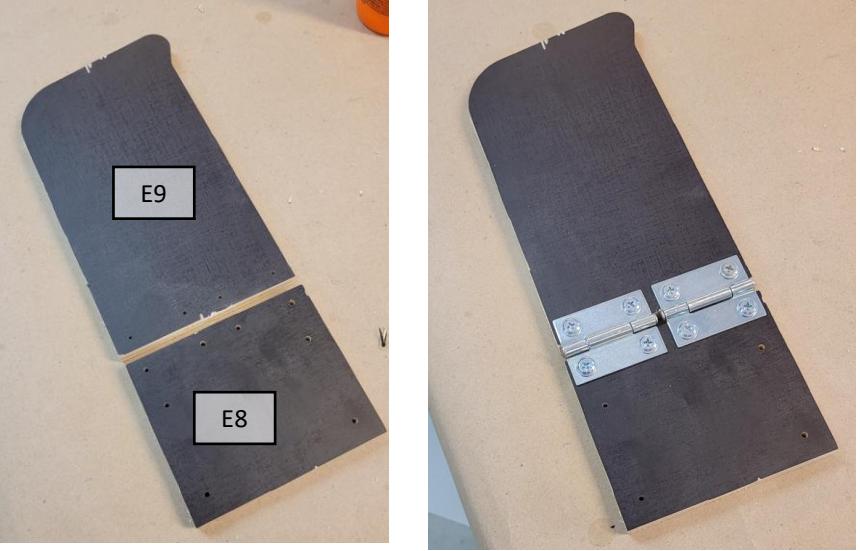
1. Mount outer planks.
2. Push chair to front to simulate a short pilot.



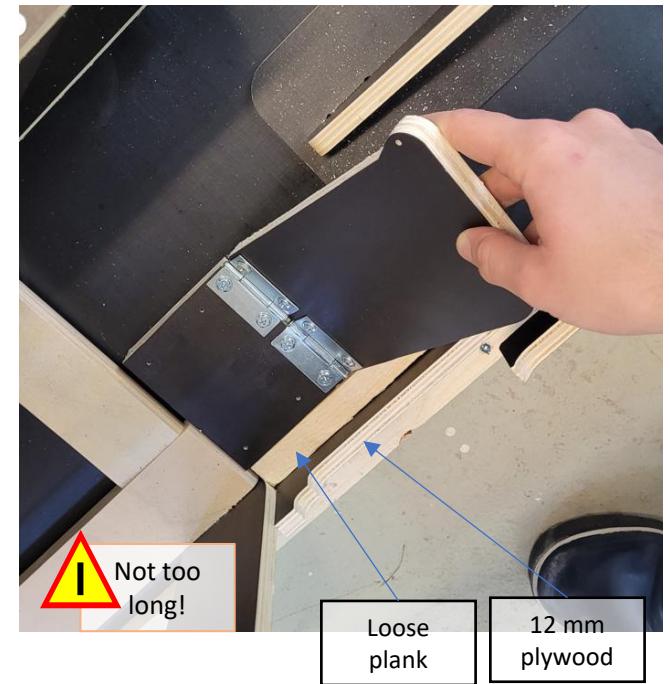
3. Place a 12 mm piece of plywood between chair and outer plank.
4. Push the chair firmly against outer plank.
5. Screw down inner plank to base plate.



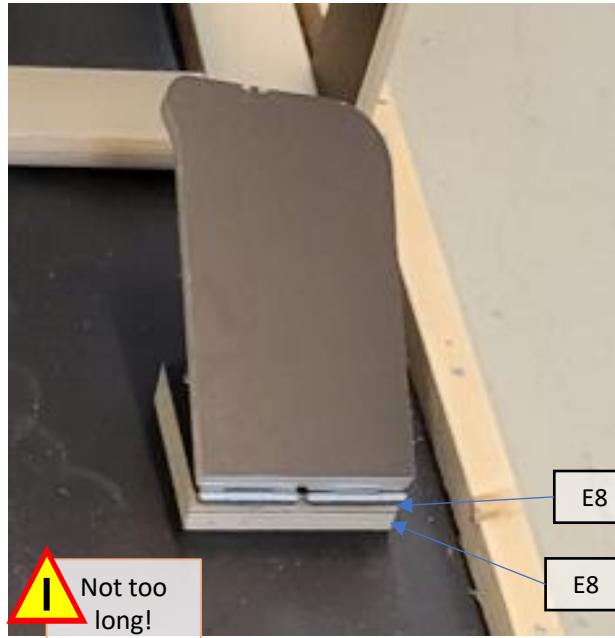
- To the same thin at the other side:
6. Place a 12 mm piece of plywood between chair and outer plank.
 7. Push the chair firmly against outer plank.
 8. Screw down inner plank to base plate.



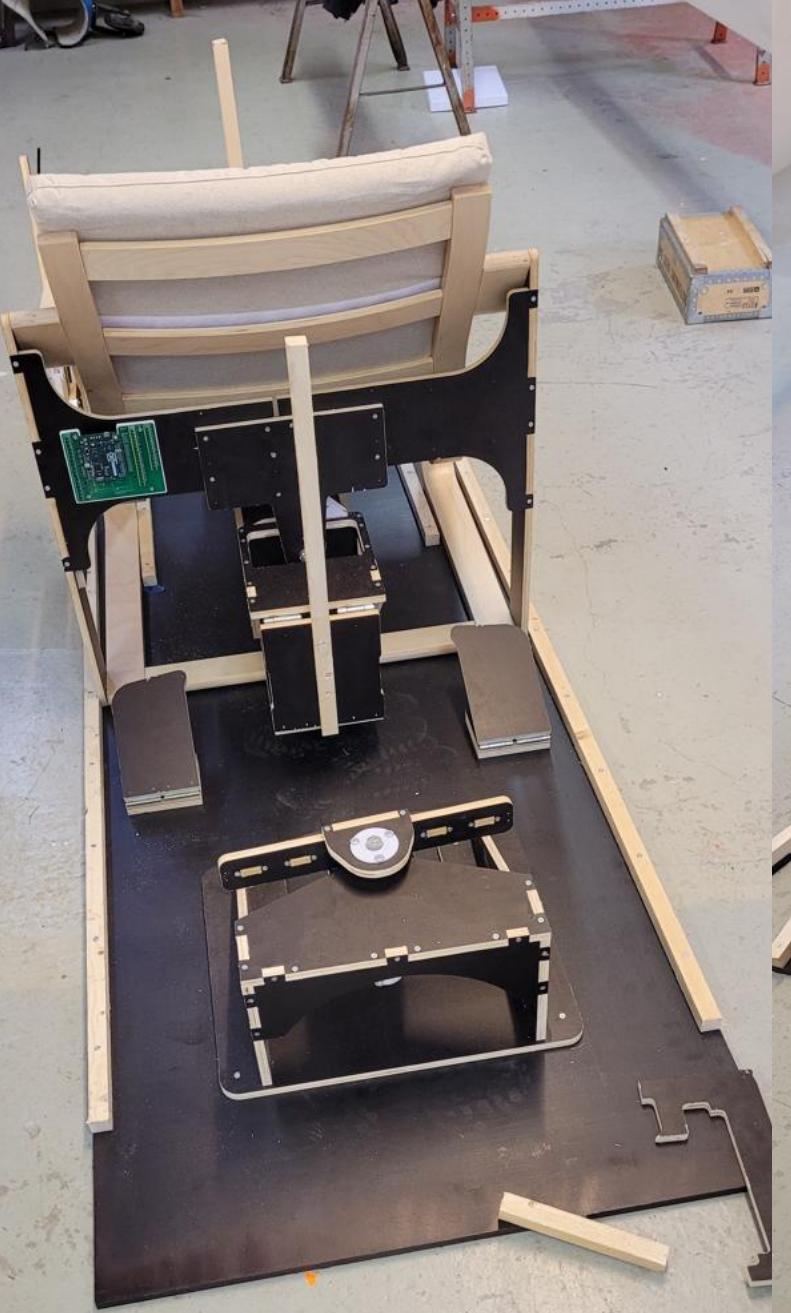
Push chair to back
so a very long
basket player pilot
sits comfortably.



Place E8 approx. 37
mm from outer plank.
($37\text{ mm} = 12\text{ mm}$
plywood and a
leftover piece of
outer/inner plank)

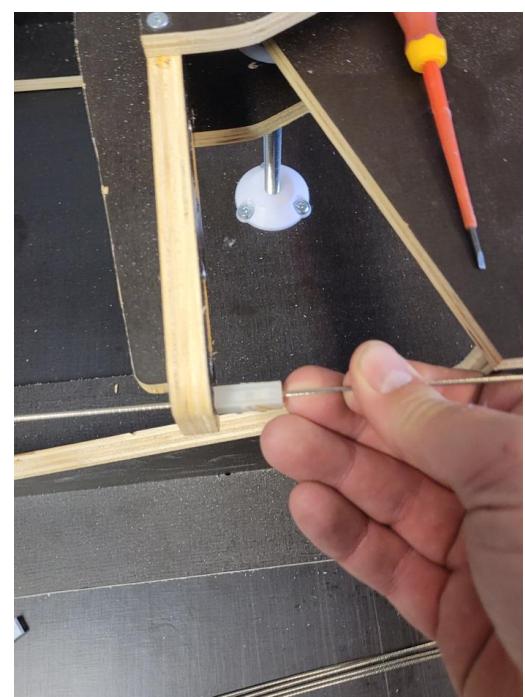
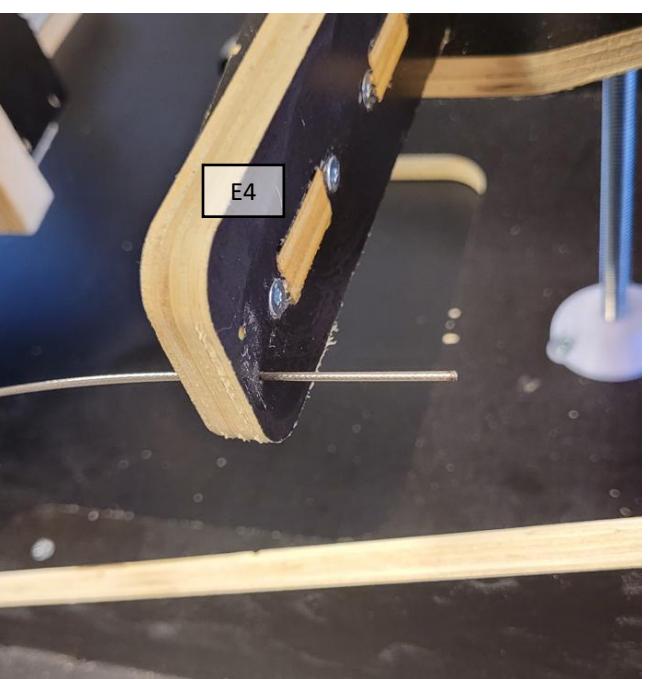
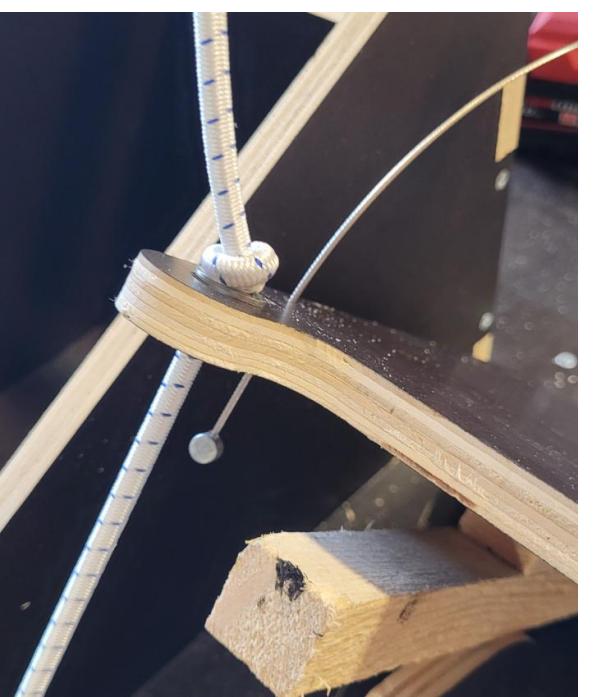
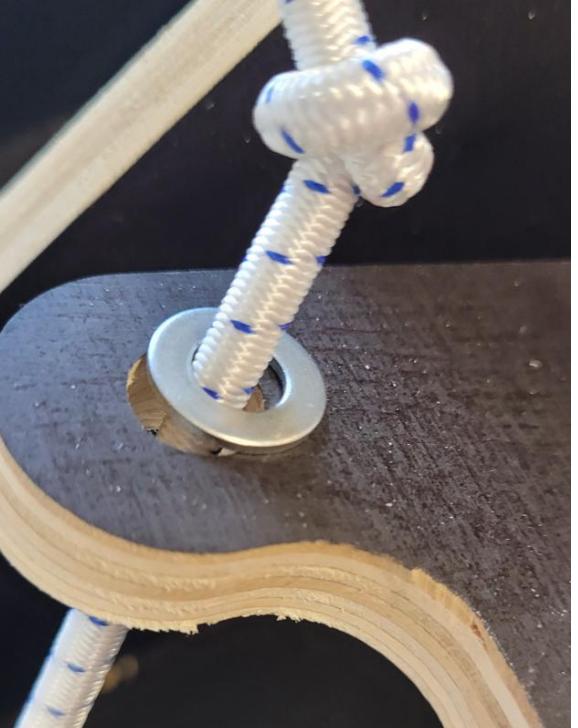


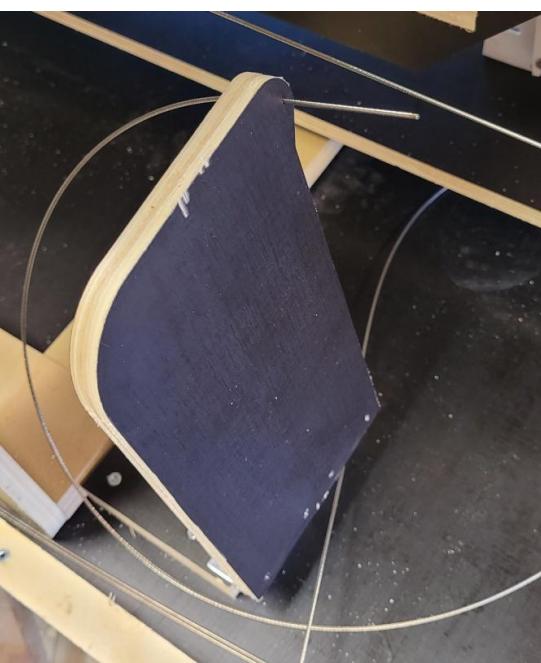
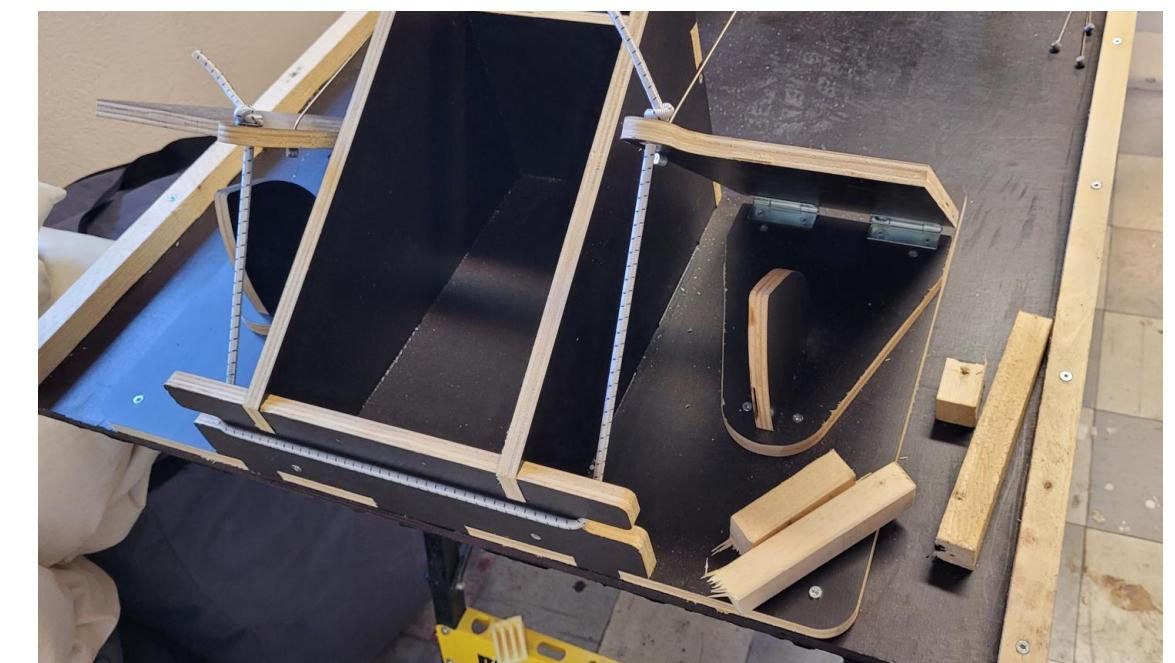
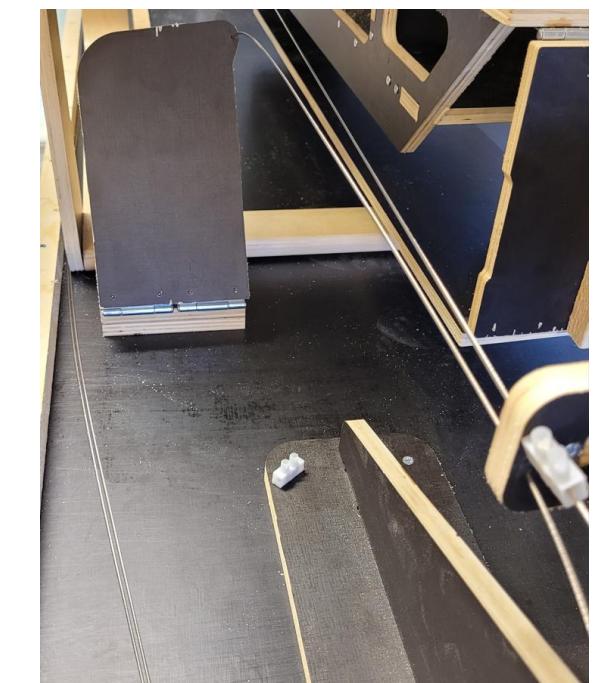
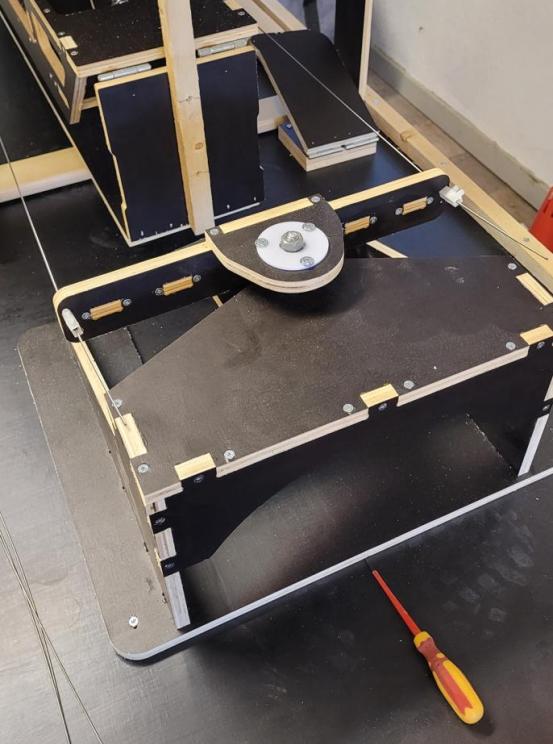
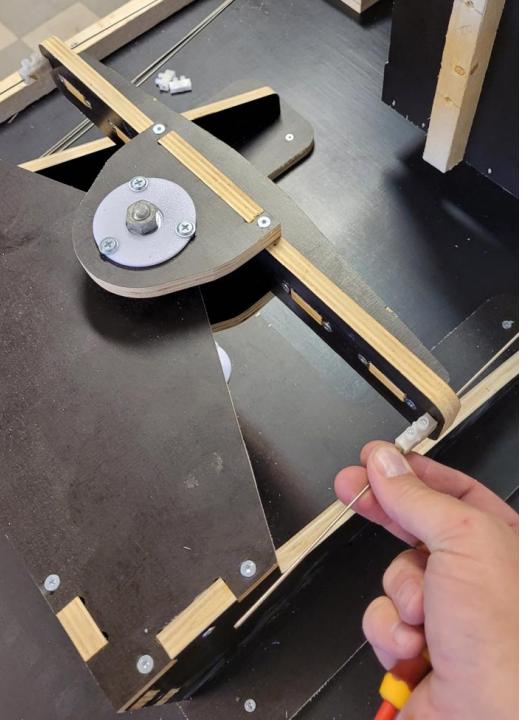
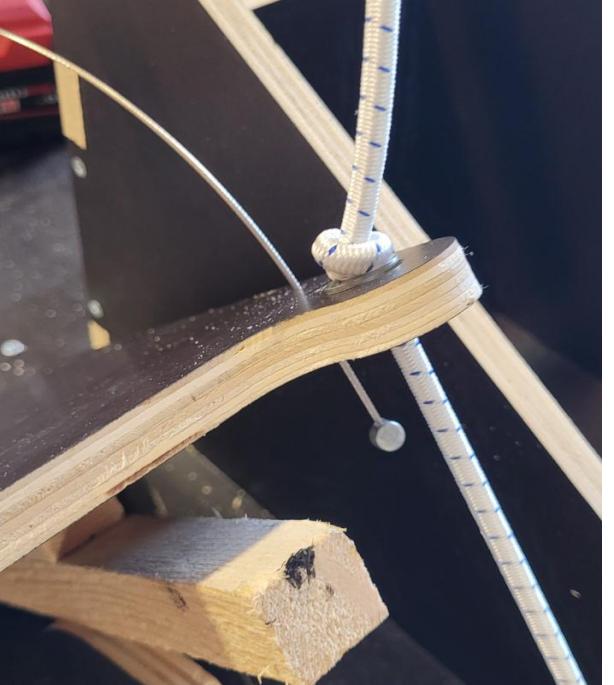
Note: 2 x E8 on top
of each other!

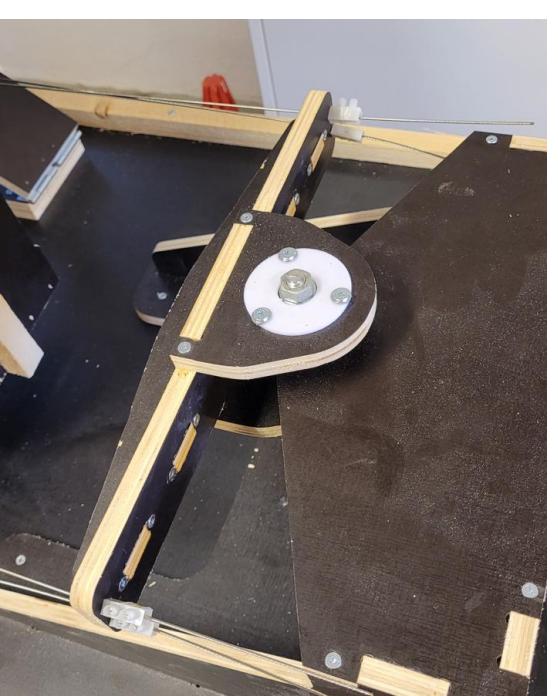
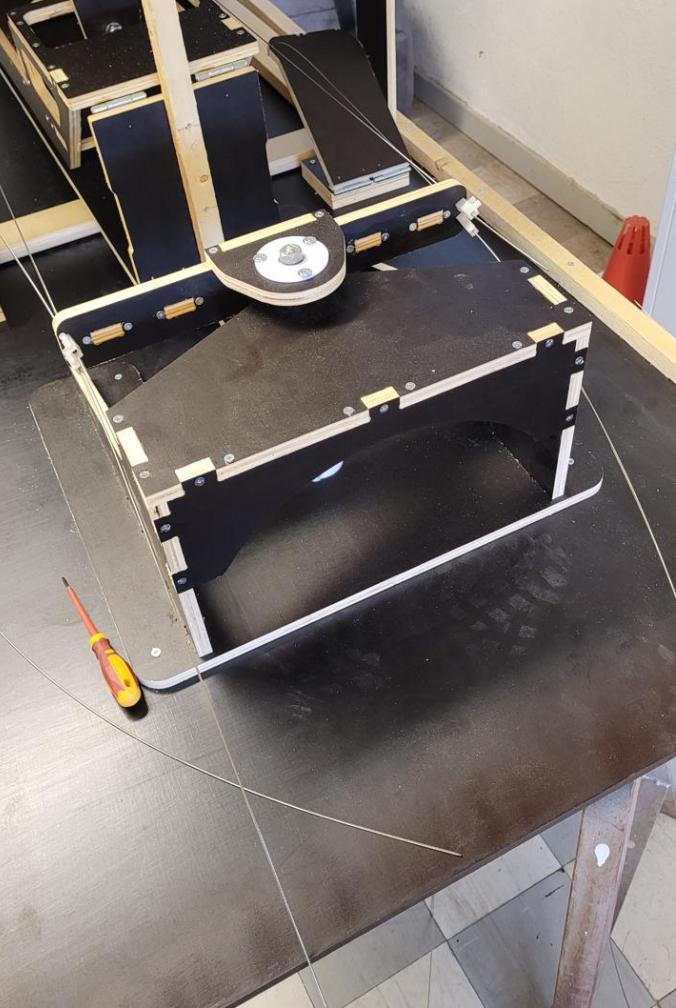
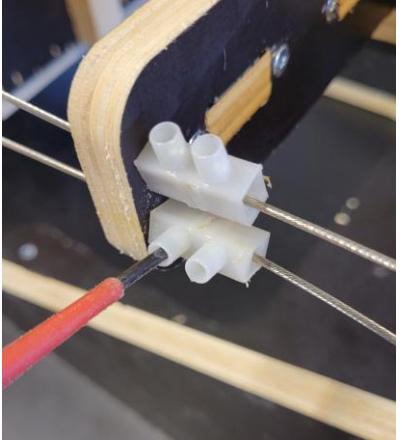
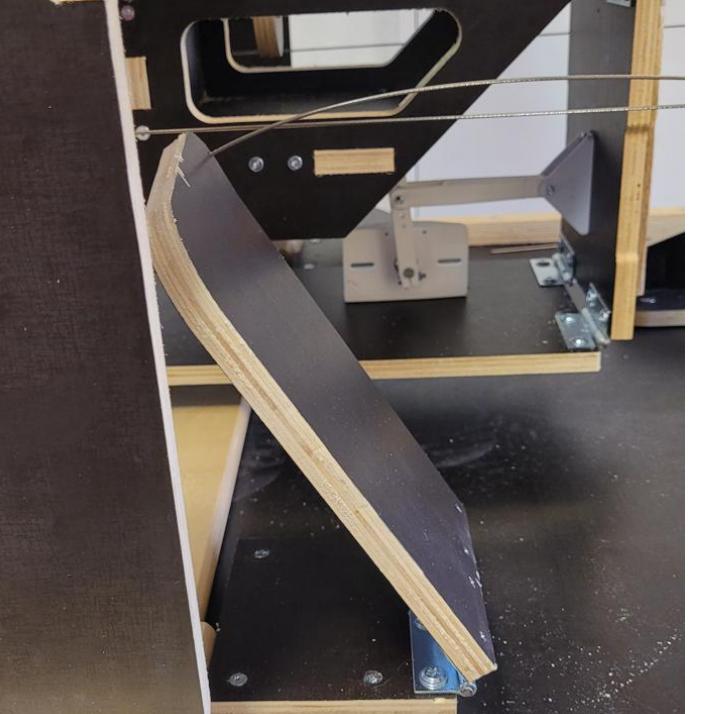
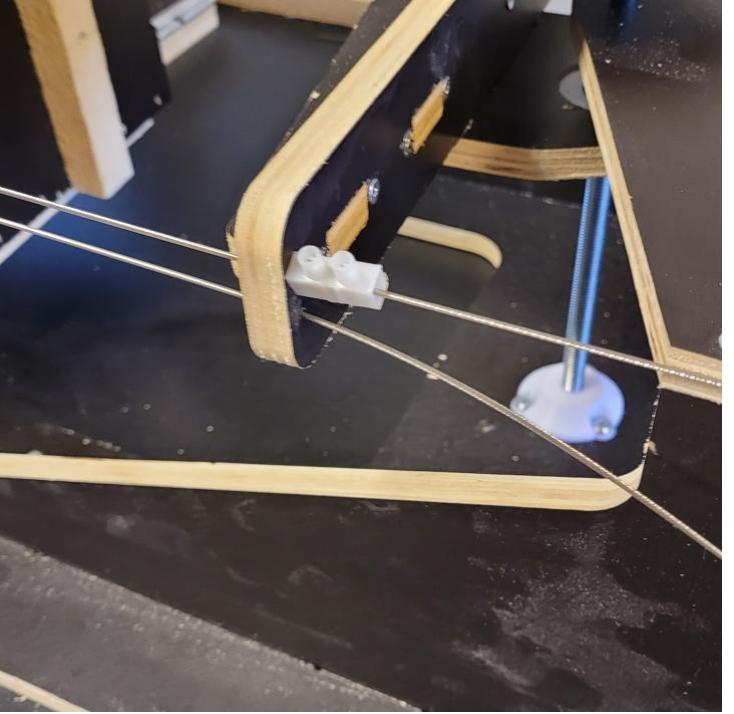


Step 7, wires and rubber bands

...





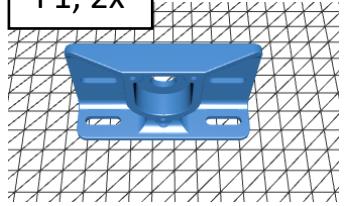




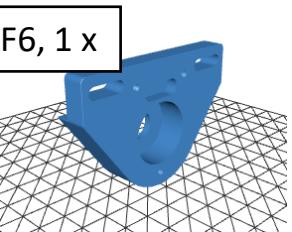
Step 7, the electronics stuff

...

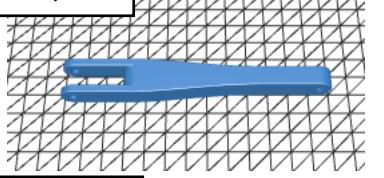
F1, 2x



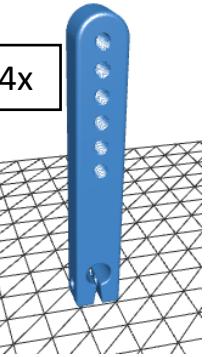
F6, 1 x



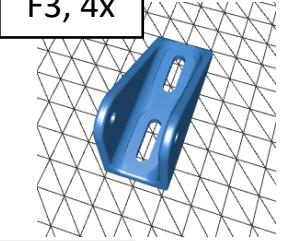
F2, 2x



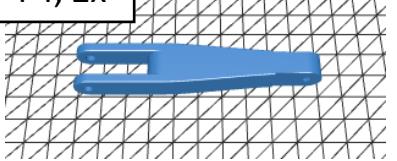
F7, 4x



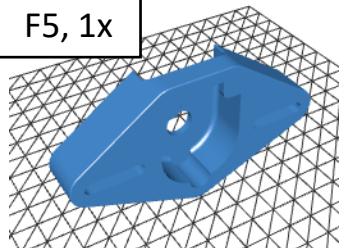
F3, 4x



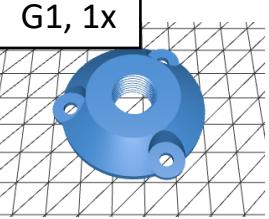
F4, 2x



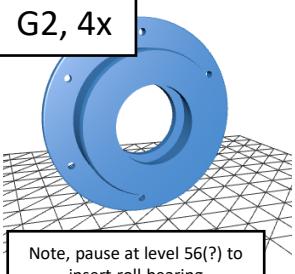
F5, 1x



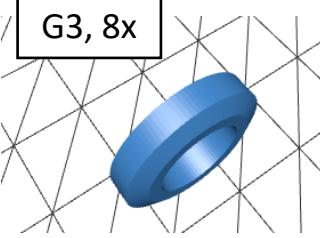
G1, 1x



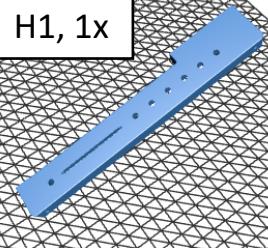
G2, 4x



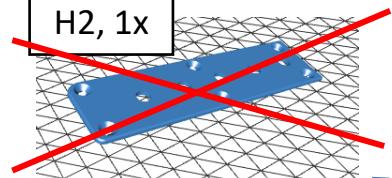
G3, 8x



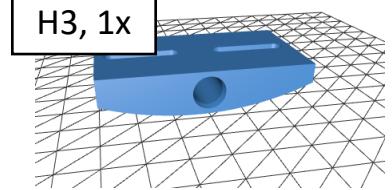
H1, 1x



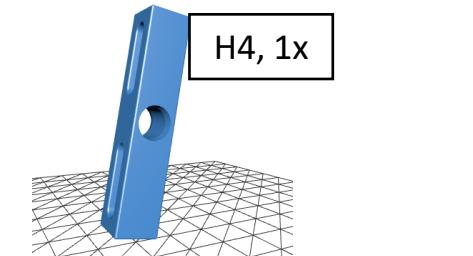
H2, 1x



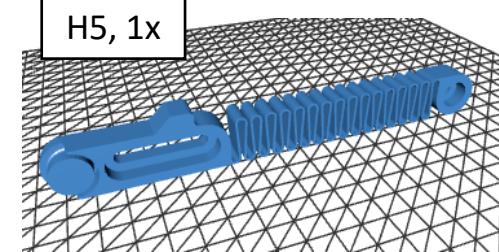
H3, 1x



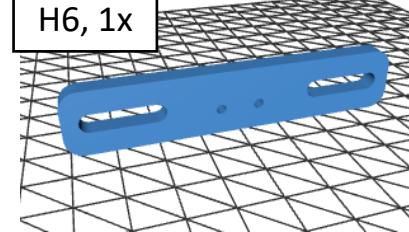
H4, 1x



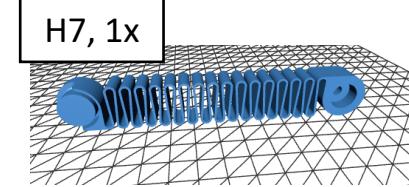
H5, 1x



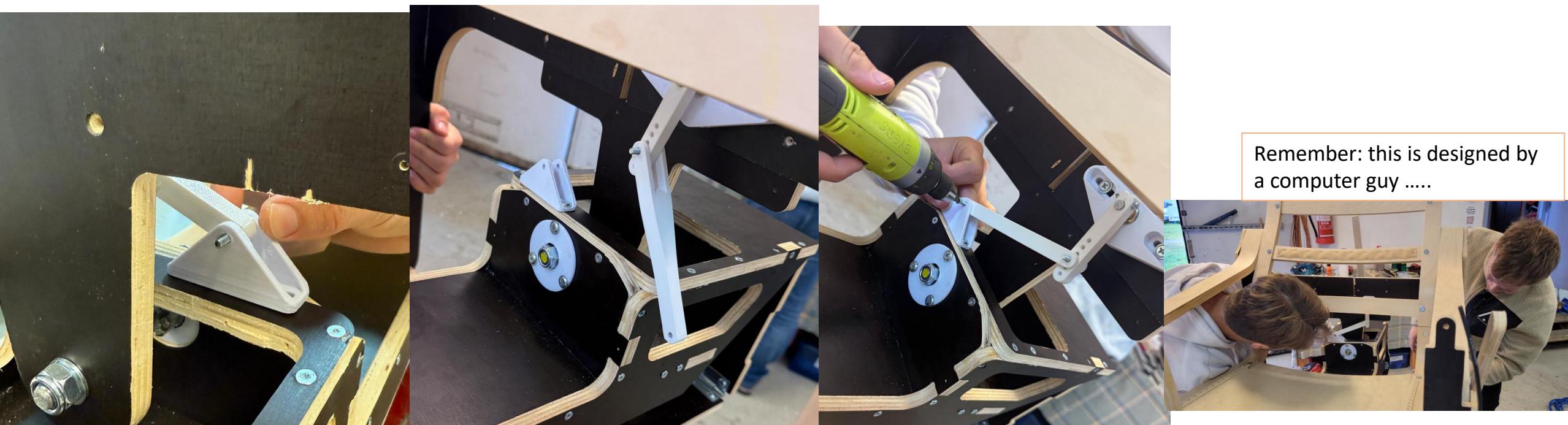
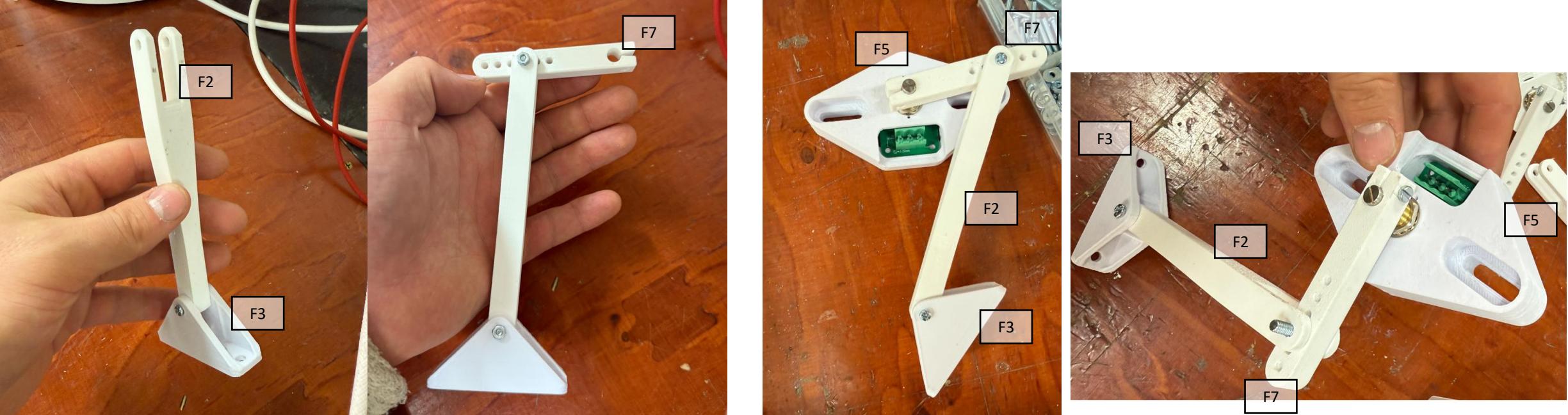
H6, 1x

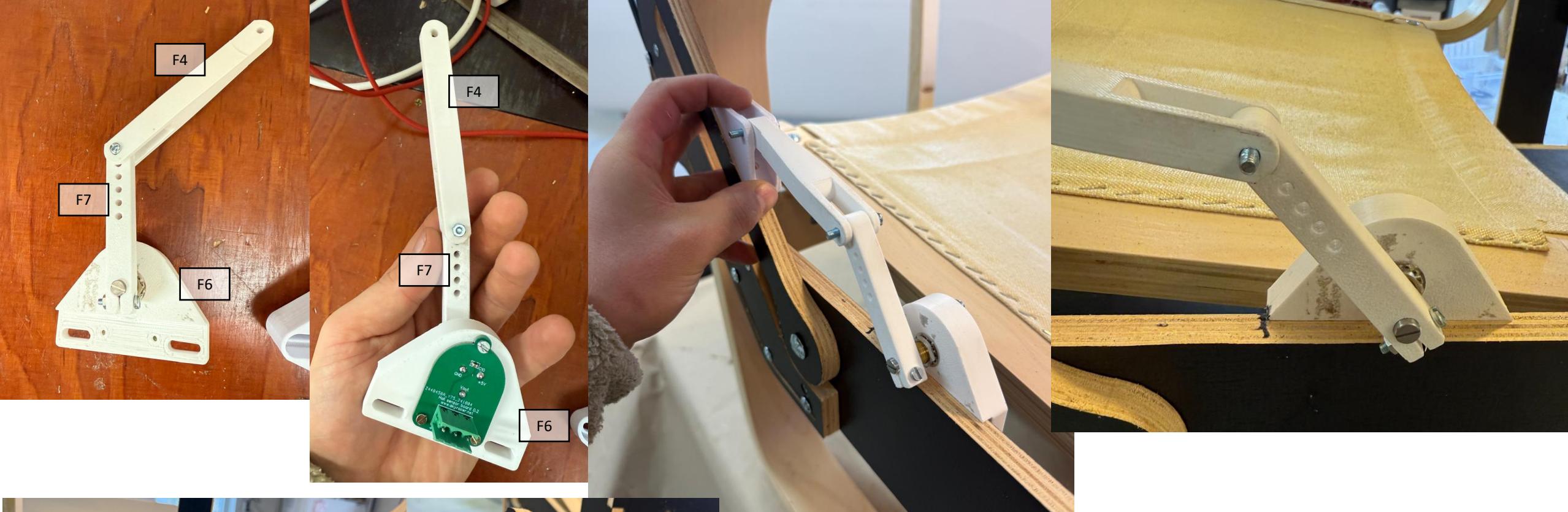


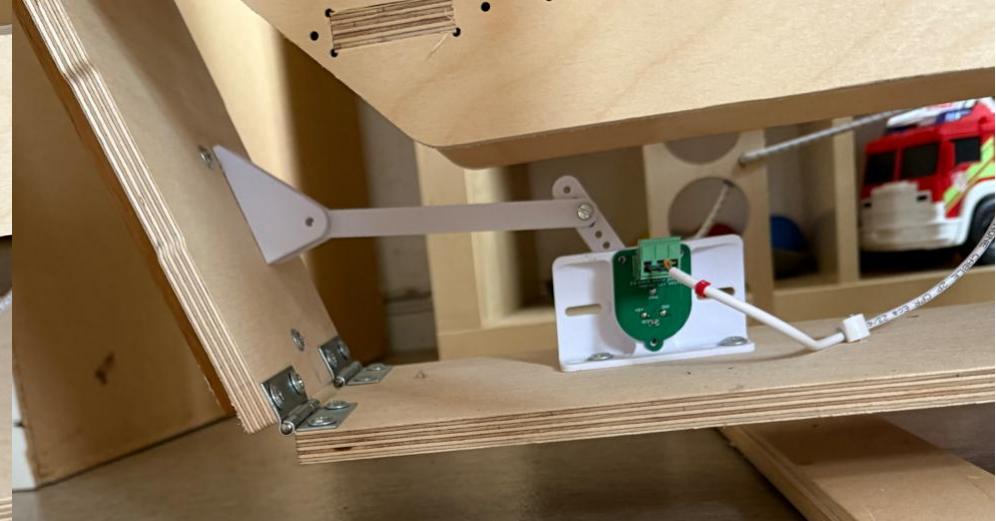
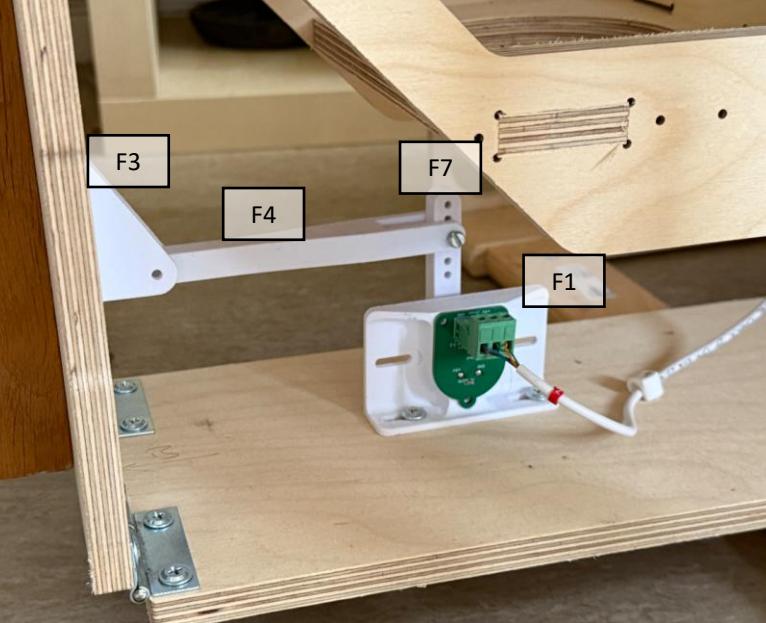
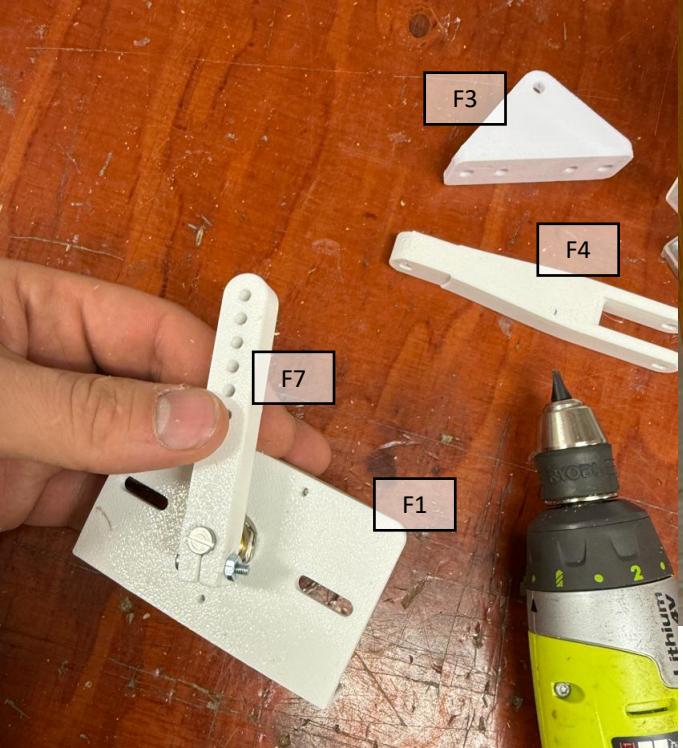
H7, 1x



Discontinued: H1, H2 and D4 is combined together into H1



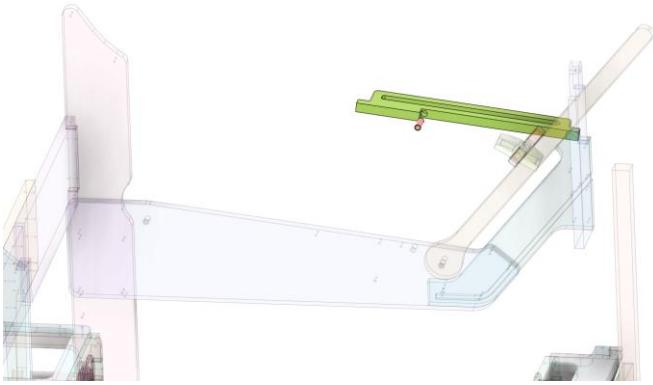




F8

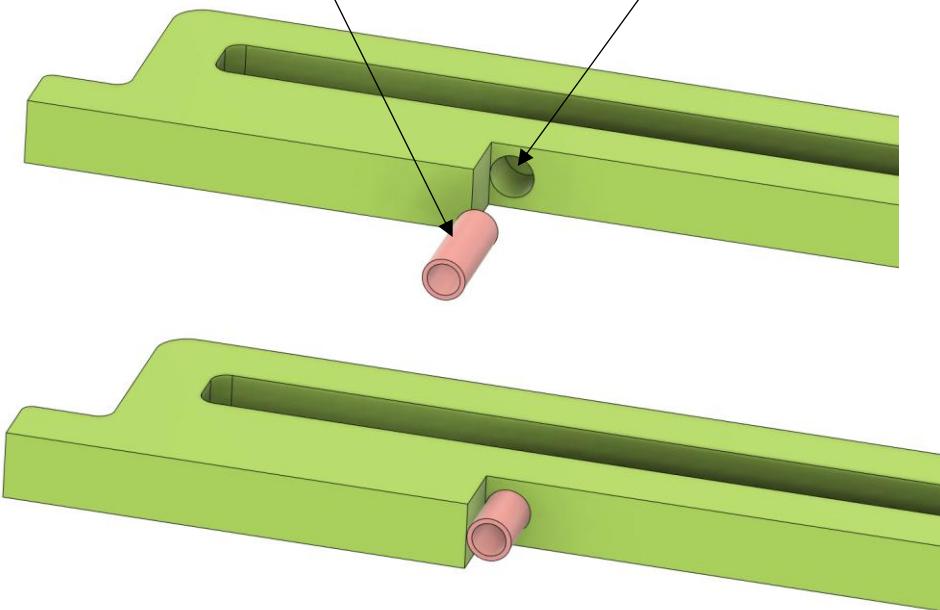


Simulating wheel brake

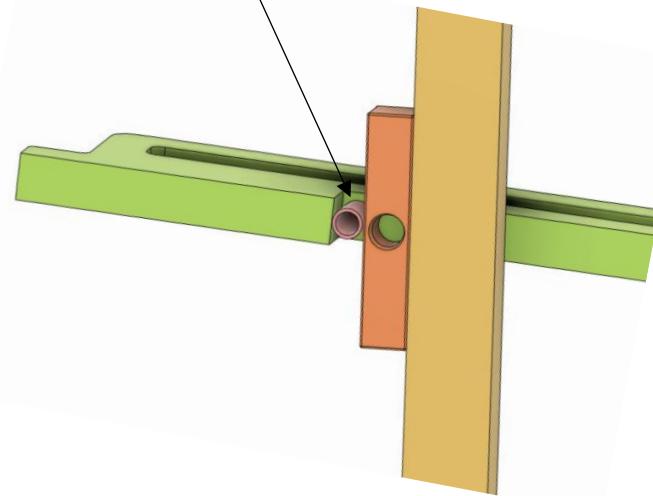


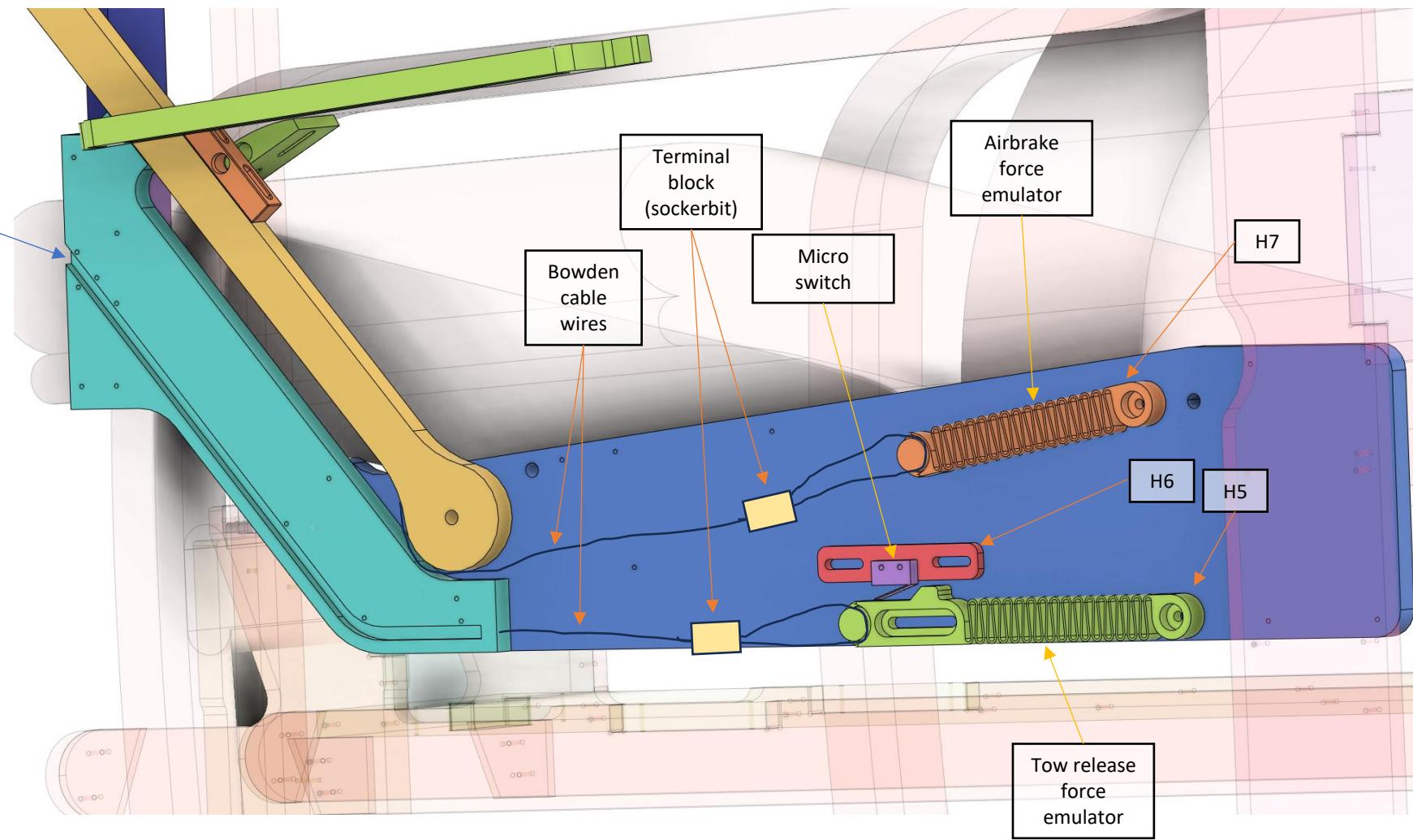
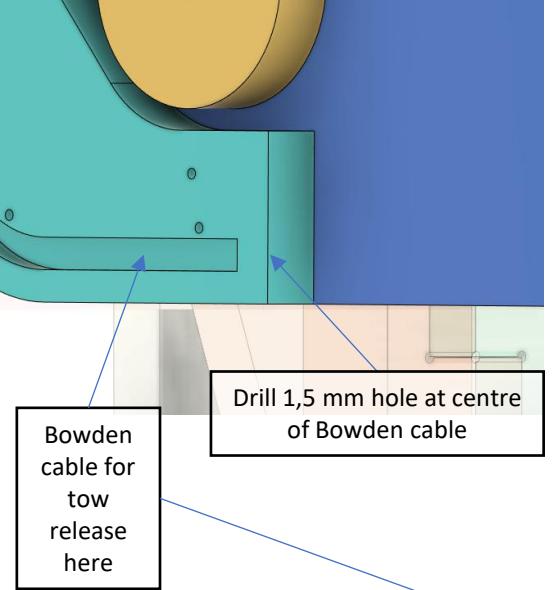
8mm PVC tube

Drill a hole 8mm diameter



When deploying full airbrake, the PVC-tube will be compressed and simulating the wheel brake





Dimensions are to be verified ...

