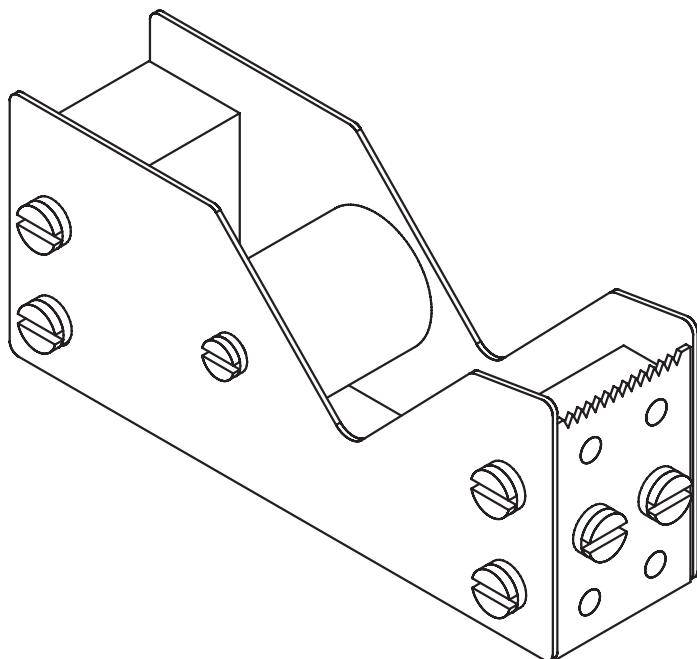


OPITEC

1 1 3 . 0 2 6

S e l l o t a p e D i s p e n s e r



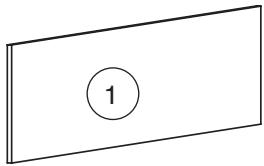
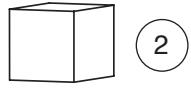
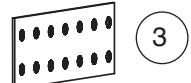
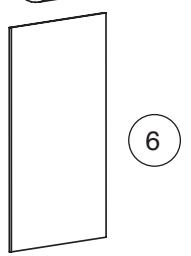
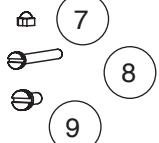
Benötigtes Werkzeug:

Maschinenschraubstock
Schonbacken
Ständerbohrmaschine
Bohrer ø 4,2; 4,5; 5,5; 8mm
Senker 90°
Gewindebohrer M5
Windeisen
Winkel
Gabelschlüssel 7mm
Schraubendreher
Stahlwolle
Alleskleber

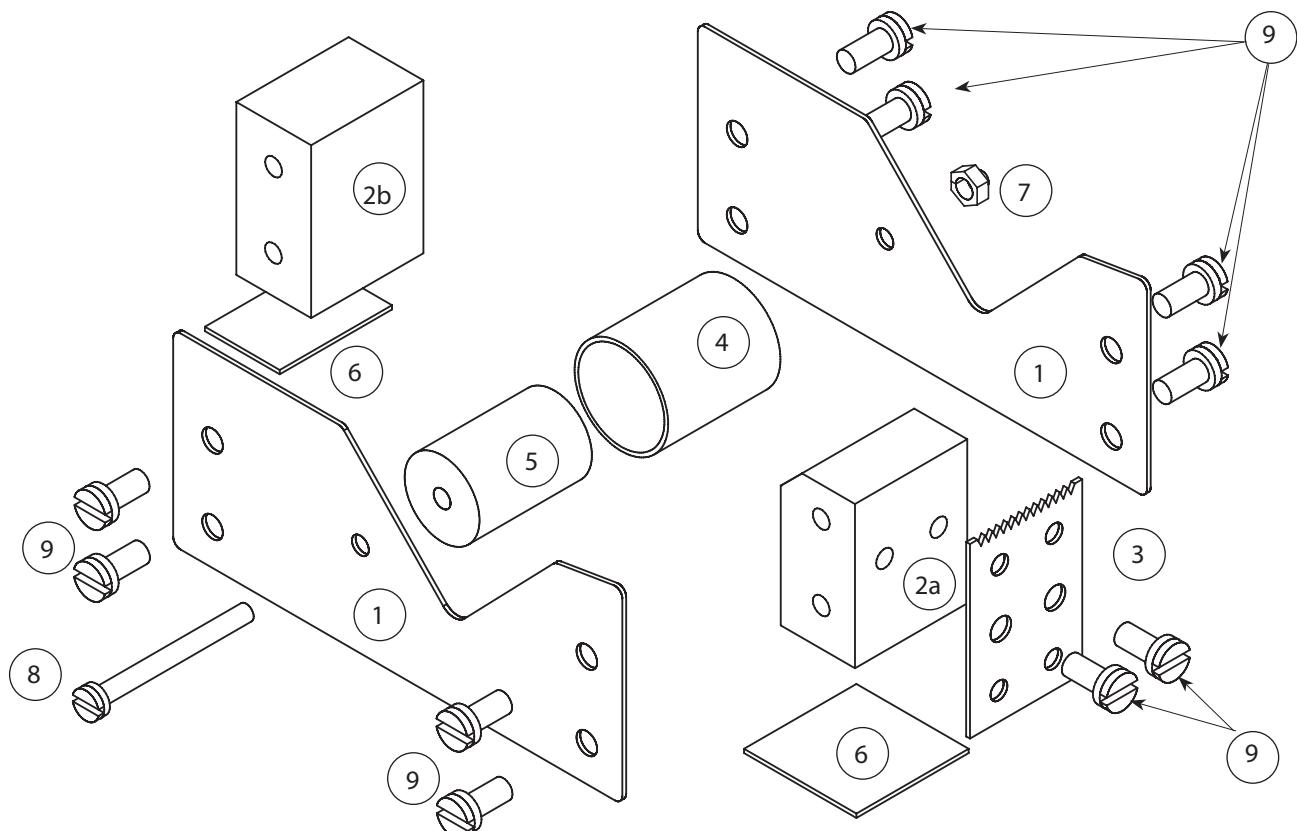
Please Note

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!

4. Parts List:

Part	Material	Quantity	Size	Diagram
Sides	Brass	2	2 x 50 x 120mm	
Cutter holder/Joiner	Aluminium	2	20 x 30 x 40 mm	
Cutter	Holed sheet	1	1 x 30 x 100 mm	
Tube	Aluminium	1	Ø 25/23 x 30 mm	
Holder bearing	Dowel	1	Ø 20 x 50 mm	
Base cover	Foam sheet	1	2 x 90x 95 mm	
Fixings	Domed nut	1	M4	
	Screw	1	M4 x 40 mm	
	Screw	10	M4 x 10 mm	

5. Exploded diagram:



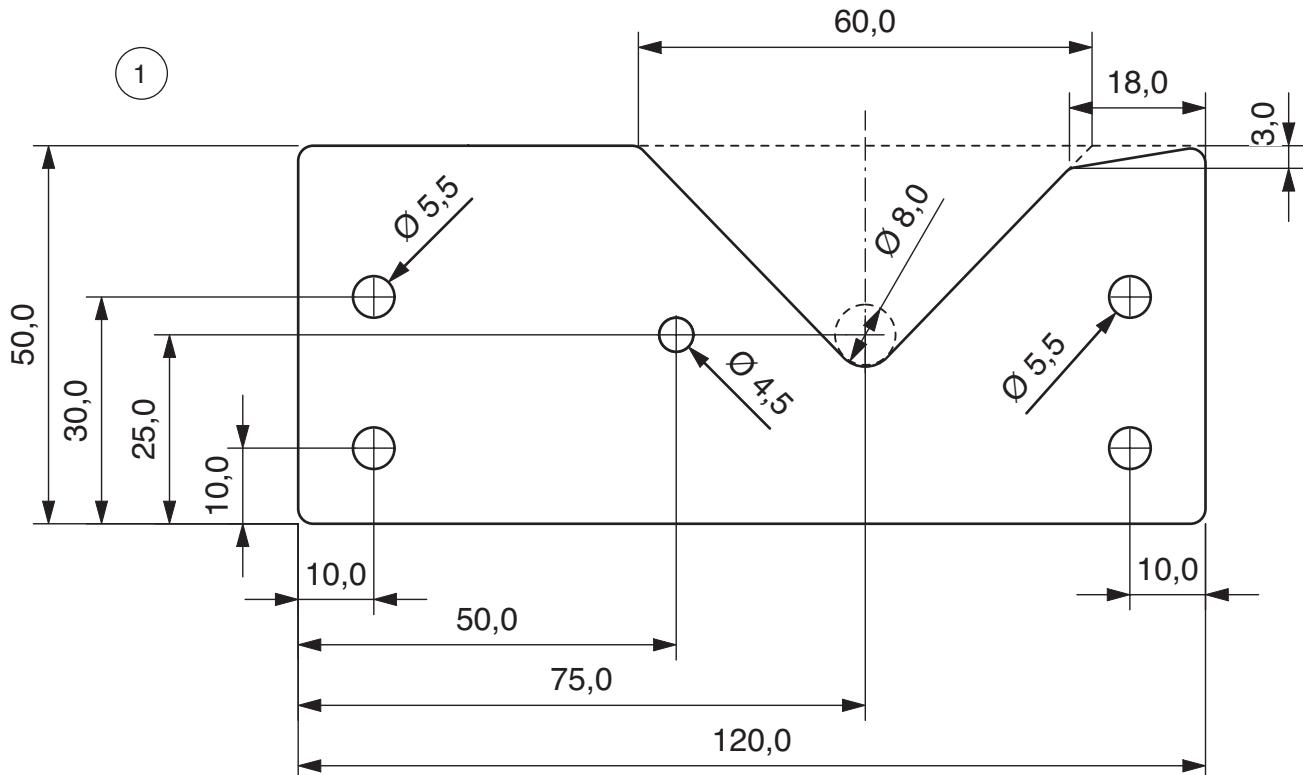
6. Planning overview

- 6.1 Planning and making the holder sides.
- 6.2 Making the spacer block and blade holder
- 6.3 Making the blade
- 6.4 Making the bearing
- 6.5 Final assembly
- 6.6 Testing the final design

6.1 Planning and making the holder sides

- 6.1.1 Remove any burr from the part (1) caused by the saw cut.

Note: Remember to use safe jaws in the vice when holding the brass or it will mark

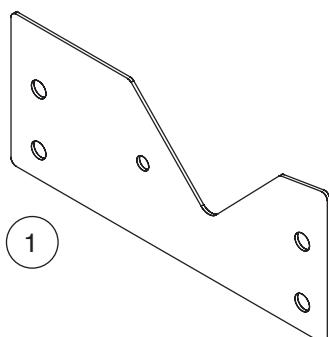


- 6.1.2 To avoid scratching the work, lay it on a clean soft surface when marking out the position of the holes and V slot..

- 6.1.3 Centre punch and drill the holes (4.5mm / 8mm dia)
Lightly countersink them).

- 6.1.4 Saw out the V shape with a hacksaw down to the 8mm hole..

- 6.1.5 File around the outside to remove any sharp edges and round the corners.

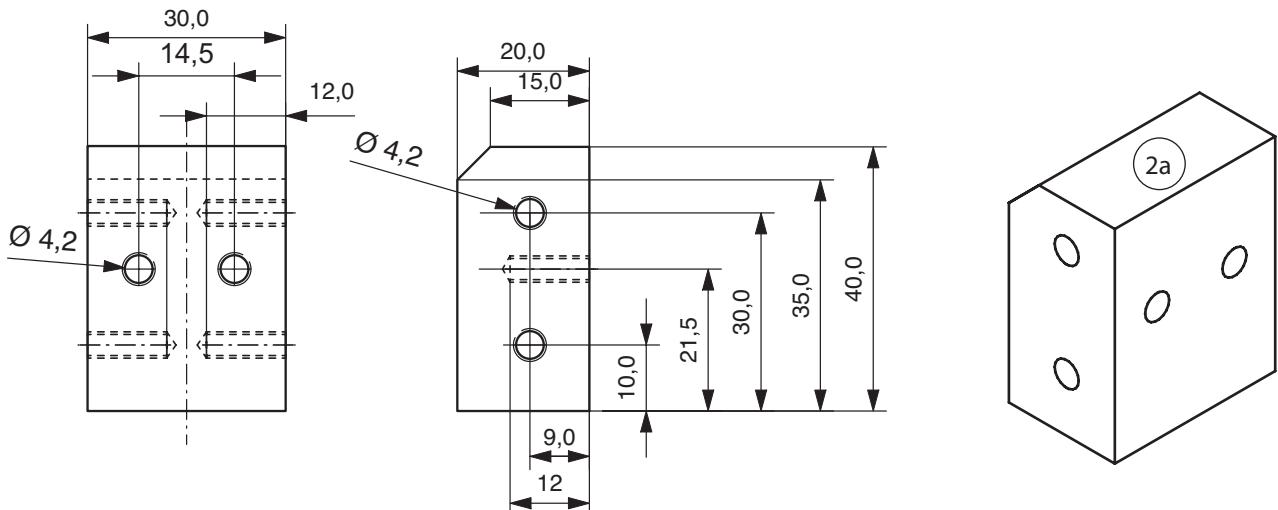


6.2 Making the centre joiner and blade holder

6.2.1 Mark out the holes on the aluminium (2a)

Note:

Check the sizes against the side parts (real size) and correct if necessary!



6.2.2 Centre punch the holes and drill 3.2mm diameter 10-12mm deep.

Check that all the drill holes are vertical and drilled on a pillar drill.

Reference: The correct drill size is worked out as follows:

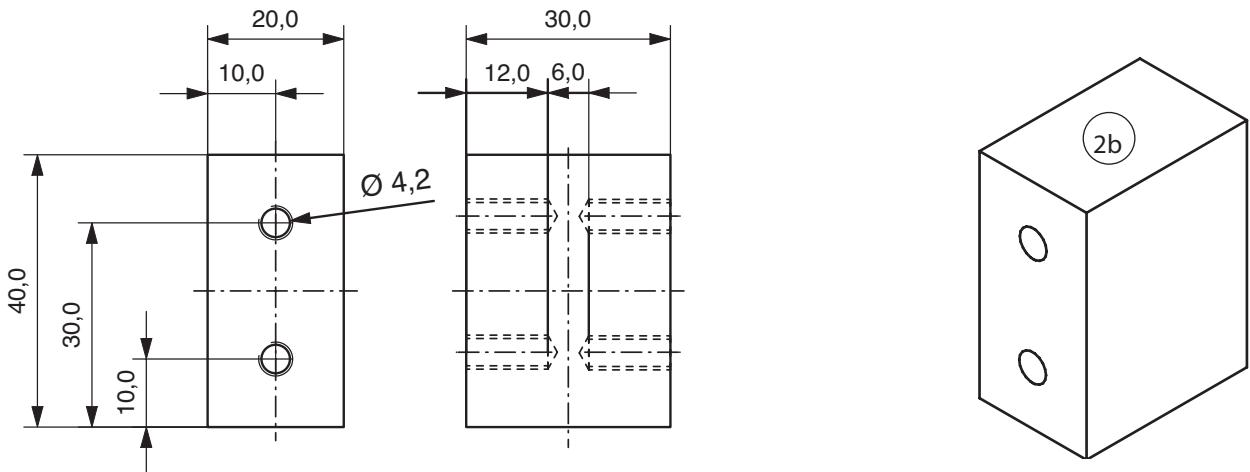
Radius of the threaded Machine screws x 1.6

M4 = 2mm x 1.6 = 3.2mm

Note:

When placing the aluminium block in a machine vice for drilling use protective soft jaws.
(Otherwise you will damage your work)

6.2.3 Mark out the spacer block (2b) as in step 6.2.1 and 6.2.2 check and drill.



6.2.4 Now cut the M4 threads in both parts (2/3). Place them in a vice whilst tapping the threads.

Note:

Do not forget to use soft jaws.!

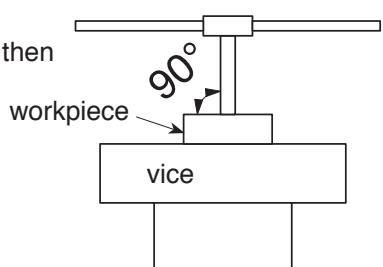
Start by making the threads with a first cut Tap and then finally with a full size M4 Tap.

Be careful as the Taps are brittle, turn the holder carefully 3 turns forward and then one turn back so that the small of metal swarf can be released.

Note:

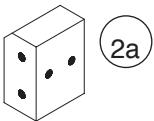
Keep checking that the tap is upright during the thread cutting process.

Use a thread cutting compound.



6.2.5 Lightly countersink all the holes to remove any burr

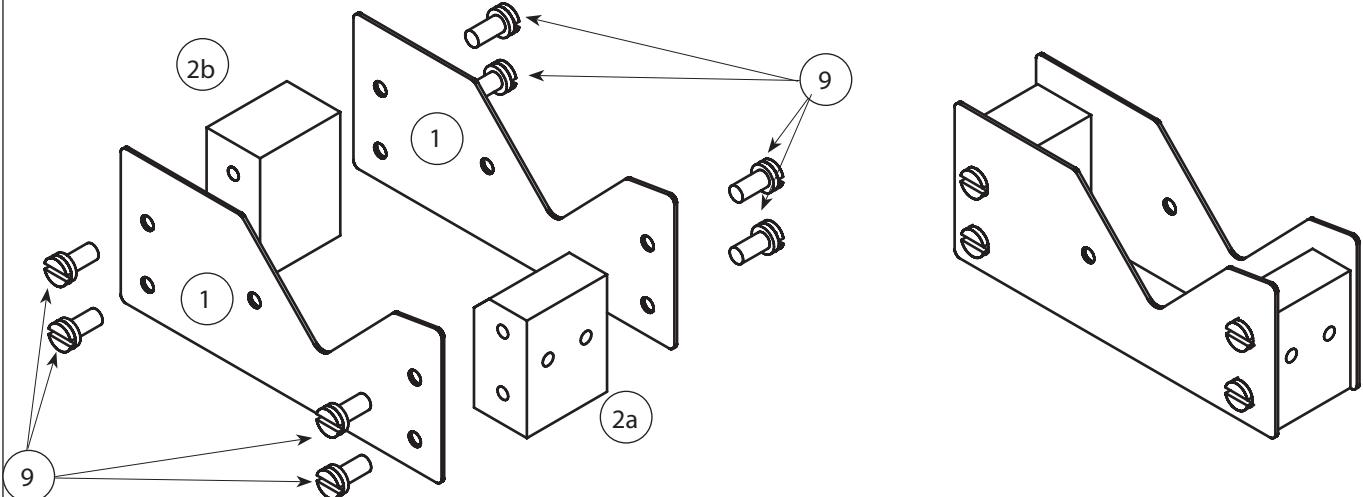
6.2.6 Mark out and file the angled end on part 2a as shown in the plan.



6.2.7 Clean up the tapped holes to remove any small pieces of metal from the screw thread.

Assemble the sides in position using the 8 screws (9)

Note: If the sides do not line up properly the holes can be corrected slightly with a small round file.

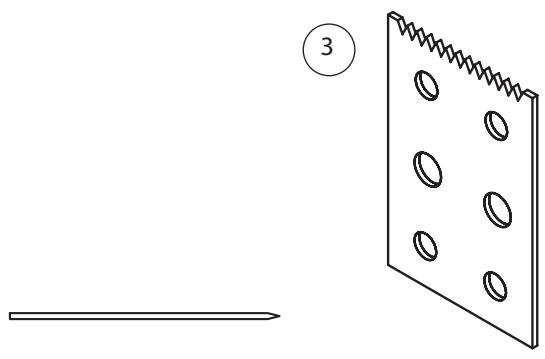
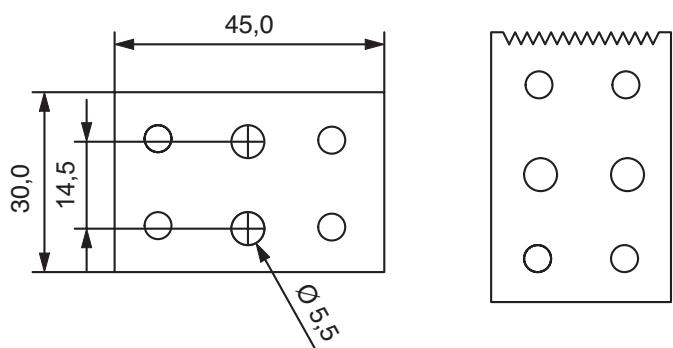


6.3 Making the blade

6.3.1 Mark out and cut a 45mm long strip (3) from the holed metal strip 1 x 30 x 100mm. The remainder can be used for a spare blade

6.3.2 File the teeth with a small needle file.

Note: Make sure the teeth are all in a straight row!

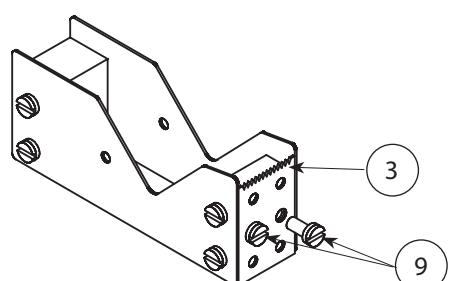


6.3.3 File the edge of the teeth at an angle to make a good cutting edge.

6.3.4 Check that the blade fits on the end of the aluminium block (2a)

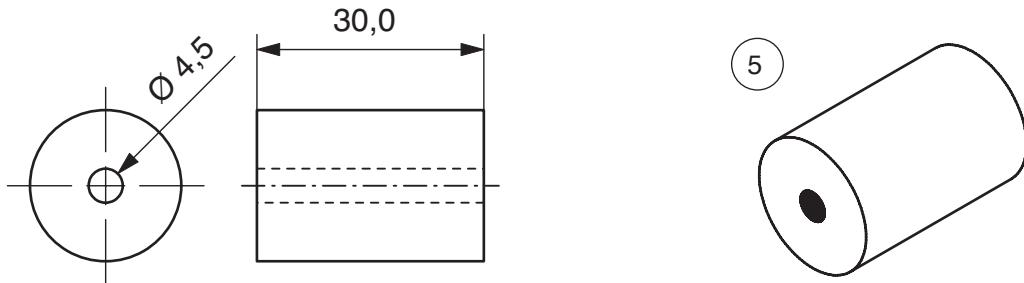
Hinweis: Geringe Abweichungen können durch Vergrößern der Bohrungen nachgebessert werden!

6.3.5 Mount the blade (3) with 2 Machine screws (9) on the blade holder block (2a)



6.4 Making the roller bearing

6.4.1 The dowel (5) 20mm x 50mm needs to be shortened to 30mm and the ends cleaned up with glasspaper.

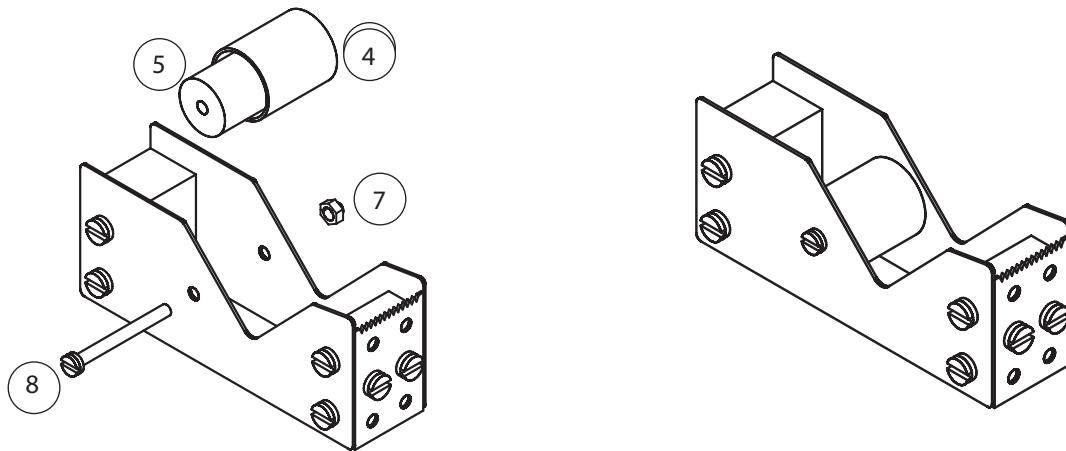


6.4.2 Drill a 4.5mm hole through the middle. Use a Pillar drill, hold the work in a machine vice

6.5 Final assembly

6.5.1 Insert the bearing (5) in the plastic tube (4).

6.5.2 Fix the bearing in position between the sides using the longer Machine screw (8) and the domed nut (7)



6.6 Testing the function

Remove the sellotape mounting tube and insert it through the roll. Replace it in the holder and screw it in position, holding it with the screw (8) and domed nut (7). Pull the tape and cut off to the required length. If the blade does not cut properly it can be easily be removed and re-filed.

Once the sellotape dispenser is working properly and the strips cut off evenly the sides of the holder can be polished. Use fine steel wool working in one direction only. Finally use a soft cloth and metal polish. To protect the final finish give the dispenser a coat of clear varnish or wax polish.

Finally cut a couple of strips from the rubber foam sheet and glue them underneath to make a non-slip surface.

