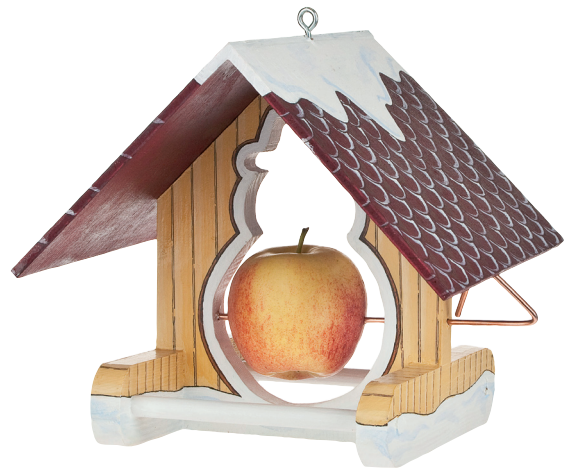


OPITEC

Hobbyfix

1 0 0 . 8 4 7
Apple house
Bird feeder



Please Note

The OPITEC range of projects is not intended as play toys for young children. They are teaching aids for young people learning the skills of Craft, Design and Technology. These projects should only be undertaken and tested with the guidance of a fully qualified adult. The finished projects are not suitable to give to children under 3 years old. Some parts can be swallowed. Danger of suffocation!

1. Product information:

Article: ___practical wood construction pack

Use: in Design Technology Key stage 3

2. Material Information:

2.1. Material: Pine (coniferous) softwood
Gabun plywood, may glued layers

Working: wood can be sawn, filed, shaped, planed and drilled according to measurement or patterns.

Joining: waterproof woodworking glue

Finish: wax (liquid or hard)
clear wood varnish
staining (water soluble stain with varnished finish)
linseed oil

2.2. Material: Welding rod (steel)

Working: bending

Finish: not necessary

3. Tools:

Saws: use a **fret saw** for all rounded and curved shapes

Note! ___ fret saw blades must be inserted with the teeth facing forward

Use a special fret saw cutting board, saw with a slow, steady, action moving the work towards you as you go.;

Fine Saw for straight cuts;

Note! ___ Hold the work securely

Shaping: use a wood file or rasp as necessary

Note! ___ Rasps and files only cut on the forward stroke!

Finishing: use glasspaper with a block for all flat surfaces and edges, sheet glasspaper for curves

Drilling: Use a handbrace or pillar drill

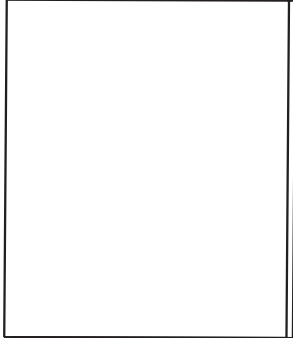
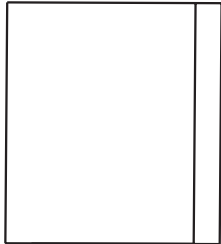




Note! ___ take care when drilling to observe the following safety rules: tie all long hair back, clamp the work securely, wear safety glasses, remove all rings and jewellery.!

Drills - use the correct size, and make sure they are sharp

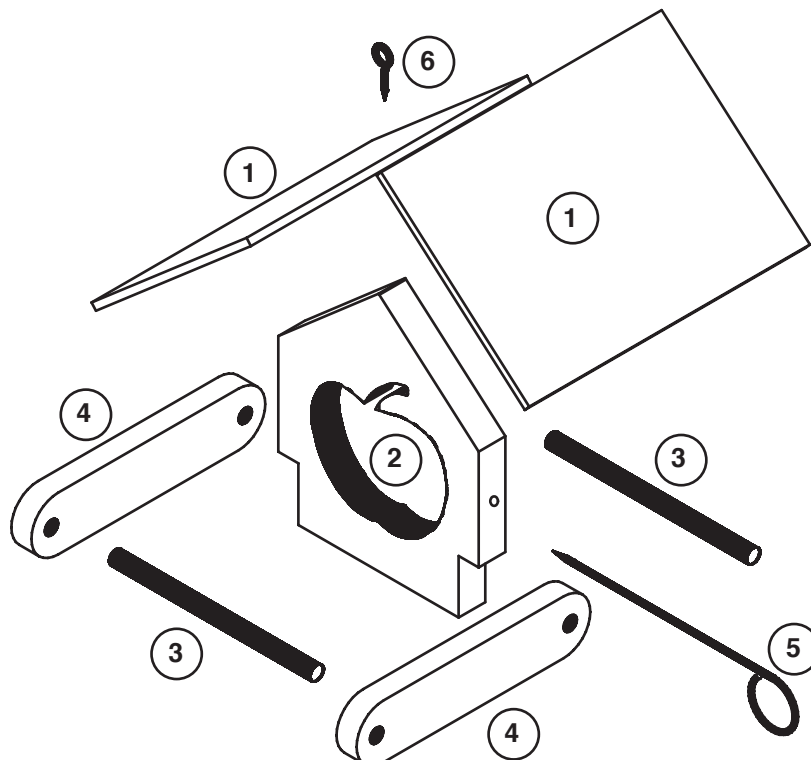
Holding: clamp all the work securely when assembling or gluing

Bending: bend the metal rod with pliers according to the pattern

4. Parts list:

Description	Material	Quantity	Size	Diagram
Roof	Plywood	1	5 x 210 x 300 mm	
Wall	Pine	1	15 x 150 x 200 mm	
Perch and Dowel holder	dowel	2	10 dia x 200mm	
	Pine strip	1	15 x 40 x 350 mm	
Skewer	Welding rod	1	3mm dia x 250mm	
Hanger	Screw eye	1	8 x 20 mm	

5. Exploded diagram



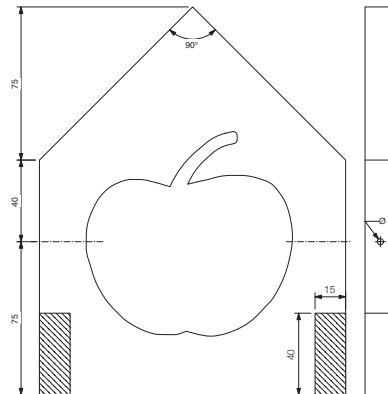
6. Planning overview

- 6.1. Making the wall
- 6.2. Making the perch and holder
- 6.3. Planning and making the roof
- 6.4. Constructing the skewer
- 6.5. Inserting the hanger and testing

6.1. Making the wall

- 6.1.1 Trace the pattern for the wall (page7) onto the pine (2)
- 6.1.2. Mark out and drill the 3mm holes

Note: Drill first and then cut out the shape

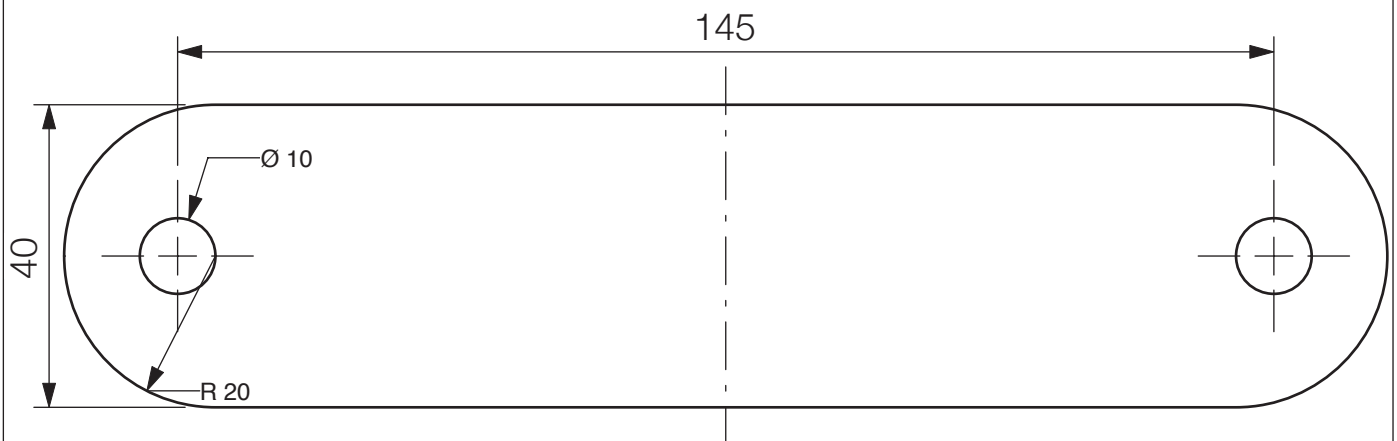


- 6.1.3. Saw out the shapes according to the pattern and clean up with glasspaper

Note: To make the project simpler the cut out shapes in the wall can be left out and the holders glued directly to the wall

6.2. Making the holders and perch

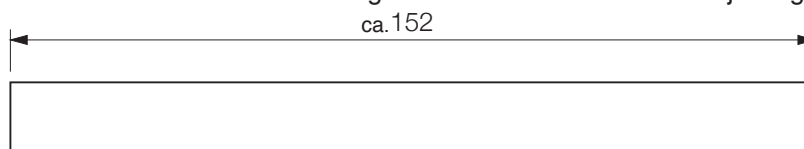
- 6.2.1. Cut the pine strip (4) in half
Mark out the shapes as shown, drill the 10mm holes in the ends and then round the corners.



Note: If you do not wish to drill the holes, the dowel can be simply glued in position on the holder.

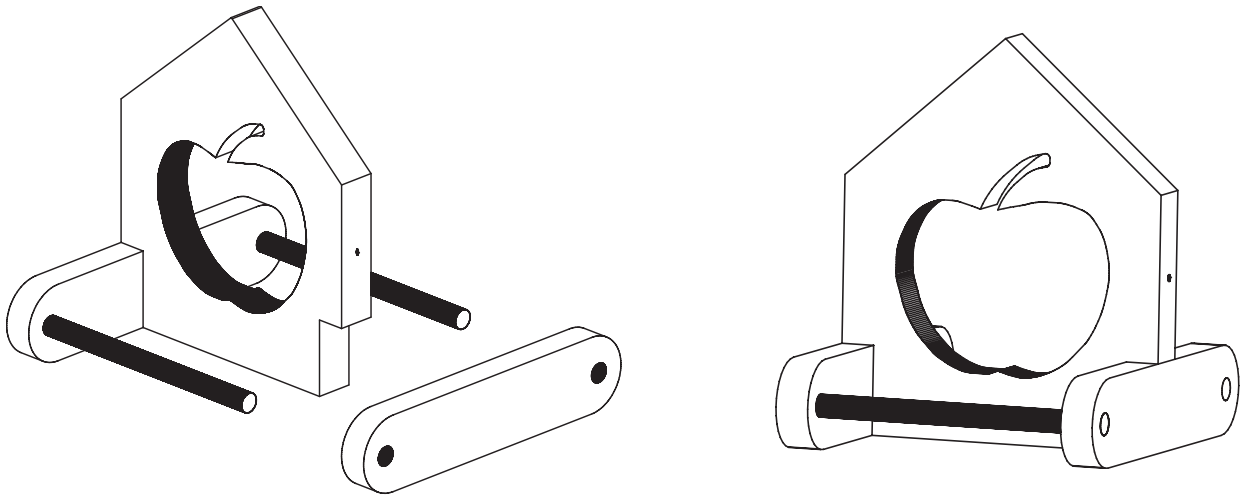
- 6.2.2. Saw two lengths, each 152mm long from the dowel (3)

Note: the dowels will need to be a different lengths if the second method of joining them to the holder is used.



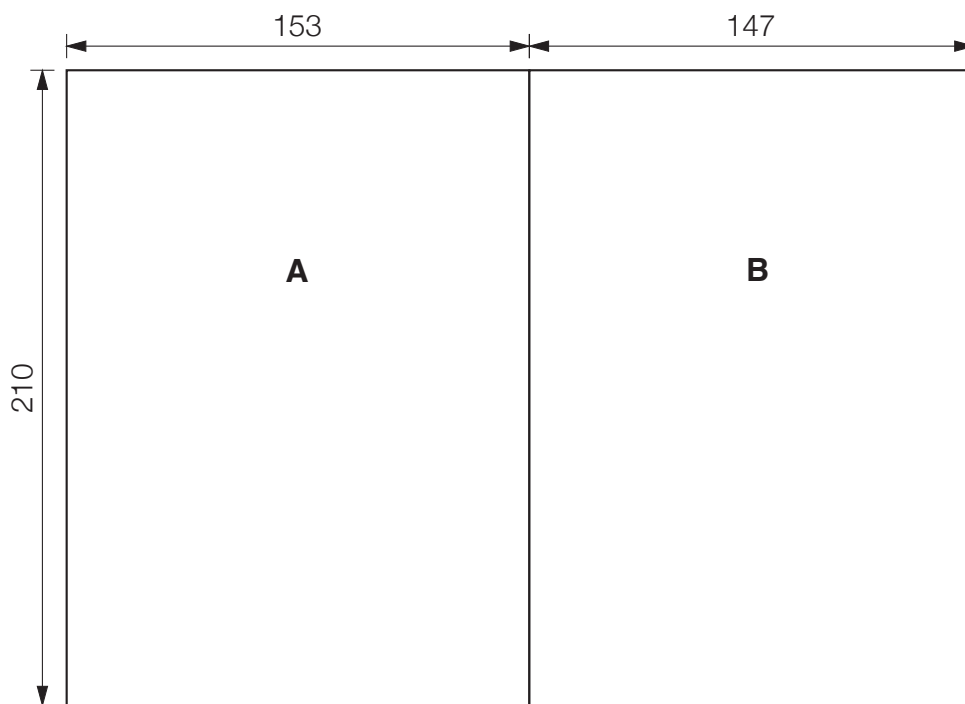
6.2.3. assemble and glue the side carriers (4) and dowel perch (3) on the wall as shown

Note: use a waterproof glue (see catalogue)



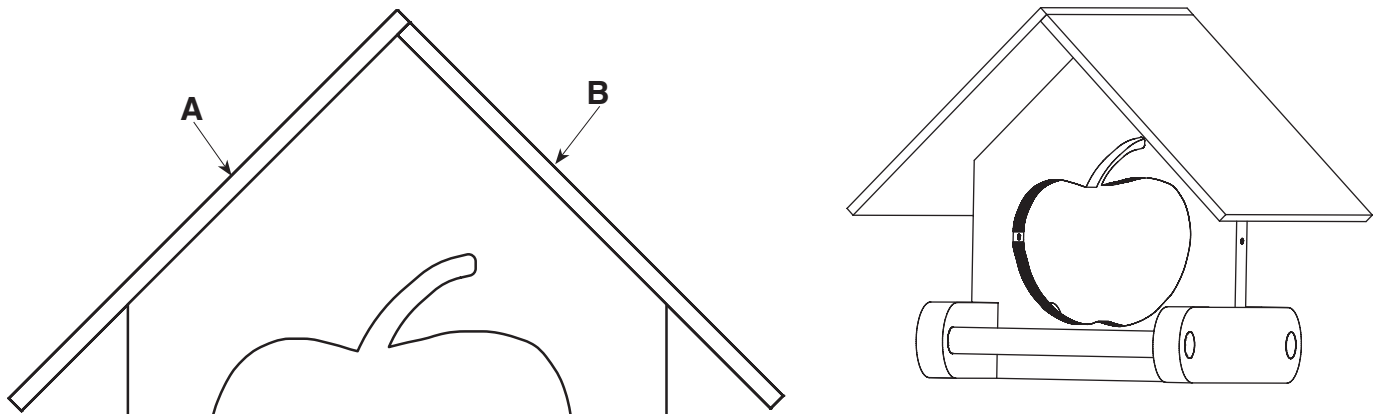
6.2.4. After the glue has dried saw or file off any excess dowel from the perch.

6.3. Making the roof



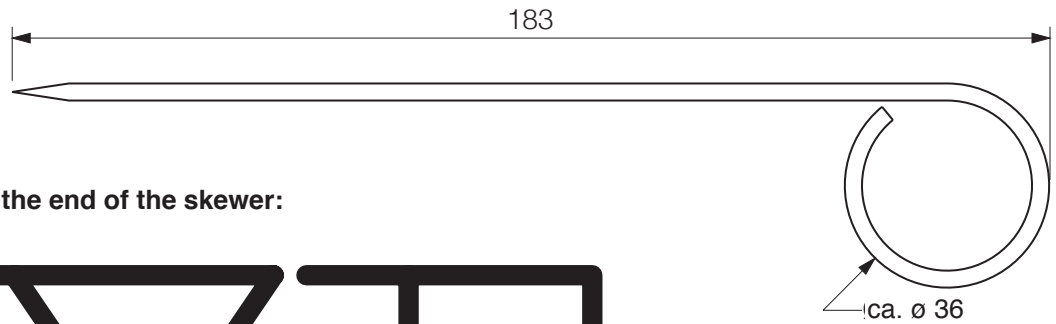
6.3.1. Mark out the plan on the plywood (1)

6.3.2. Glue the two halves of the roof together as shown

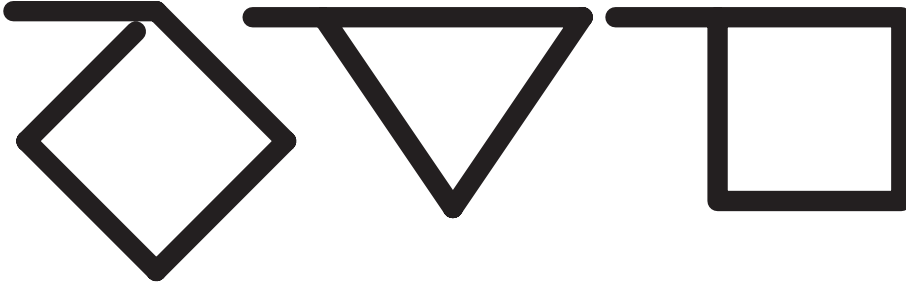


6.4. Constructing the skewer

6.4.1. Bend the welding rod (5) to the shape as shown. Use a round piece of wood or metal as a former.



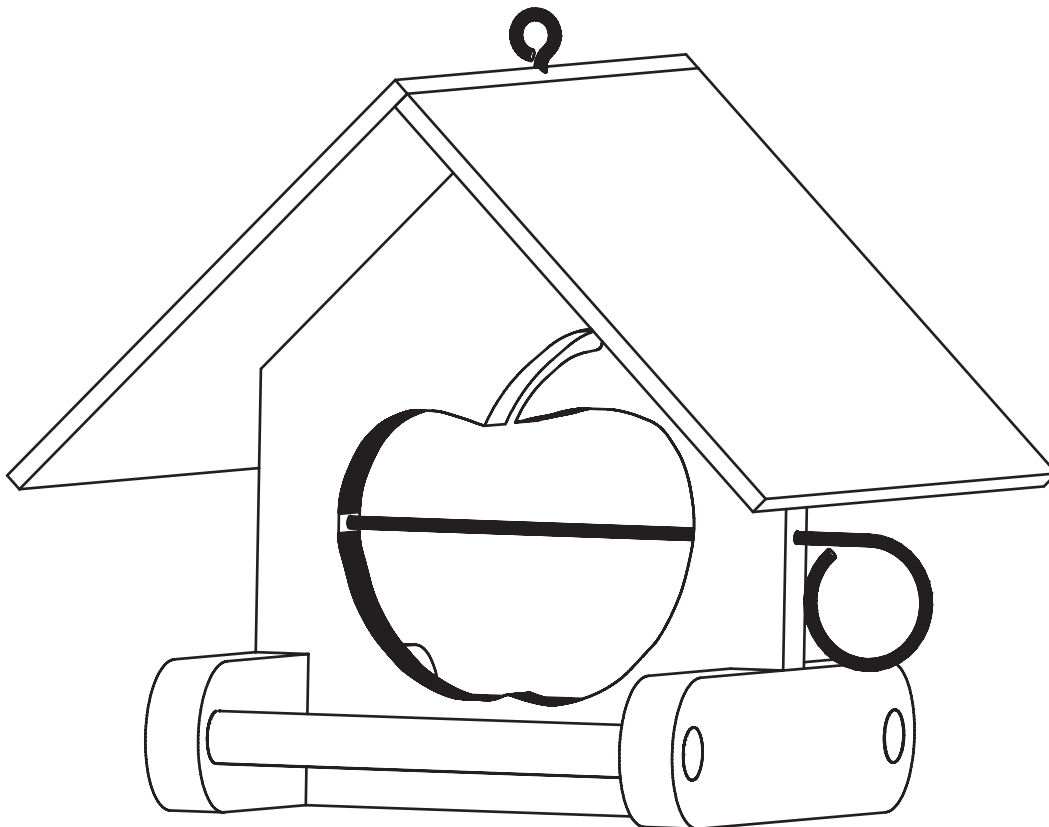
Different designs for the end of the skewer:



6.5. Inserting the hanger and testing

6.5.1. Screw the metal eye (6) into the centre of the roof

Note: use a bradawl first to make a starter hole



Tips:

To keep in with the environmentally friendly theme, use an appropriate finish as follows: a water based stain or varnish

If you are going to paint any of the surfaces of the house mask out the other areas before starting.

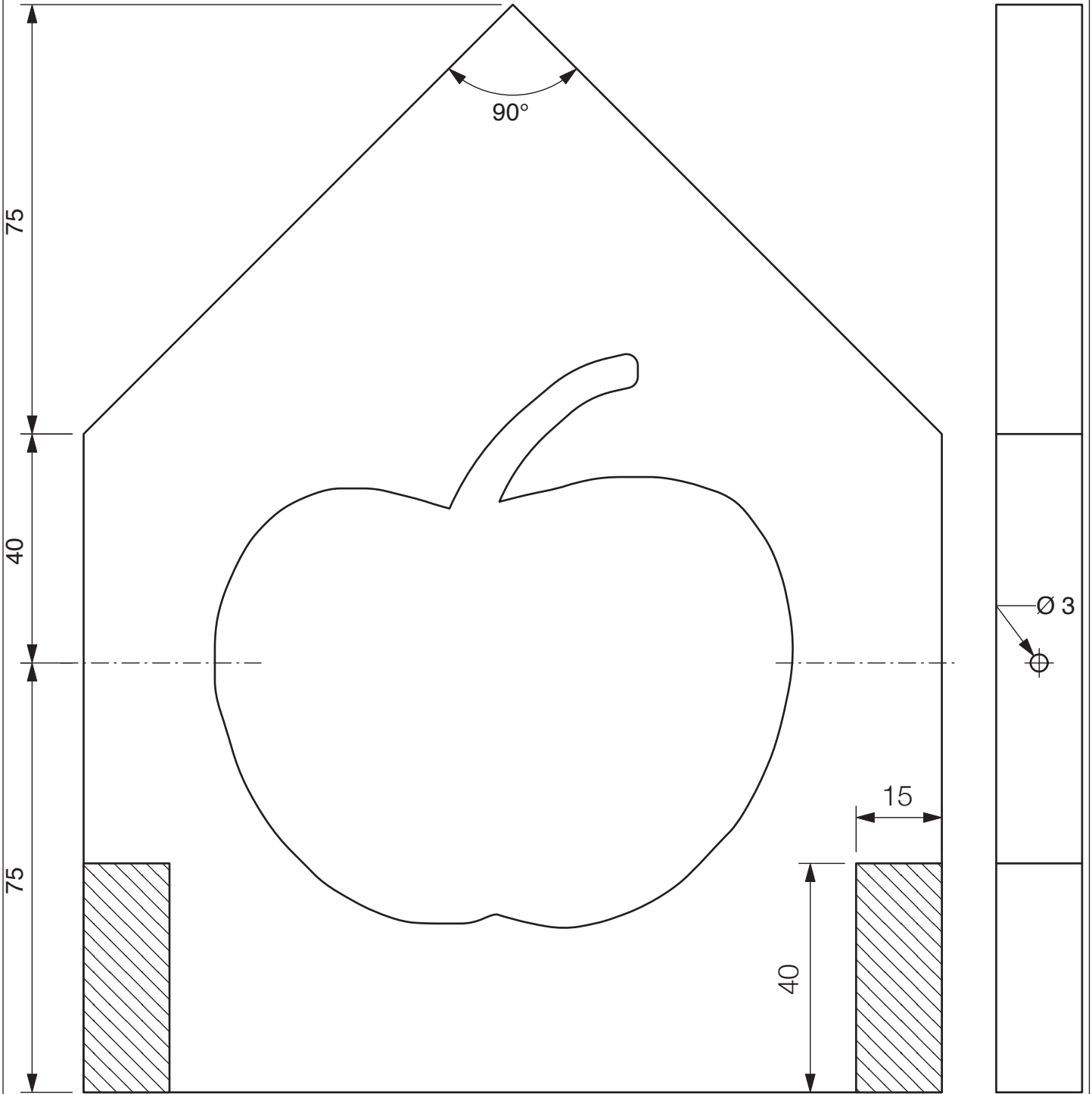
We recommend using a linsed oil finish, adding as many coats as you can until no more is absorbed

Pattern (apple)

Scale 1 : 1

Wall (front view)

Side view



Skewer 183

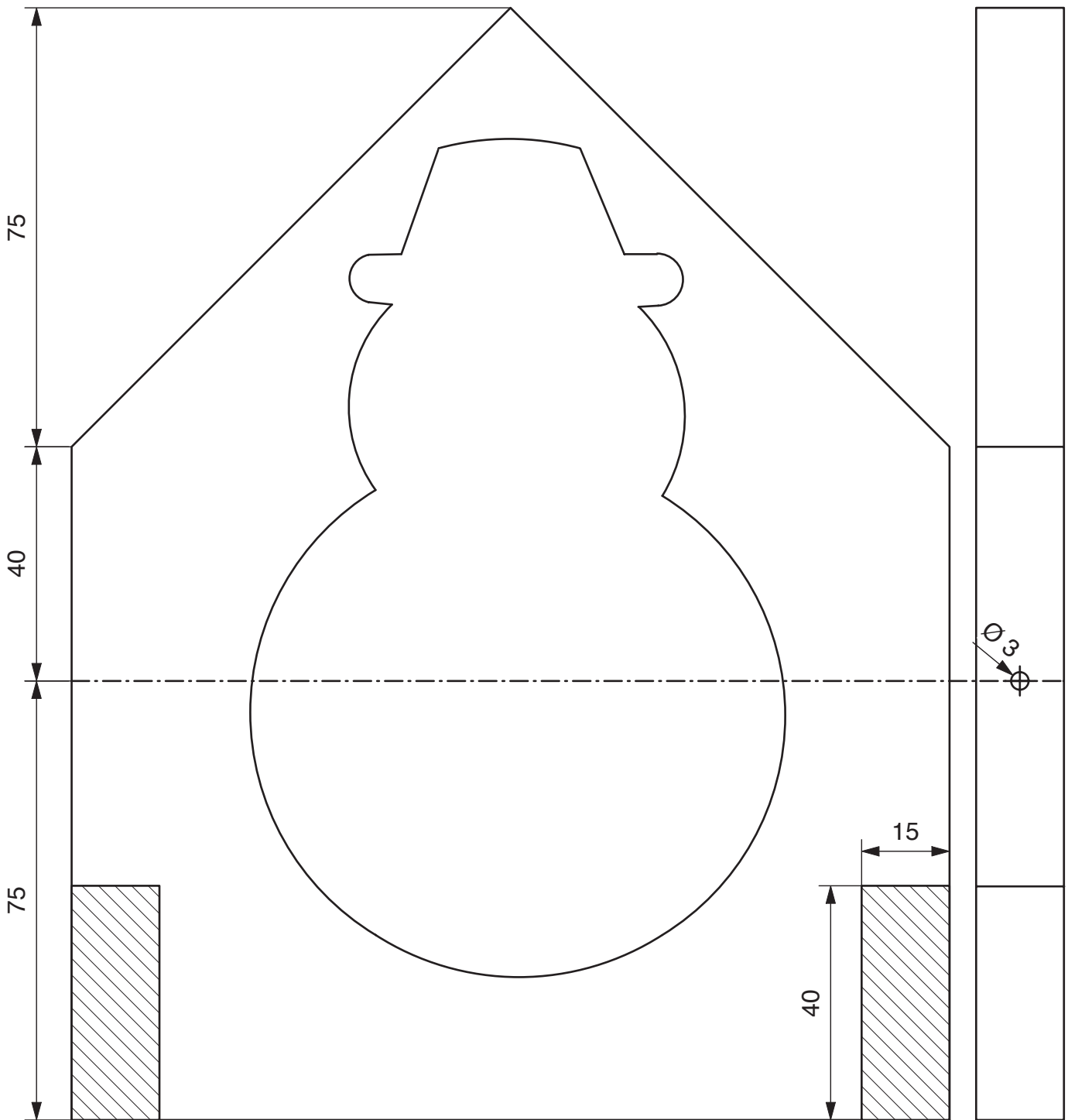


Pattern (snowman)

Scale 1 : 1

Wall (front view)

Side view

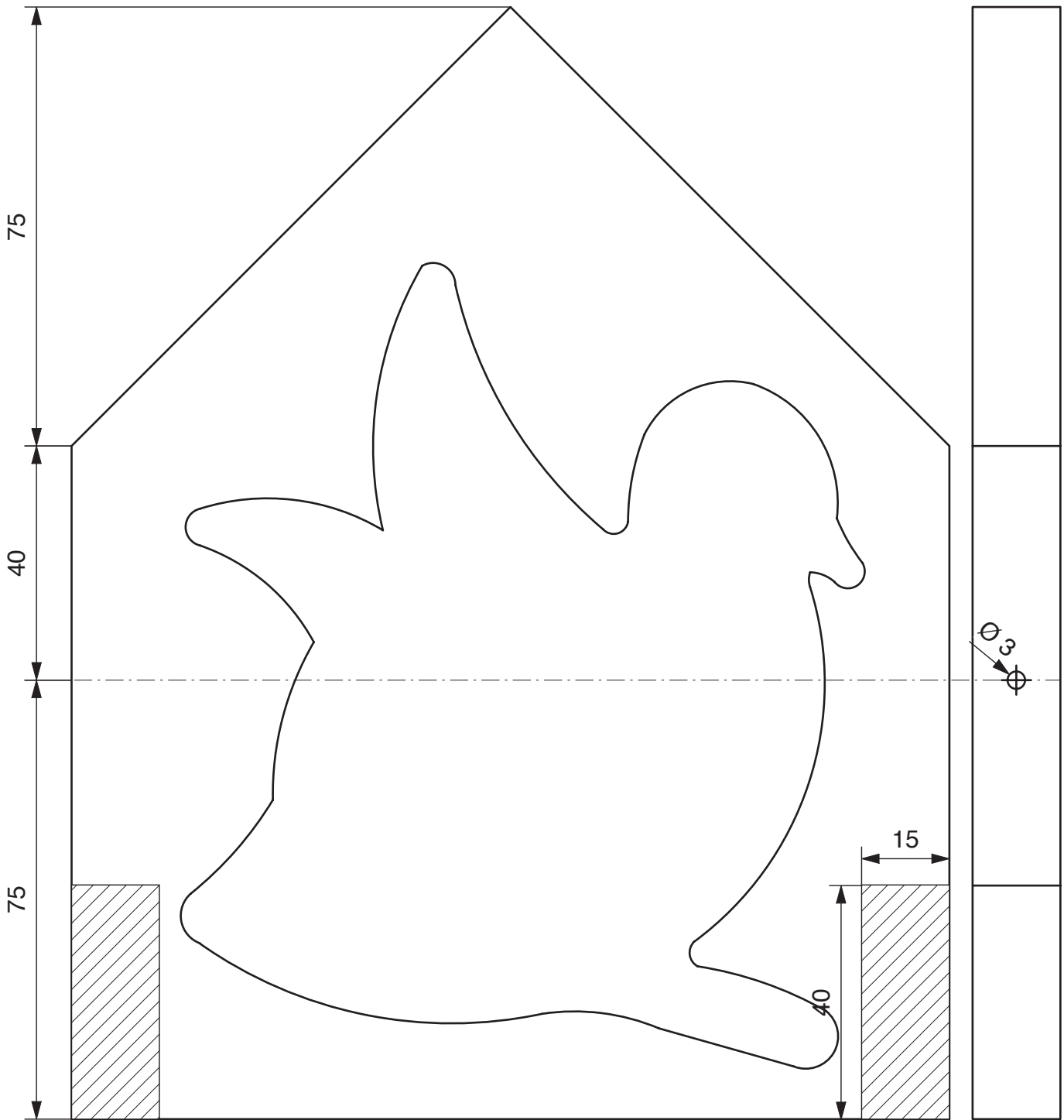


Pattern (bird)

Scale 1 : 1

Wall (front view)

Side view



Pattern (ice crystal)

Scale 1 : 1

Wall (front view)

Side view

