

# the Butterfly easel

## You will need



Electric drill



drill bit  
& countersink



3mm (1/8") plywood, MDF or  
hardboard

2 pieces 9" x 10" (23 x 25cm)

1 piece 10 1/2" x 12" (27 x 30cm)

1 piece 2" x 2" (5 x 5cm)



Saw & mitre



10mm (3/8") square dowel  
about 6ft (2m) total length



Wooden baton 1 1/8" x 3/8" (3cm x  
1cm) 2 pieces 8" (20cm) long



Clamps or heavy books



Wood glue, superglue



Acrylic varnish



Square nut that fits tripod screw



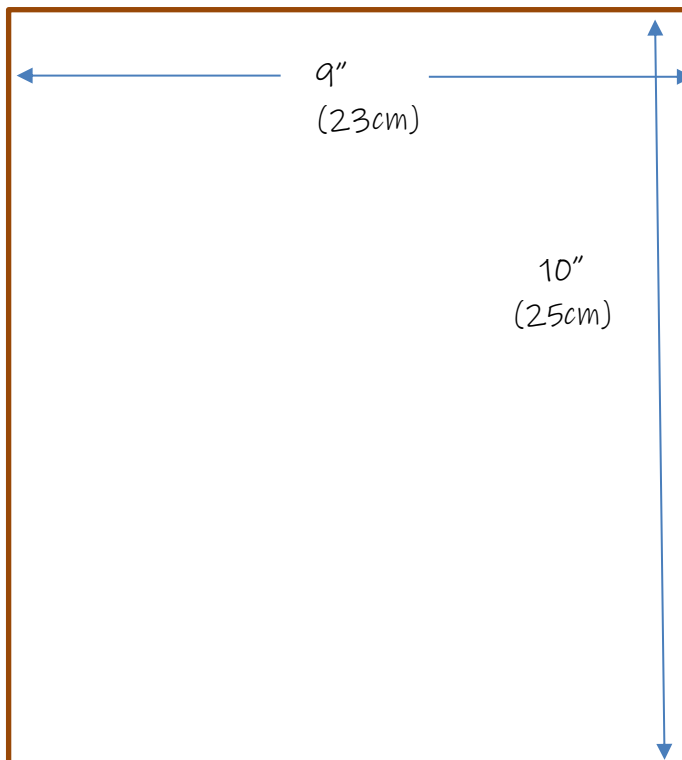
Wingnut, bolt and washer  
3/8" (5mm) dia  
Bolt 3/4" (2cm) long and  
countersunk



Clasp and 3 hinges



1



To make the folding palette area:

Cut two pieces of 1/8" (3mm)  
plywood, hardboard or MDF to  
9" x 10" (23cm x 25cm).

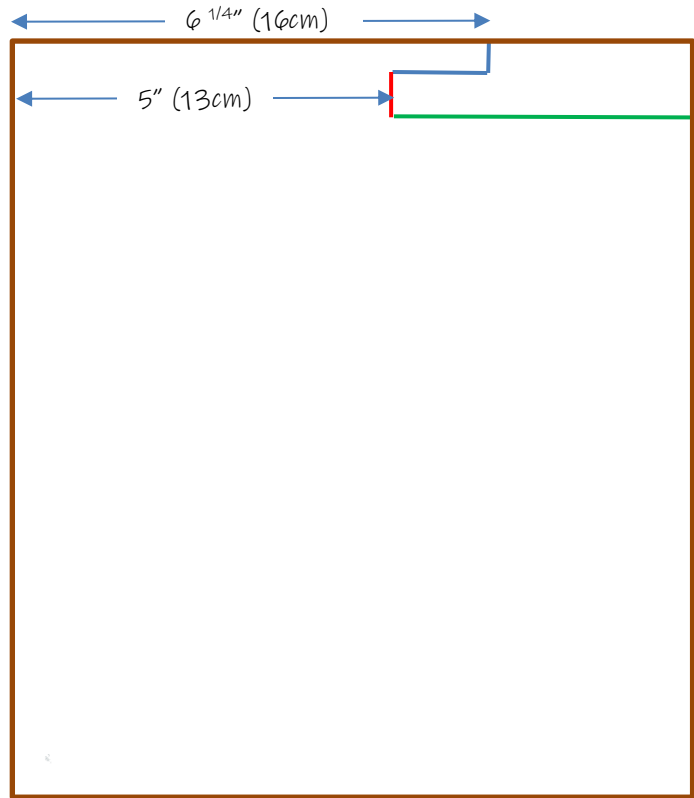
Cut a 6 1/4" (16cm) length of 3/8" (10mm) square dowel.

Place it along the top of one of the shorter sides of a board, butted up to the left edge of the board.

Draw a line around it (shown here in blue).

Then drop a vertical line down 5" (13cm) in from the left edge. The length of this line (shown here in red) depends on the size of your tripod legs. To calculate this, measure the width (diameter) of your tripod legs and then add on 1/8" (2mm).

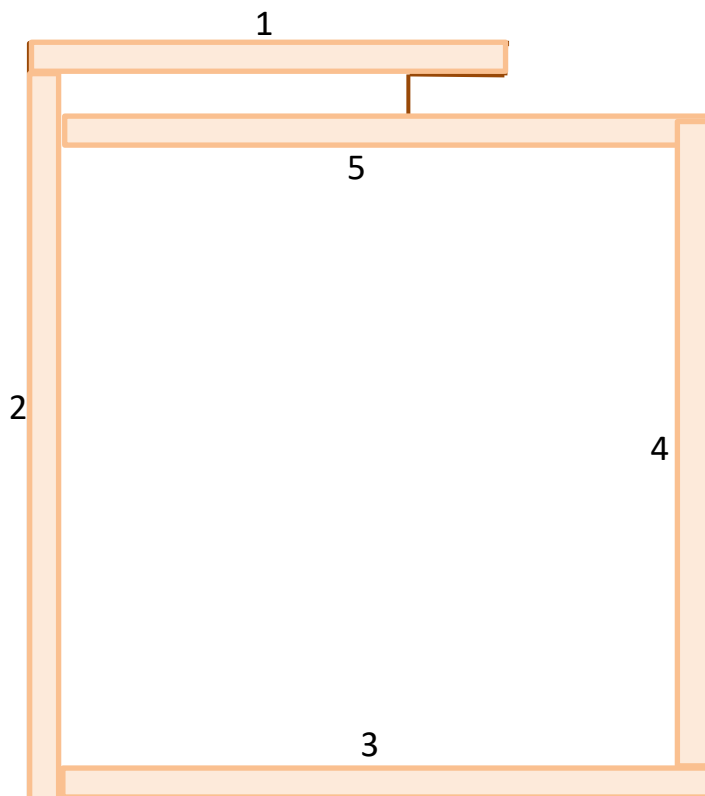
(My Amazon basics tripod has legs that are 20mm in diameter, so my measurement for this line is 22mm.)



Draw a horizontal line (green) across from the bottom of the red line.

Now use a sharp craft knife and a metal ruler to cut out this right-hand corner shape.

Place this board on top of the other one, draw around the shape you have cut out and then cut this piece out of the second board. You should end up with two identical boards.



Glue the 6 1/4" (16cm) length of 3/8" (10mm) square dowel into position as shown here (1).

Then line up and measure the length for the second piece of dowel (2), cut it and glue it in place. Repeat for pieces 3, 4 and 5.

By doing this you ensure that they all fit exactly to size.

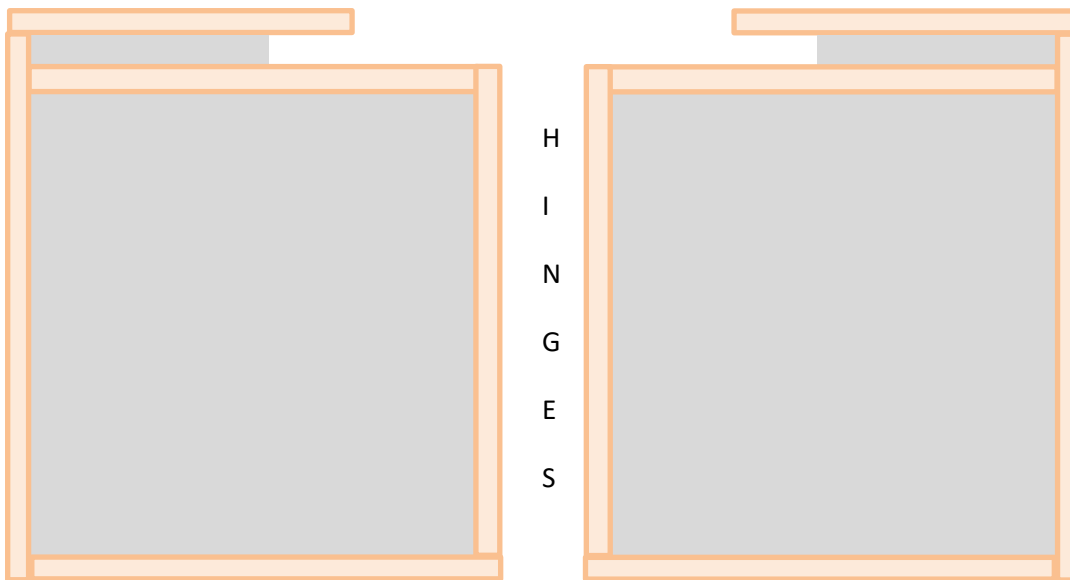
Repeat for the second board, and you should end up with two identical trays.

Hing the two trays together using the three small hinges, and then add the clasp.

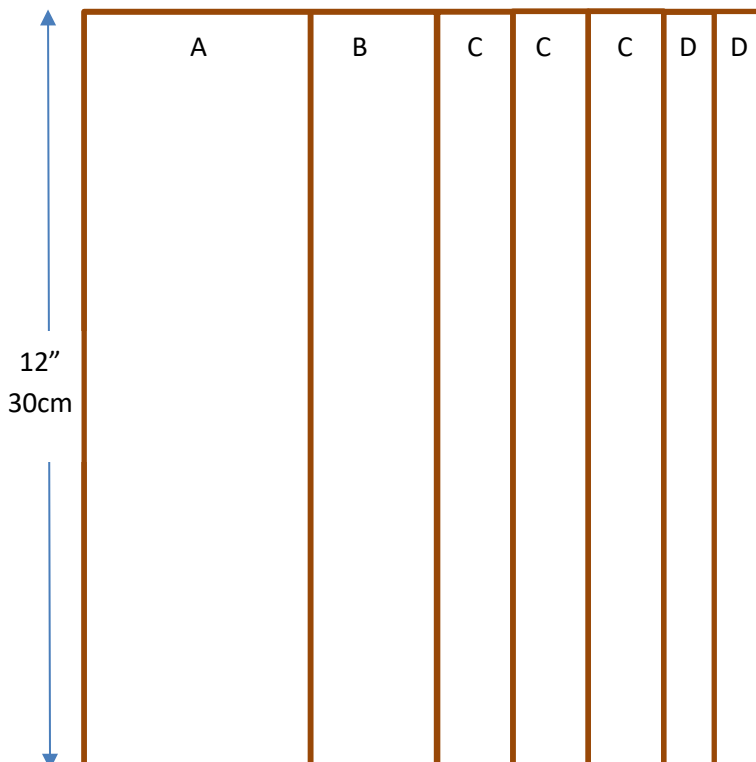
Then try out the palette tray on your tripod. If it all fits well (and it should!), then give the tray a couple of coats of varnish.



This part of the project is now complete.



### 3



Cut a 12" (30cm) high piece of 1/8" (3mm) ply or hardboard into strips as follows:

A = 3 1/2" (9cm) wide

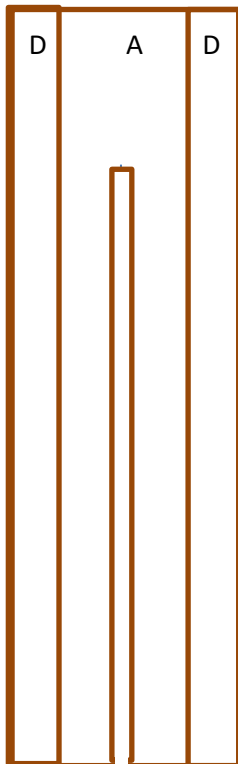
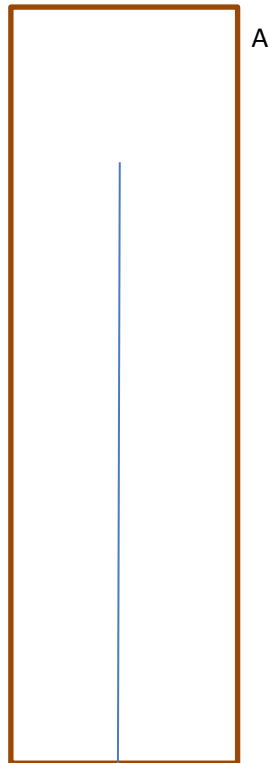
B = 1 15/16" (4.8cm) wide

C = 1 1/8" (2.9cm) wide

D = 3/4" (2cm) wide

Take piece A, and draw a centre line 9 ½" (24cm) long.

Measure the width (diameter) of your bolt and then use the centre line to measure and cut a slot that is just a little wider. (My bolt was 5mm so I cut a slot 6mm wide).

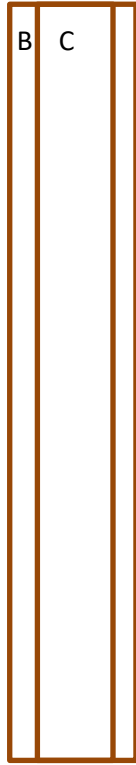


Take both pieces D and glue thin card to both sides of each piece. This forms a small gap to allow the slider to move easily. Business cards have the right thickness, but any card will do.

Then glue pieces D to piece A as shown here.

Make sure the slider (piece B) moves up and down between these sides.

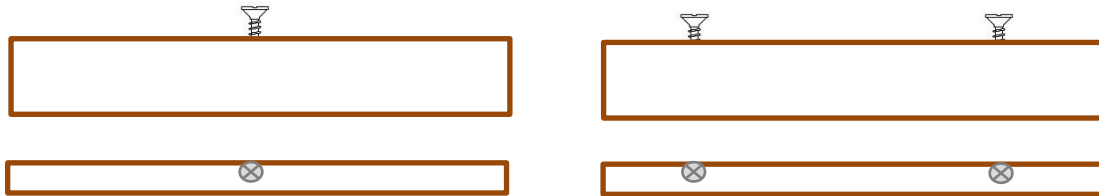
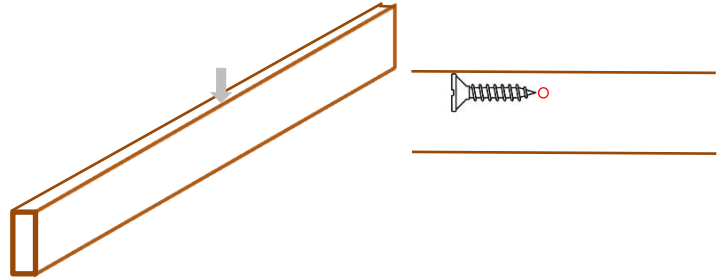
4



To create the “slider”, glue thin card to one side of piece C.  
Then glue piece C centrally to piece B with the card between the two.

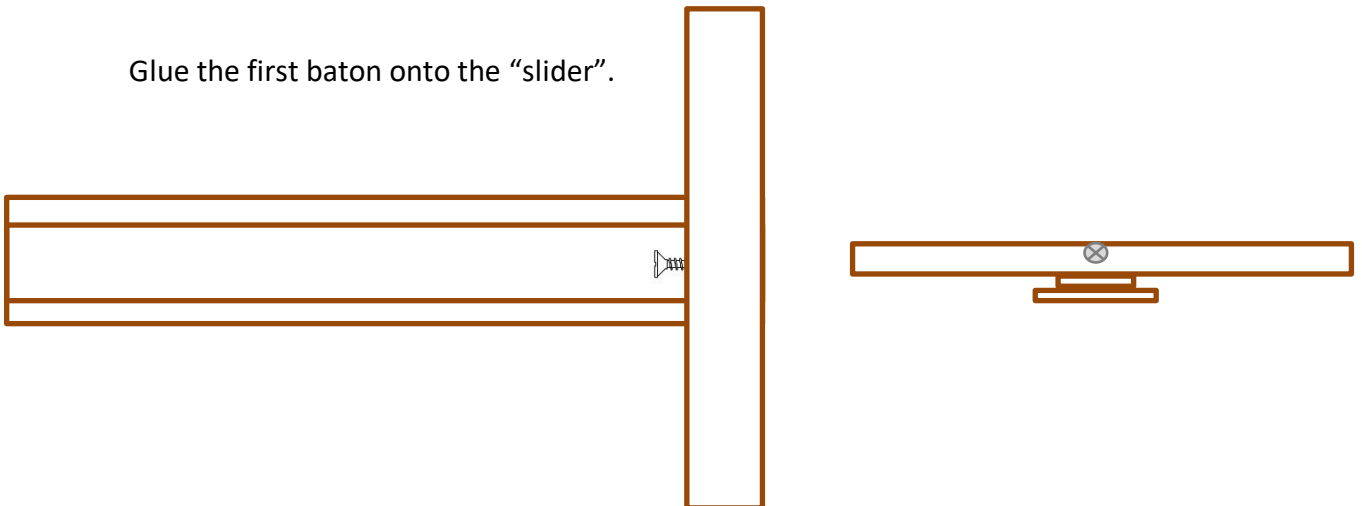
Cut two pieces of wooden baton 1 1/8” x 3/8” (3cm x 1cm) to a length of 8” (20cm).

On one piece mark the centre and screw in a 5/16” (1cm) screw on the thin side. Make sure that the head of the screw is on one edge so that there will be room below this screw to slide your painting board.

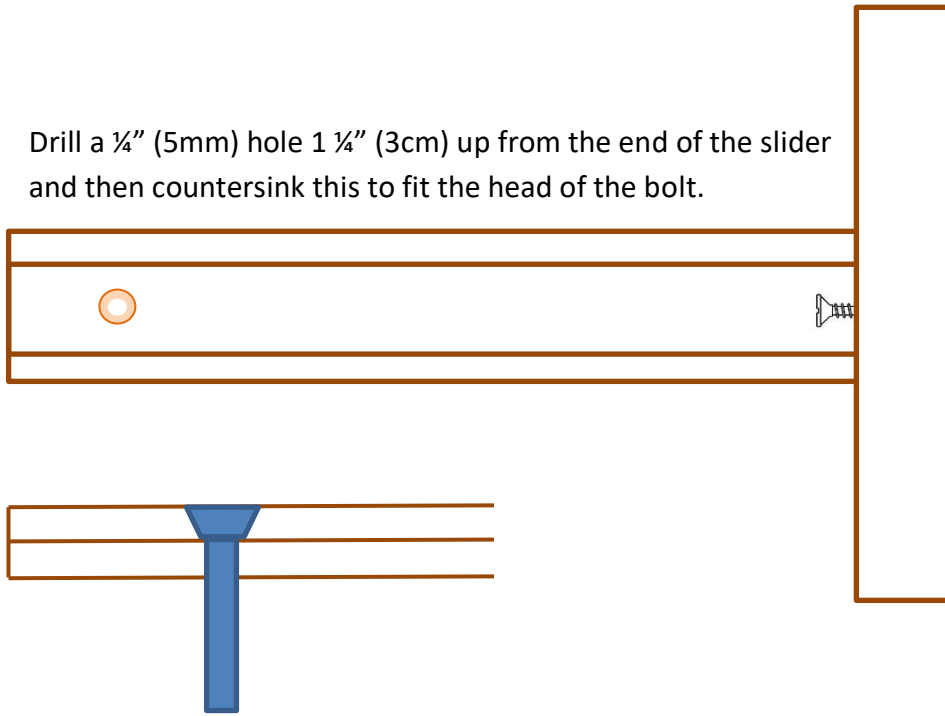


On the second baton screw in two screws 2” (5cm) from each end.

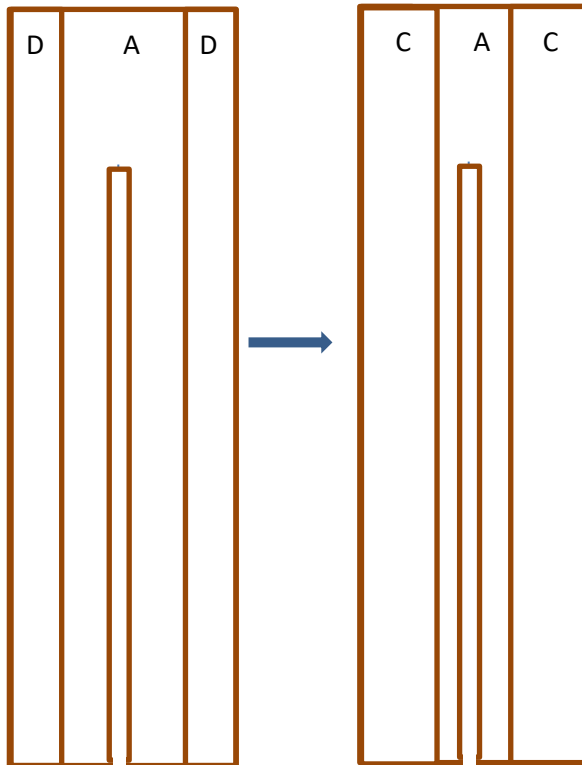
Glue the first baton onto the “slider”.



Drill a 1/4" (5mm) hole 1 1/4" (3cm) up from the end of the slider and then countersink this to fit the head of the bolt.

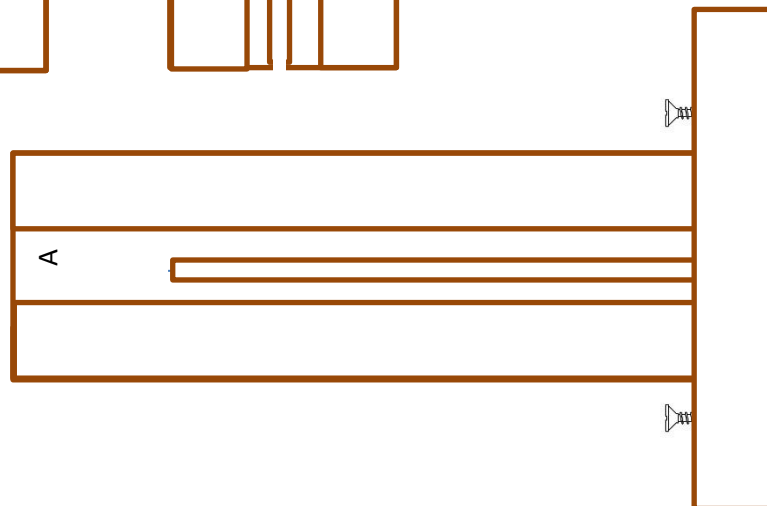


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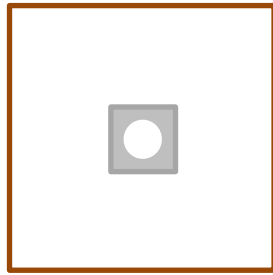


Glue pieces C onto pieces D.

Then glue the second baton on as shown here.



6



Draw a square 2" x 2" (5 x 5cm) on a piece of 1/8" (3mm) ply or hardboard or MDF.

Find the centre by drawing diagonal lines across from the corners, then place your tripod nut over the centre and mark around it with a pencil.

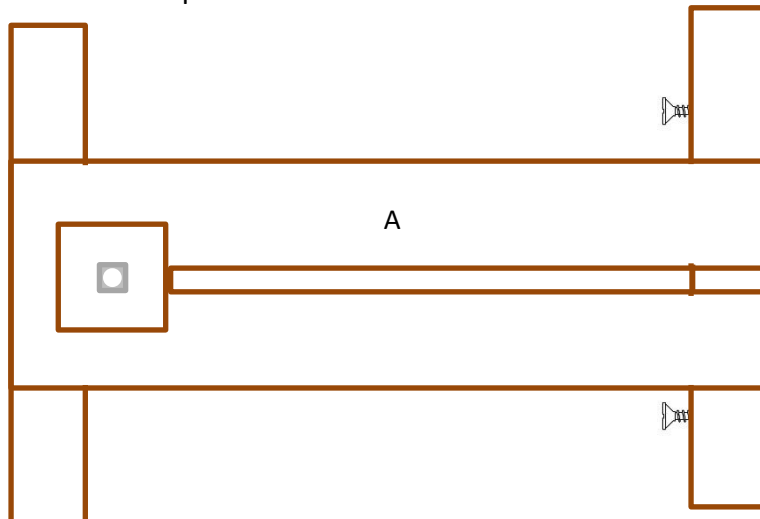
Cut out this hole.

Then cut out the 2" square. (It's easier to do it this way and less fiddly.)

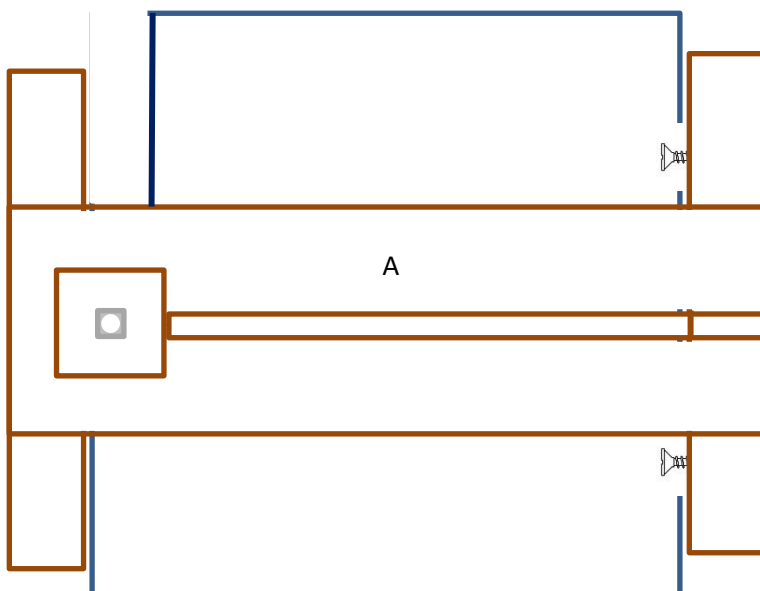
Slide the slider into the other part of the easel and then place the 2" square onto the back of Part A. One edge should line up with the top of the slot in Part A.

Draw the nut hole onto Part A with a sharp pencil, then gouge out a recess to accommodate the nut on your quick release plate or your tripod.

Glue the square and the nut in place.



7



Place the palette box centrally with the easel and mark on the box where the screws touch.

Then drill holes to fit the screws in the palette (be careful not to drill right through the palette sides!)

Give everything a good varnish, add the wingnut, washer and bolt and you are finished!