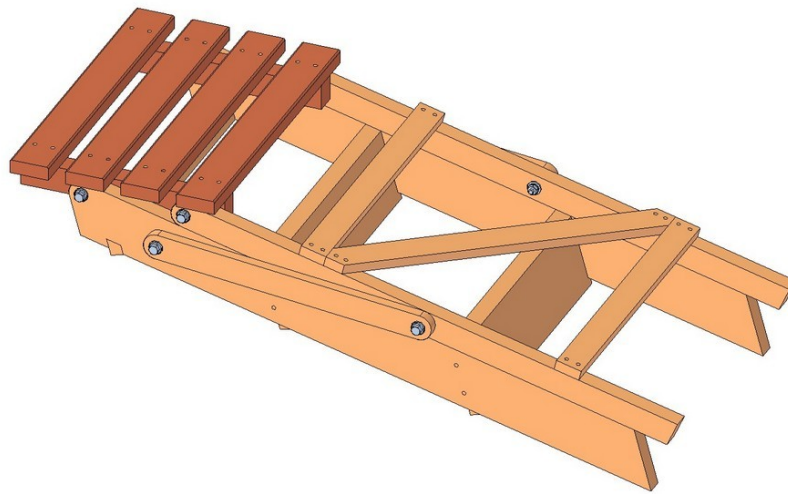


Folding step ladder plan



The step ladder is a practical tool, which you can easily and quickly use to climb and reach things stored on high place at home or in the store, workshop, library... It is very useful at home for washing the windows, hanging picture and curtains, etc. The ladder can also be used as a support or a stand.

We are presenting the plan for wooden folding step ladder, which can be made quite easily in the carpentry workshop. This step ladder is very suitable for its folding, so after using it you can easily fold it and put away. This ladder is small and light, so that even women can easily carry it and use.

Carefully sand all the parts to get a smooth surface. This is important because the step ladder needs to be hold, carried and set by hands every time we use it, so if the surface is not smooth, there is a big chance for injury by splinters. Finish can be transparent to highlight the natural wood appearance, or it can have applied colour to fit the interior.

Always be careful when using the ladder. Rarely you will just go up and get off it – in most cases you will also carry something in your hands or you will use the ladder to repair something on higher places. In such situations, a man is focused on the work and not on the ladder, so the loss of balance, falls and injuries can happen easily.

The upper surface of this ladder is not made for standing on it, but to hold something like a bucket of water when washing the windows or tool box when fixing something.

When working on projects that have movable parts, you should be very careful and precise. If you want to resize the dimensions it has to be done very carefully, without disrupting the characteristic dimensions and proportions, which provide the mobility. An assembly in 2D documentation of our plan is geometrically accurate and verified, so the slightest mistake in cutting, measuring and marking can affect that this folding step ladder will not fold properly.

This step ladder is made out of 4 subassemblies that are tied together with fasteners.

1. Back support (two legs with three joining pieces); joined by dowels
2. Steps (two legs and three steps); joined with dado joints
3. Top (four planks with two supports; joined by dowels)
4. Side supports – Two simple side planks

For precise cutting of parts it is best to use a table saw, but you can also use a circular saw or handsaw. After you have made all the parts, you should assemble the ladder by using glue, dowels and fasteners. When installing it, make sure that step boards (ladder rungs) and upper surfaces are horizontal and the ladder folds properly. It is best to temporarily close the ladders, so you could make small adjustments. You should carefully check the position and drill holes for bolts, because any inaccuracy will cause that ladder will not fold properly. If the ladder is not stable after installing, carefully sand the ends of legs with files or sandpaper until they are completely stable. All the edges should be rounded and all surfaces of the parts sandpapered.

Using a ladder and ladder safety:

- Before use, make sure that the functionality and the strength of the ladder match the kind of job you want to do.
- Periodically check if there are some cracks or broken joints in the ladder.
- Always set the ladder to stand stable on a flat surface.
- Never put the ladder on top of another object (table, ...)
- When setting up a ladder, always spread it in the final position.
- If you need to lean to catch something, ask someone to hold the ladder.
- Always keep both feet on the ladder - never keep one foot on the ladder and the other foot on a different surface.
- If you have small children do not leave the ladder open, because the children can climb on it and fall. Step ladder is not a toy.
- The ladder is made to be used by one person.
- Do not use the ladder when closed
- Do not move or shift ladders while in use
- Do not use the top of a stepladder as a step.

To make sure that the ladder is firm, we recommend using hardwood (birch, oak...) and steel fasteners.

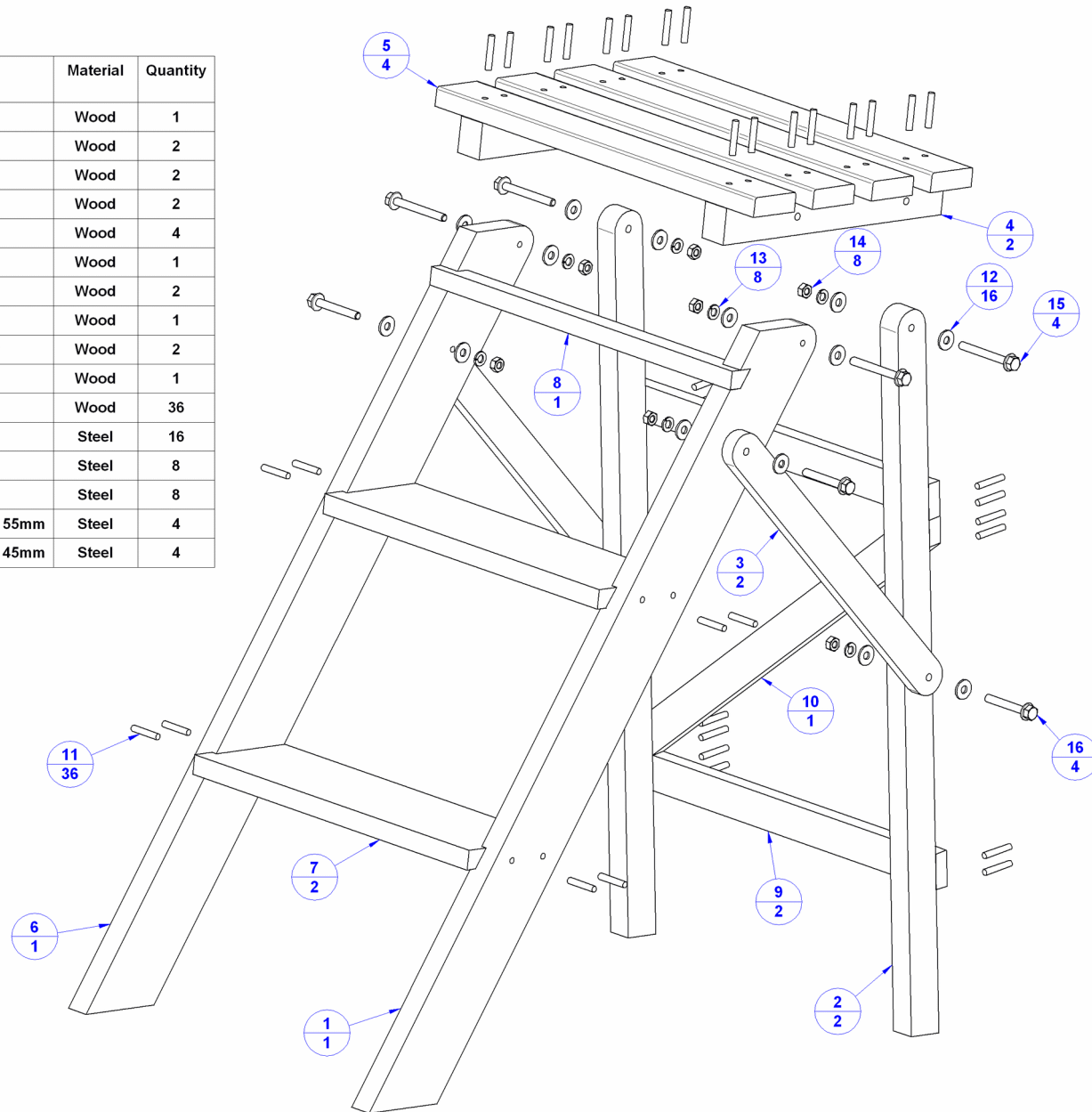
Causes of ladder accidents:

- Complacency about danger
- Dizziness and poor balance
- Fatigue and weak muscles and bones
- Poor vision
- Poor hearing (exposure to noise)
- Ladder touching live electrical conductors
- Ladder slipping at top
- Ladder slipping at base
- Ladder resting against moveable objects
- Falling materials

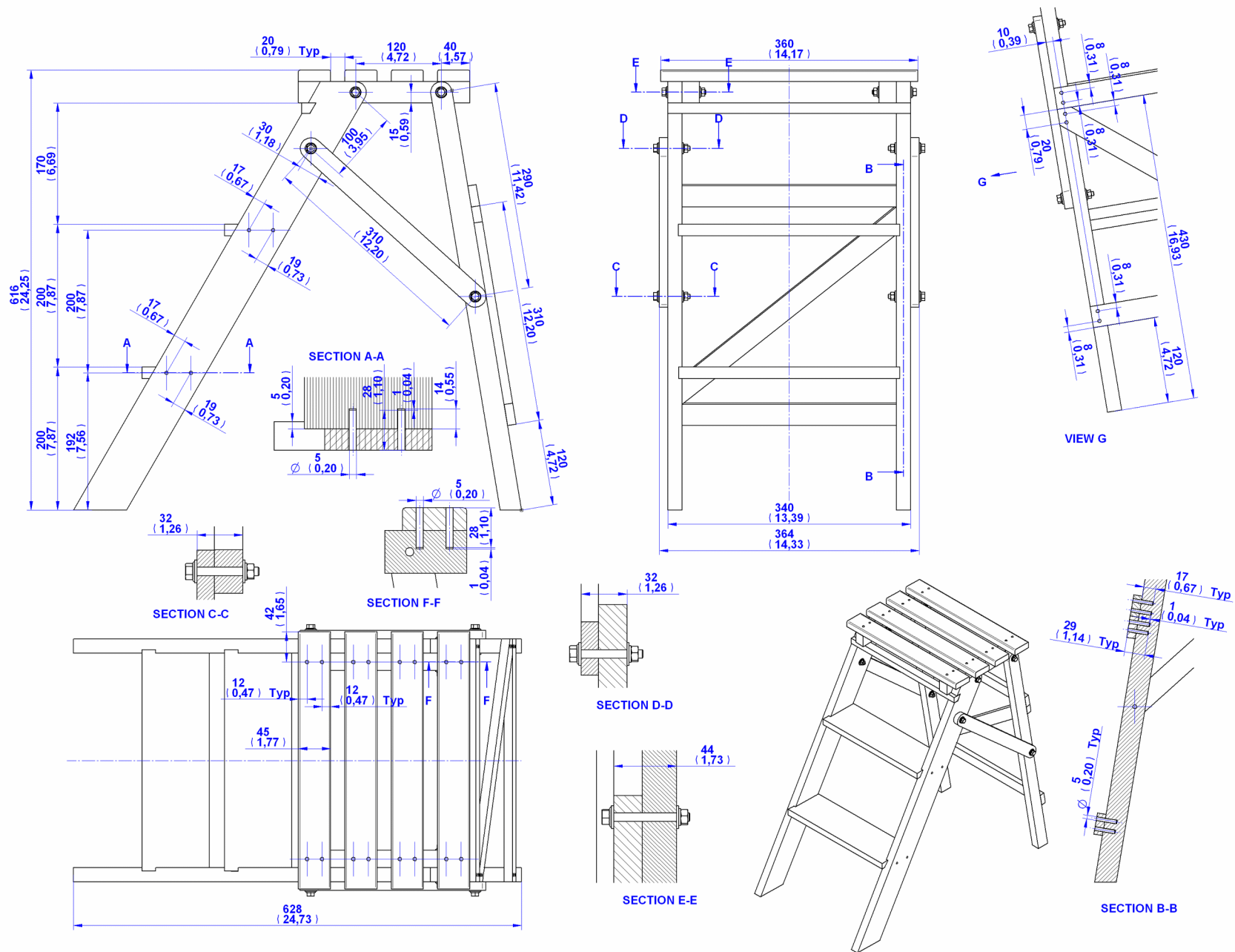
NOTE: The measurements within this text and 2D documentation are given both in millimeters and inches (in brackets).

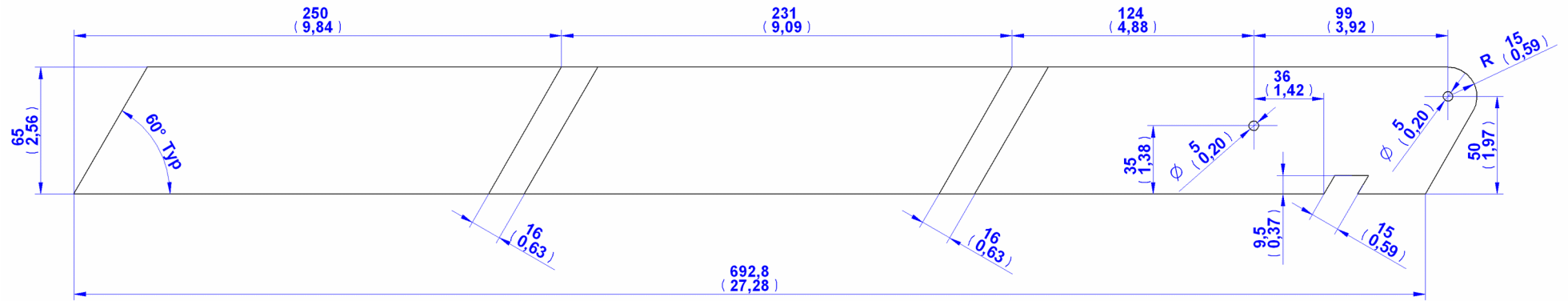
Small folding step ladder parts list

Item Number	Title	Material	Quantity
1	Back leg	Wood	1
2	Front leg	Wood	2
3	Link plank	Wood	2
4	Plank support	Wood	2
5	Top plank	Wood	4
6	Back leg mirror	Wood	1
7	Step board	Wood	2
8	Top support	Wood	1
9	Horizontal support	Wood	2
10	Oblique support	Wood	1
11	Dowel D5 x 28mm	Wood	36
12	Wide washer 6	Steel	16
13	Lock washer 6	Steel	8
14	Hexagon nut M6	Steel	8
15	Hexagon bolt M6 x 55mm	Steel	4
16	Hexagon bolt M6 x 45mm	Steel	4

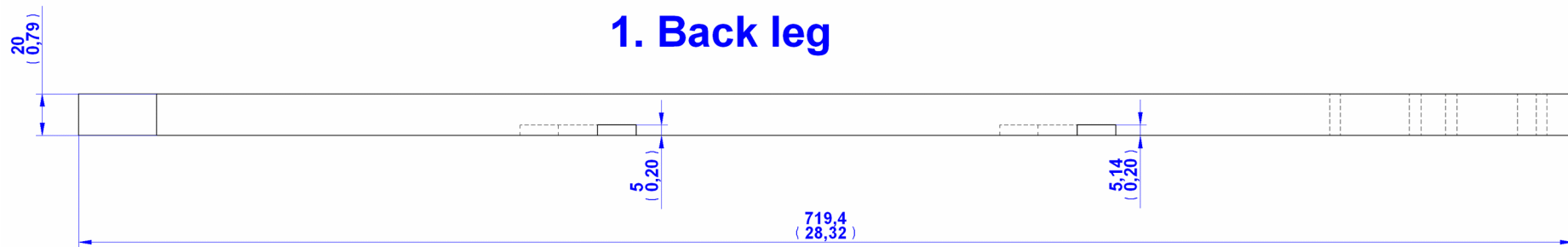


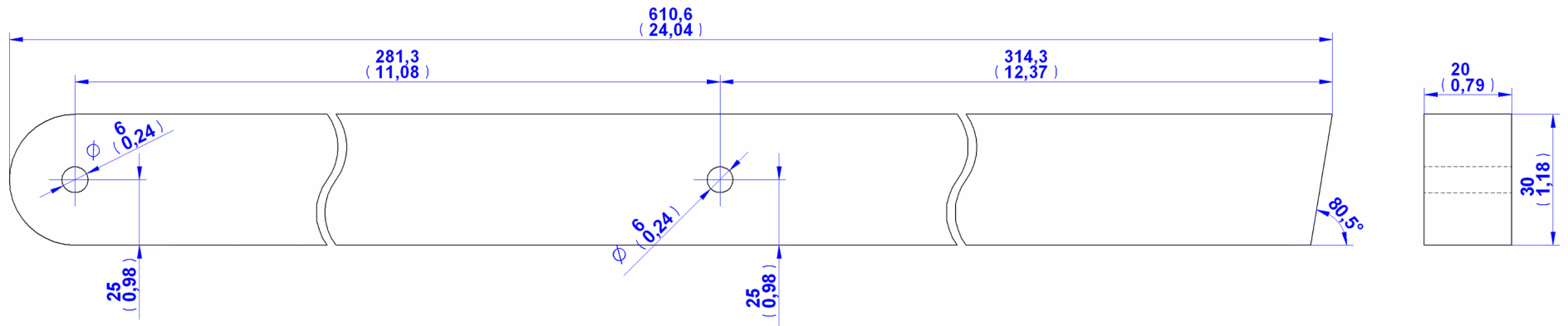
Small folding step ladder assembly drawings





1. Back leg

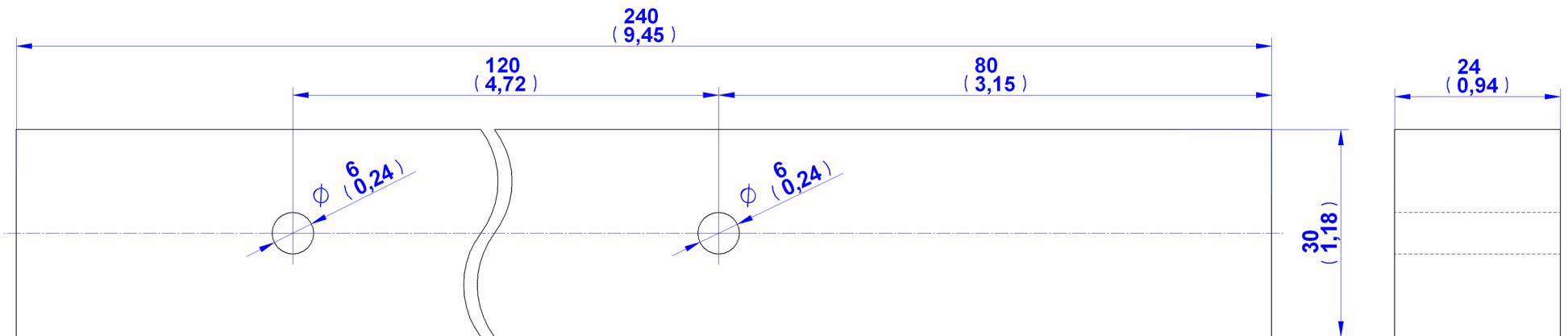




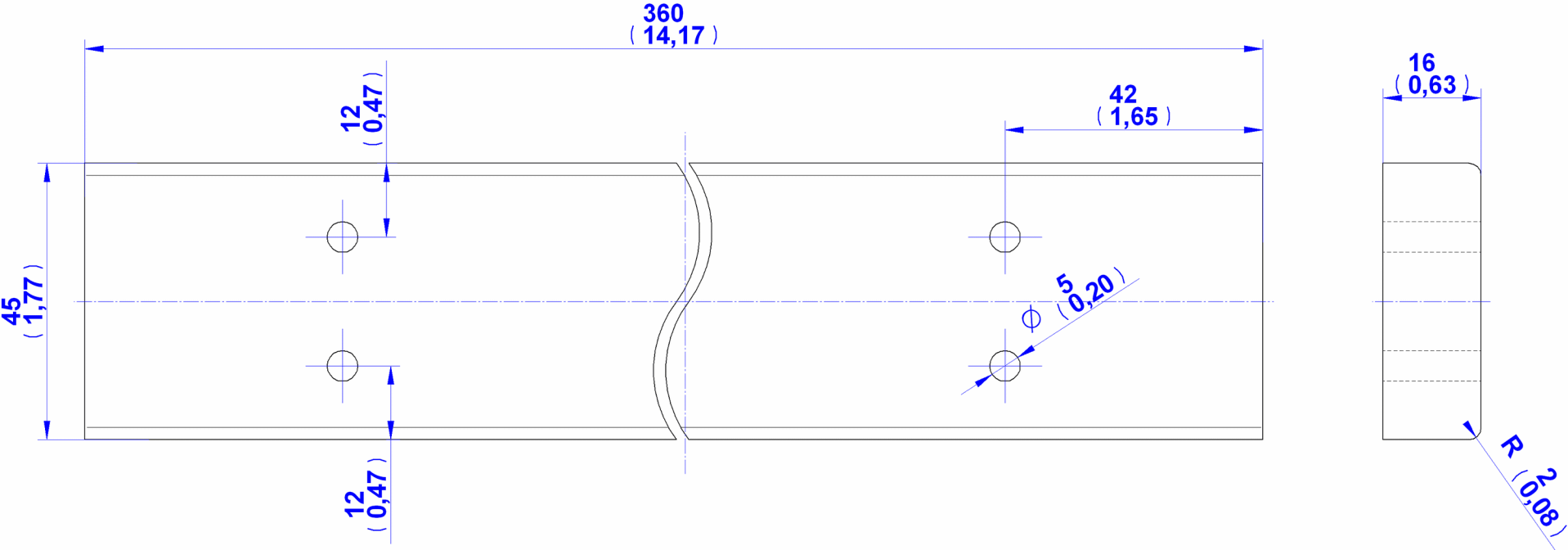
2. Front leg



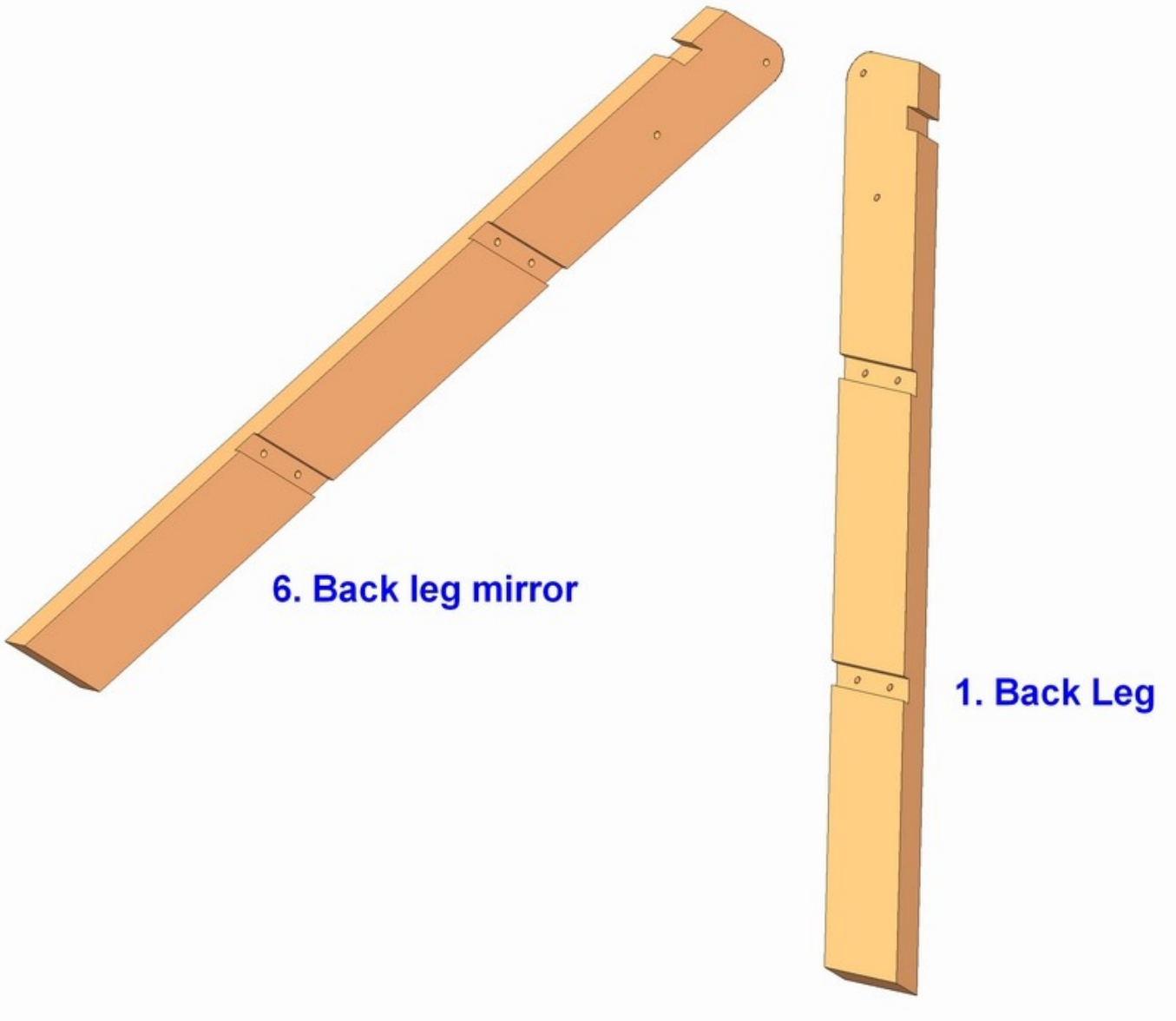
3. Link plank

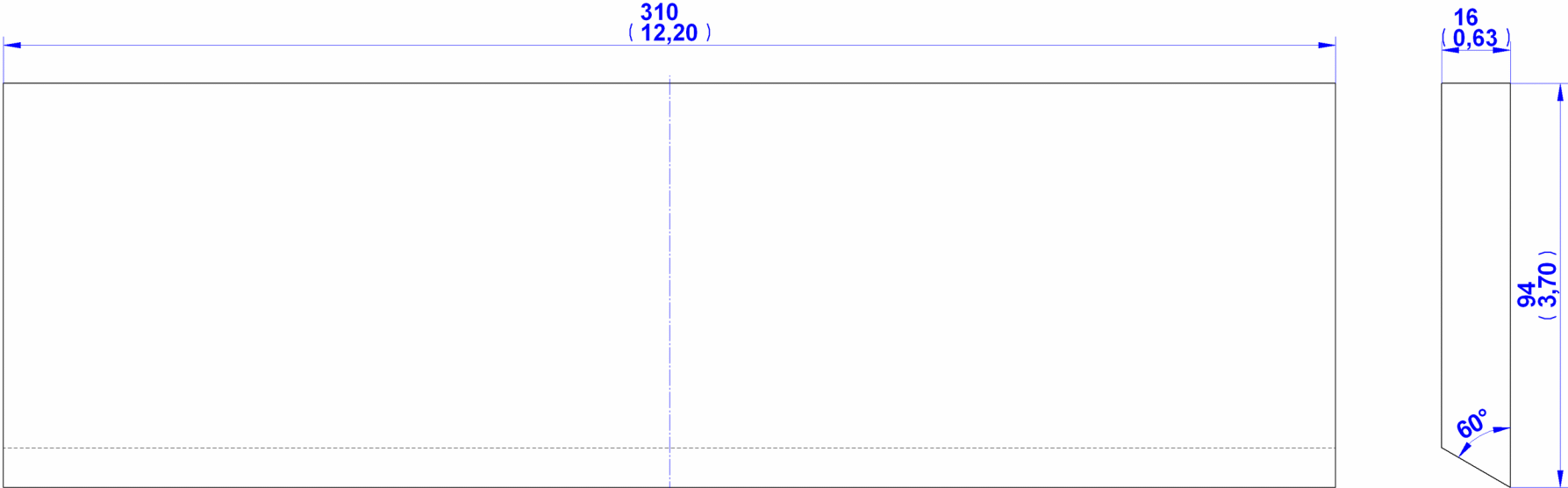


4. Plank support

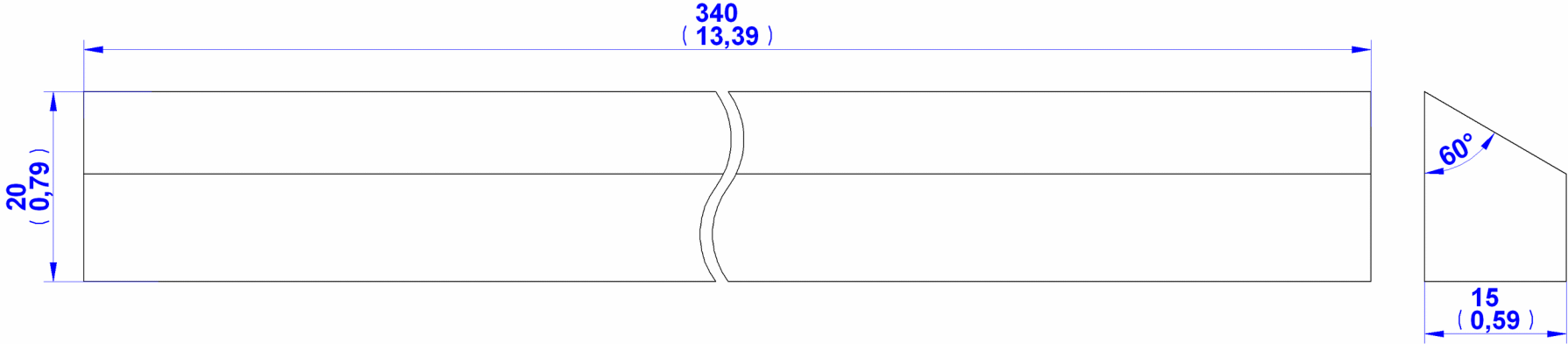


5. Top plank



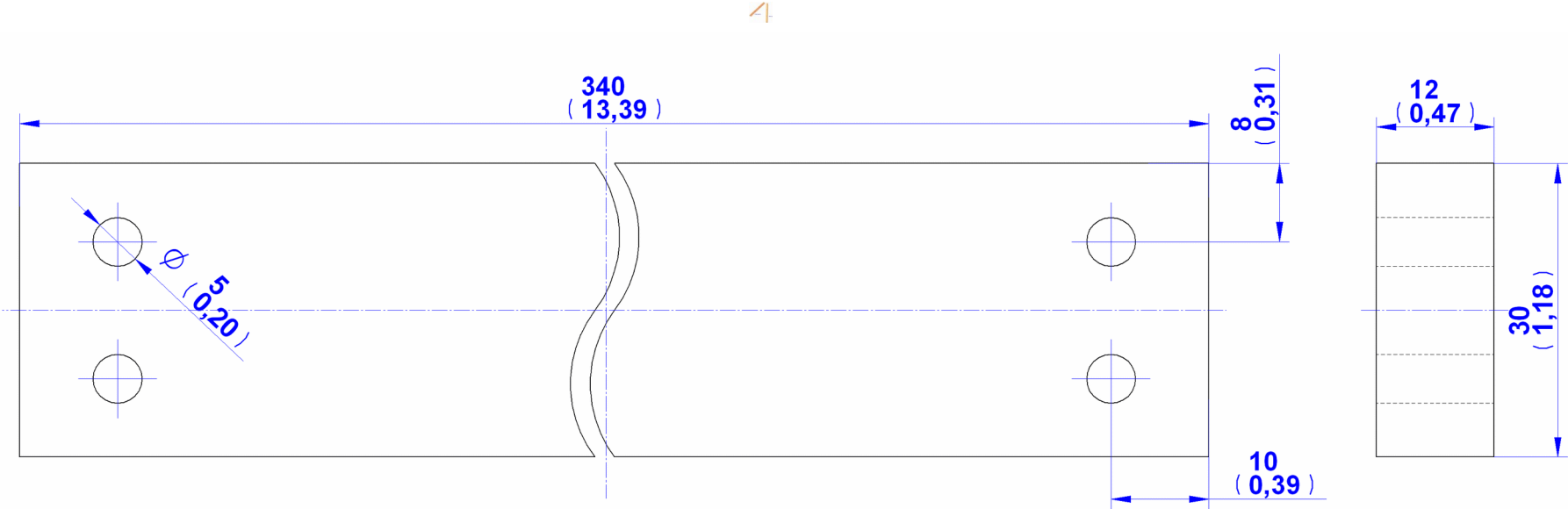


7. Step board

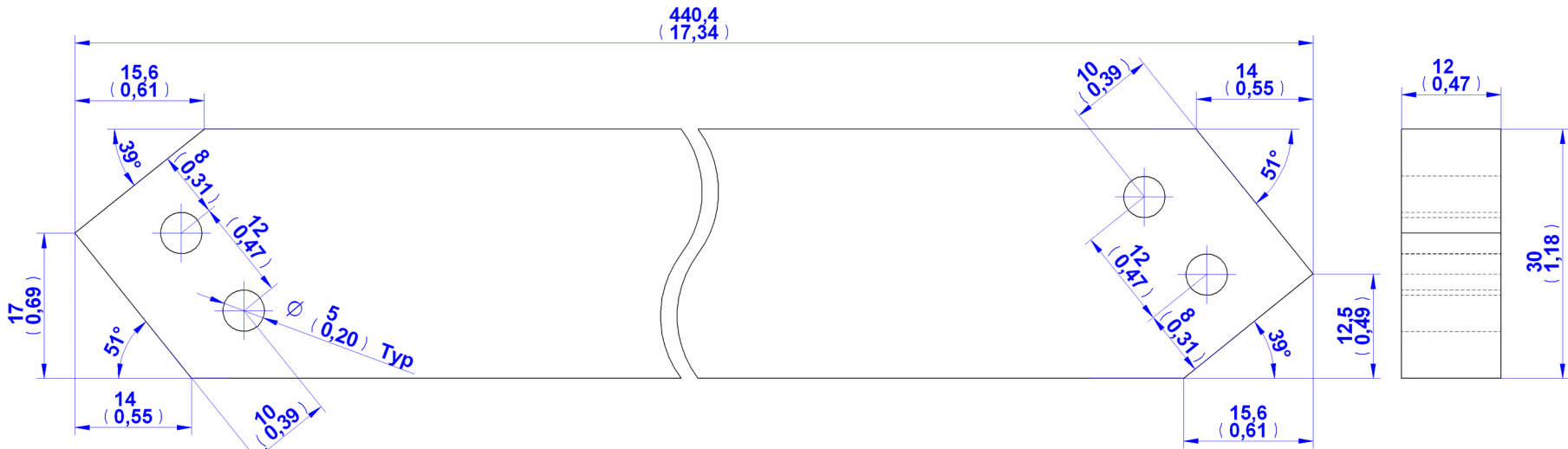


8. Top support

4

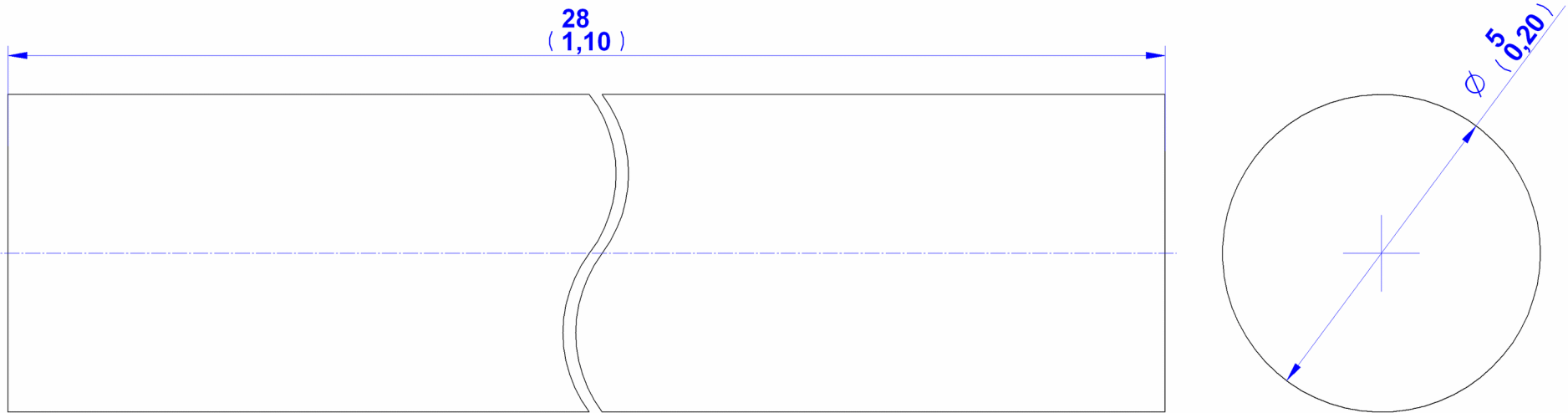


9. Horizontal support

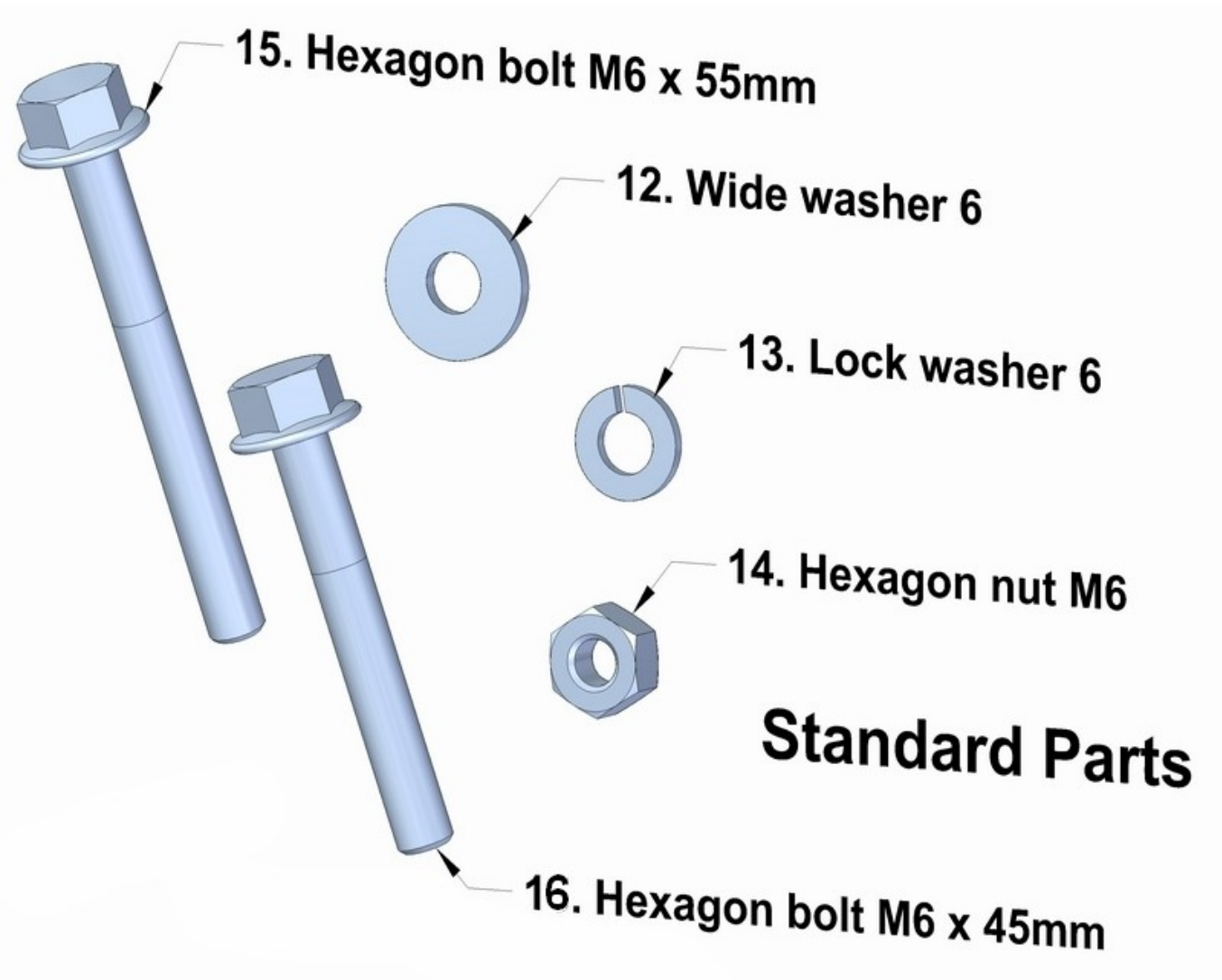


10. Oblique support

4

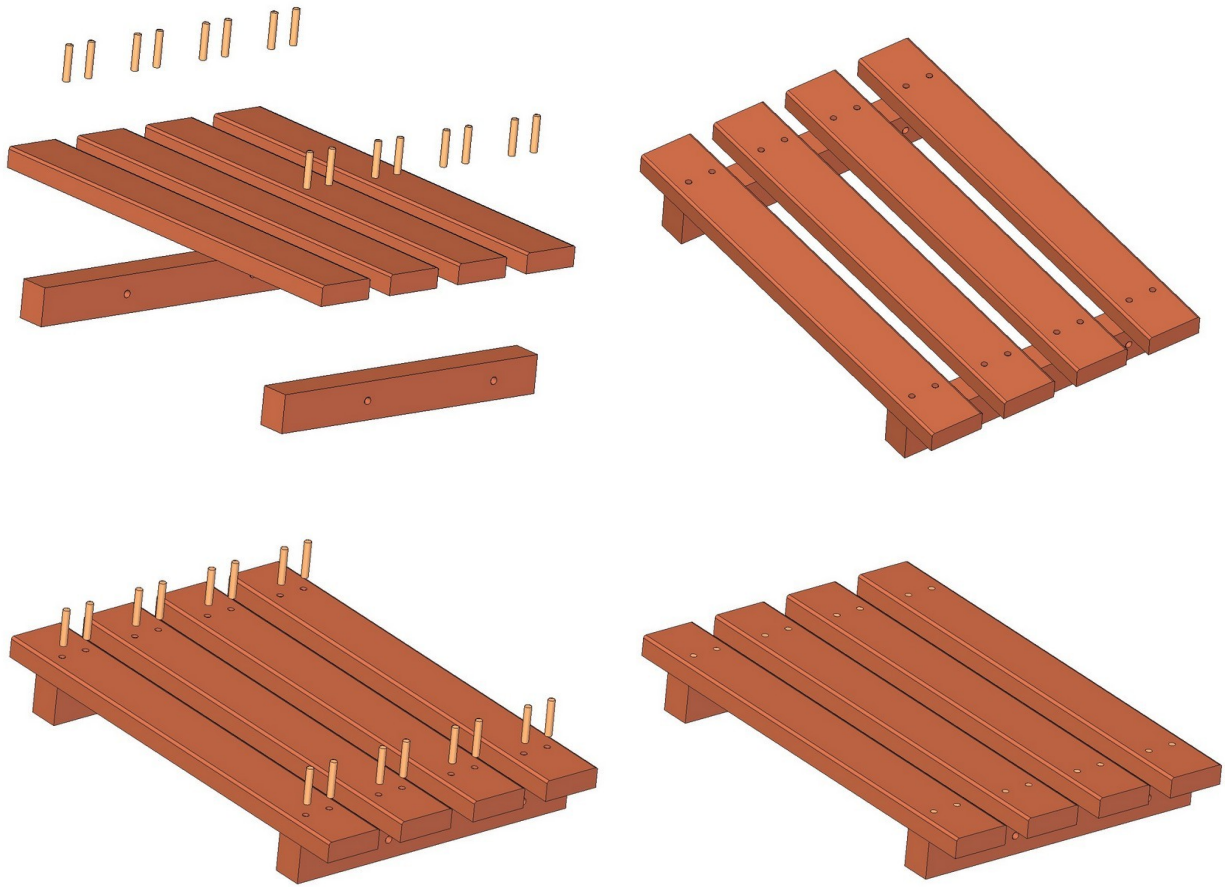


11. Dowel D5 x 28mm

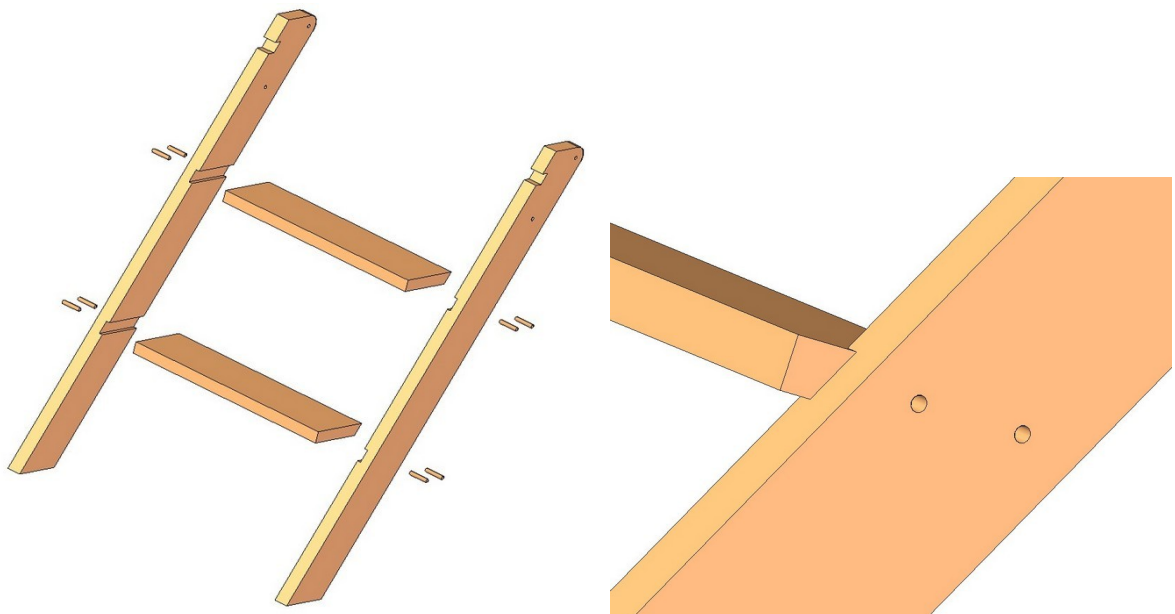


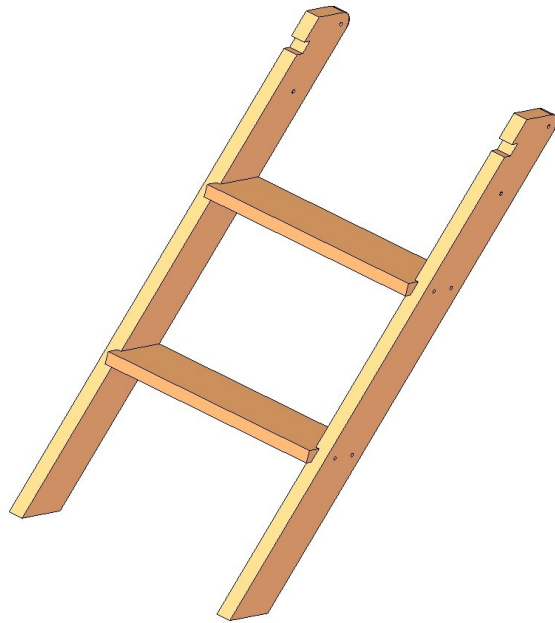
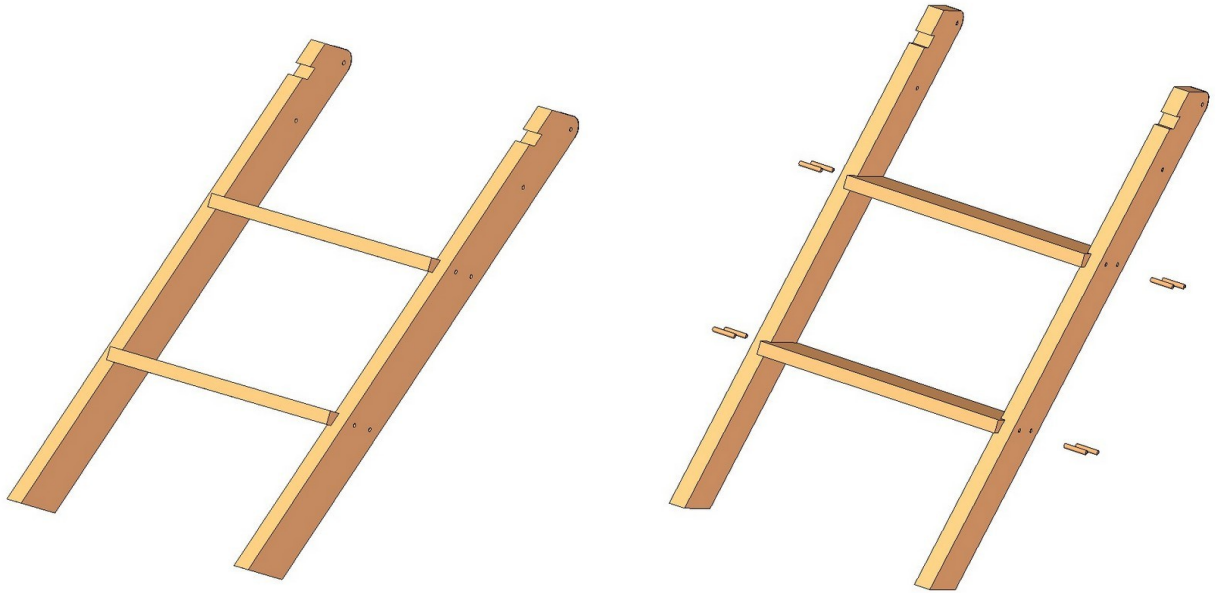
Small folding step ladder assemblage images

1.

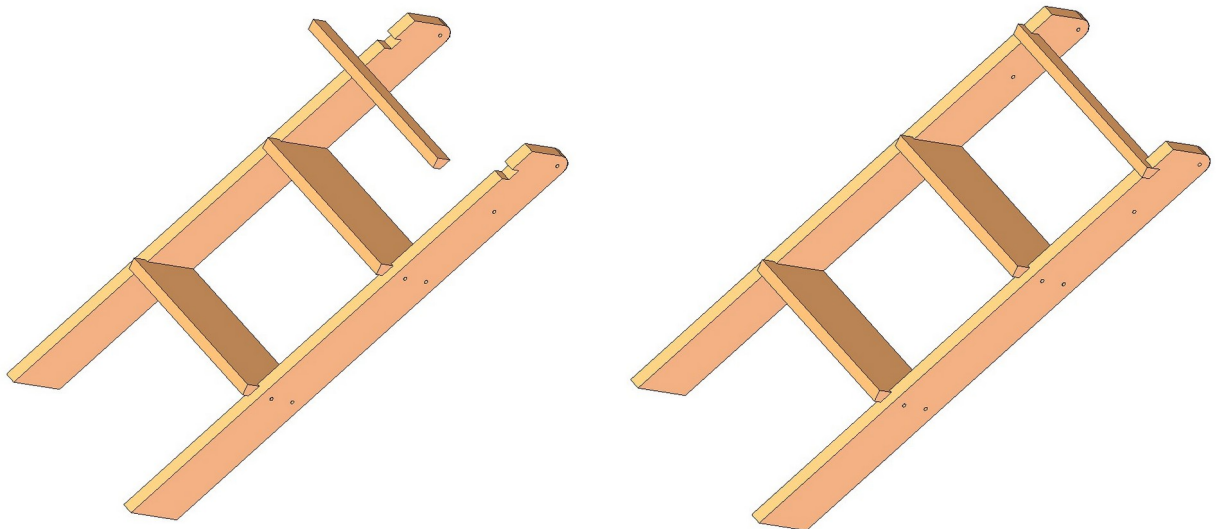


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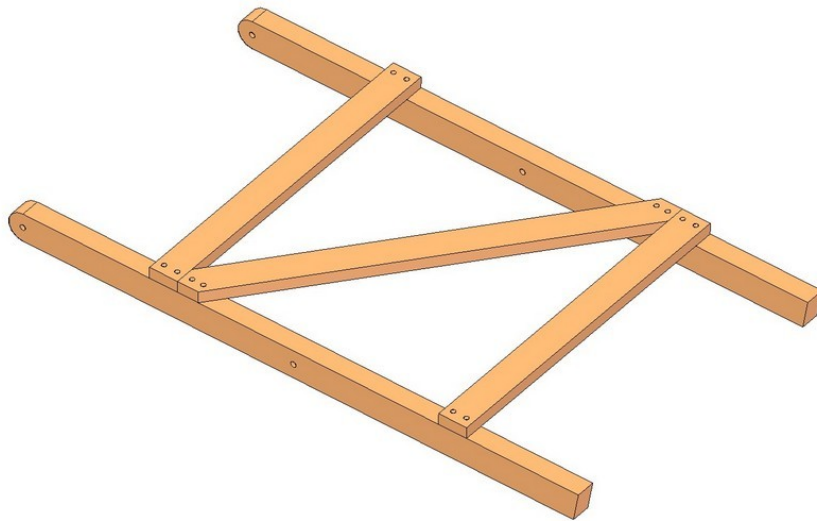
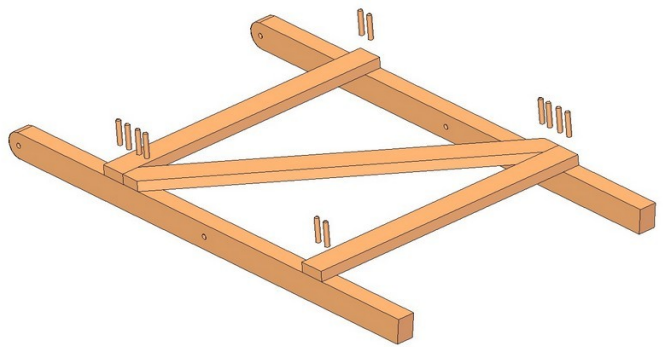
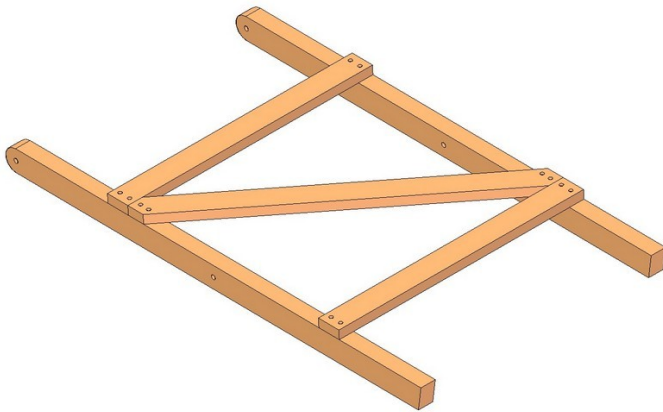
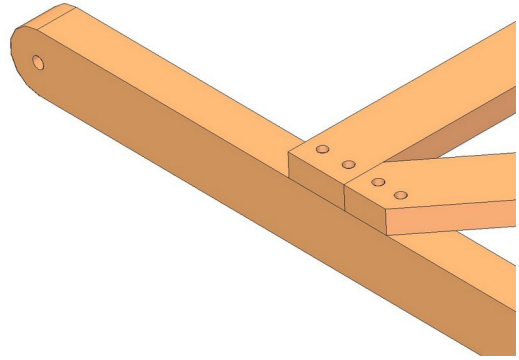
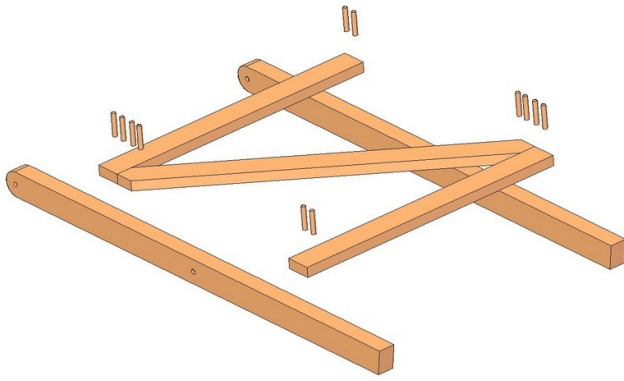




3.



4.



5.



6.





7.

