

Making a Plein Air Painting Kit

Lighter than a French Easel, more complete than a Pochade.

Wilson Street Easel

- All of your painting materials are at working height
- Lighter than French Easel or Pochade
- Allows for a large palette
- Can hold a large canvas or board
- Fast and easy to set up and take down

End Result

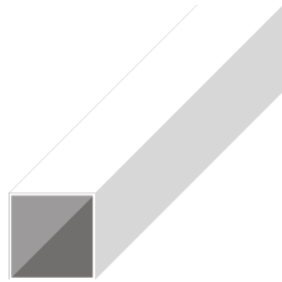


Raw Material



- All Aluminum
- 1" square tubing
- 3/4" square tubing
- 3/4" angle strap
- 1" flat strap

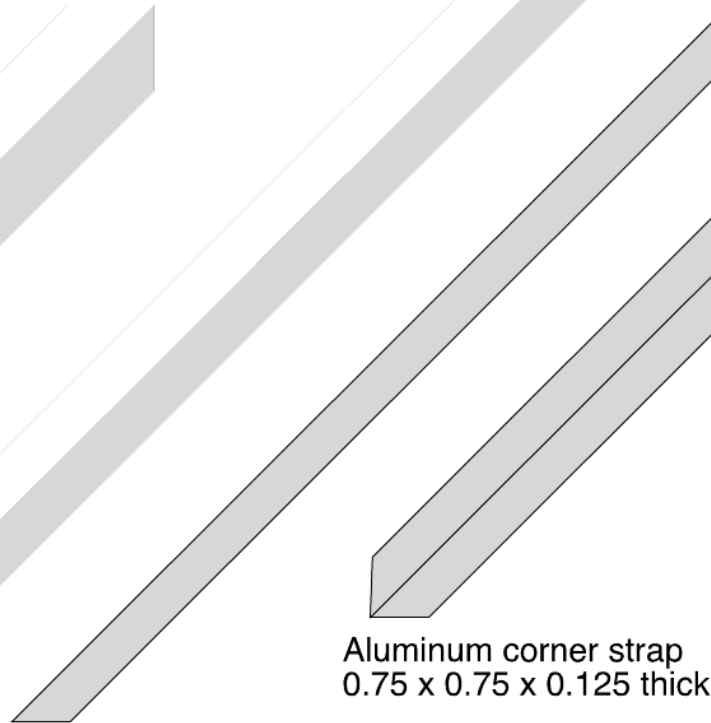
Materials Required



Aluminum square tubing
1.00 sq x 0.1 thick



Aluminum square tubing
0.75 sq x 0.05 thick



Aluminum flat strap
1.0"w x 0.125 thick



Aluminum corner strap
0.75 x 0.75 x 0.125 thick

Various tools

- Drill press
- Hack saw
- Flat fine file, 3/4 wide
- 13/64 drill bit
- 9/64 drill bit
- 3/16 drill bit
- Counter sink
- 14-20 Tap
- 10-24 Tap
- Screw driver (to match your screws)
- Adjustable wrench
- Wood saw for building jig
- Small pieces for jigs
- (2) 6 x 8 x 1/2" plywood
- (2) 1x1.125 x 8 spruce
- (2) 1 x 3 x 1/4 spruce
- (2) 1 x 3/4 x 8 spruce
- Flat head wood screws
- wood glue
- epoxy cement

Various machine nuts & screws

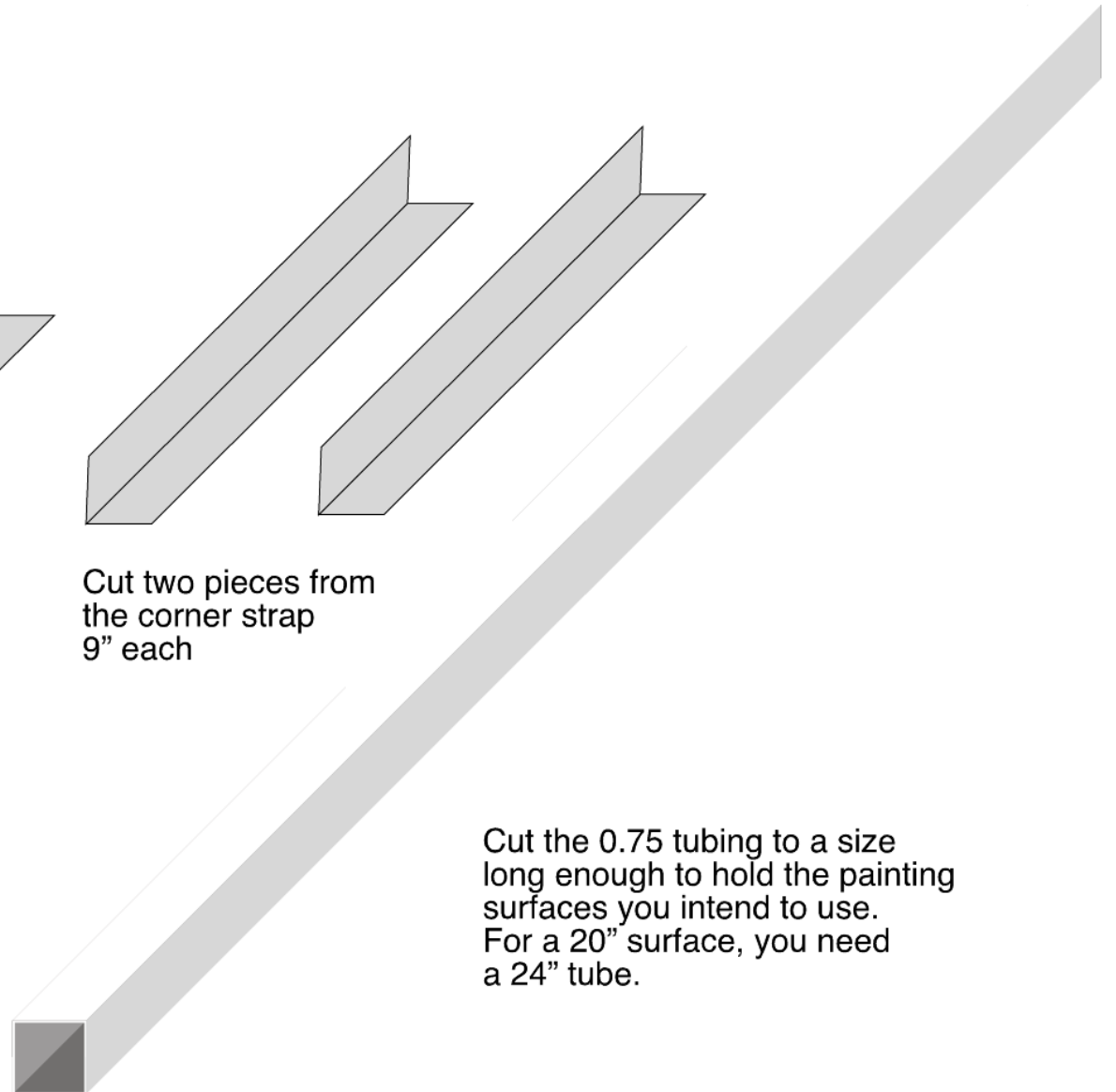
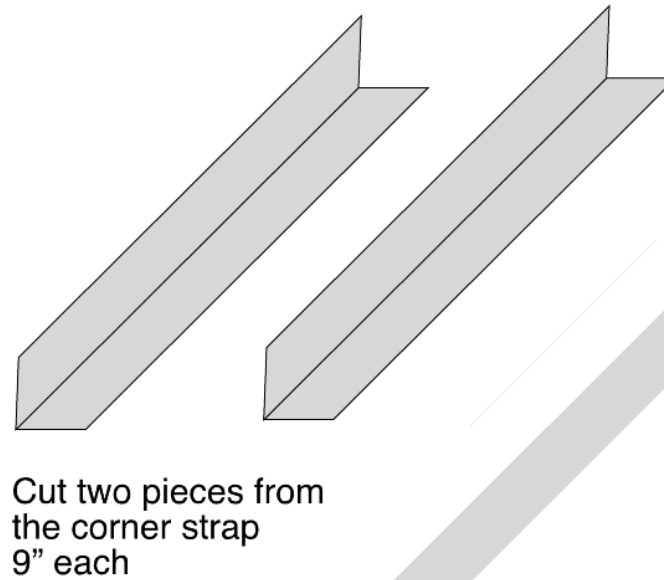
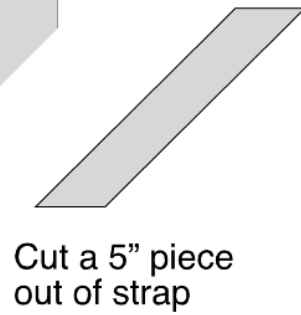
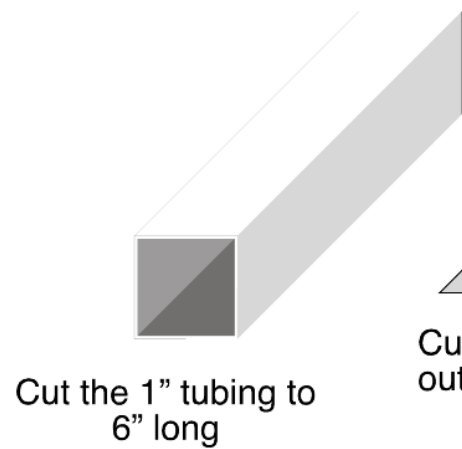
- (2) 1.25" 10-24 flat head
- (2) 3/8" 10-24 flat head
- (2) 10-24 machine nut
- (2) 10-24 lock washers

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Measure & Cut



Cutting the aluminum



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Finishing Cuts



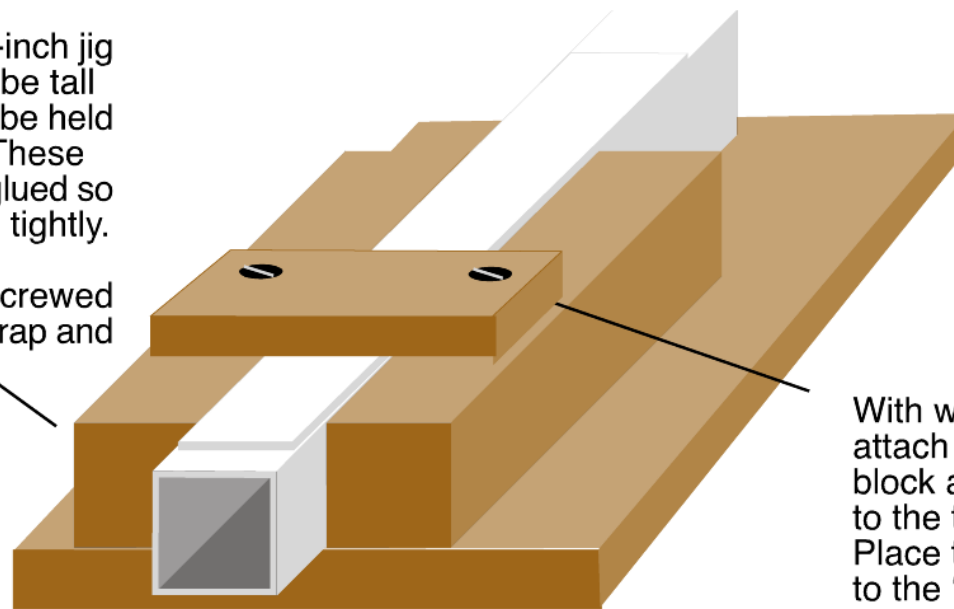
- All cut surfaces must be filed smooth
- Especially where the tubing slides into the other tubing

Make Two Jigs

Make two jigs like this to help with drilling accurately.
One jig fits the 1" sq tubing and the other fits the 3/4" tubing.

1.125" x 1" x 4" on the 1-inch jig
the wood blocks should be tall
enough to allow strap to be held
in the jig at same time. These
should be screwed and glued so
that they hold the tubing tightly.

When the top clamp is screwed
tight, it should hold the strap and
tube tightly together.



6" x 8" x 1/2" plywood

With wood screws
attach a 1/2" x 1"
block at right angles
to the two 1x1s
Place the screws slightly
to the 'back' of the block.

Use these jig to hold the tubing flat and square in the drill press and
to correctly position the corner strap to the 1 x 1 tubing.

**Make the same kind of jig to position the other corner
strap to the 3/4" tubing, simply reduce the dimensions to suit
the 3/4 inch tube.**

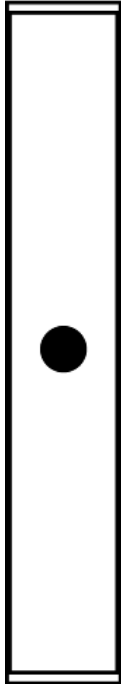
Build Jigs



- The clamp on top of the jig must be at right angles to the tubing it holds



Reinforcing the tripod mounting area



A-Slightly roughen the surface of one side of the strap and the 1" tube

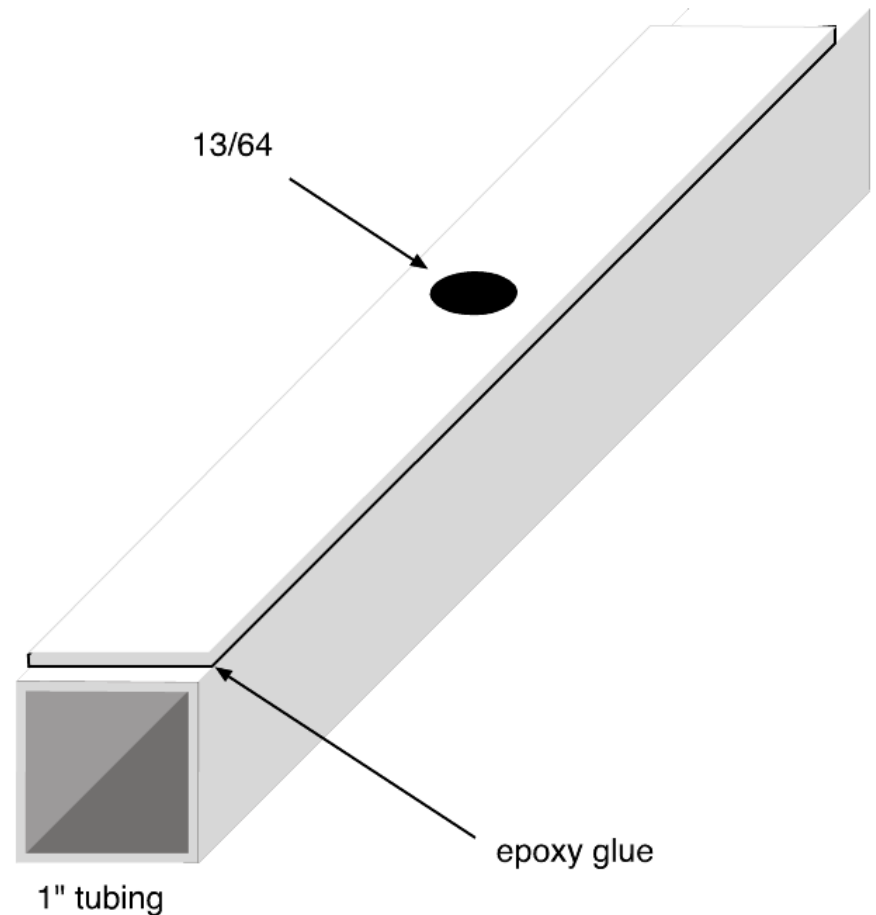
B- Mix up some epoxy glue. (The full strength kind, not the quick drying kind.)

C- Spread glue on the roughened surface of the strap and then clamp the strap to the roughened surface of the tubing. Leave until completely dry.

D- Clamp the strap-tube assembly into the jig, then clamp the jig onto a drill press and drill a 13/64 hole in the exact centre of the assembly. Drill through the strap and one side of the 1" tube.

E- Cut threads into the 13/64" hole with a 1/4-20 NC tap, through both the strap and the 1" tubing. This is where the quick release mechanism attaches.

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Lower Panel Holder

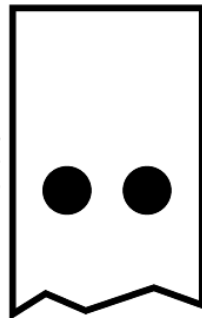
Creating the lower painting surface holder

A- To create the lower holder drill 2 holes in back (opposite side from reinforcement strap) of the one-inch tube. 9/64"
Use jig to make sure everything is in alignment. Drill through one side only.

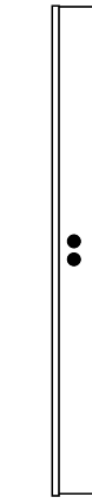
B- Cut threads into the two holes in the tube with the 10-24 NC tap



one-inch tubing



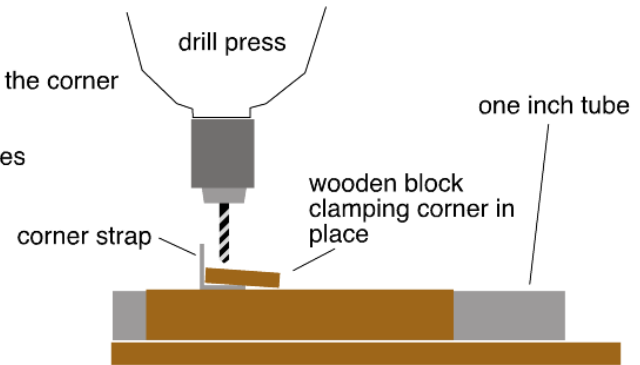
9/64 holes
1/8 from each edge
1.5" from end of tube



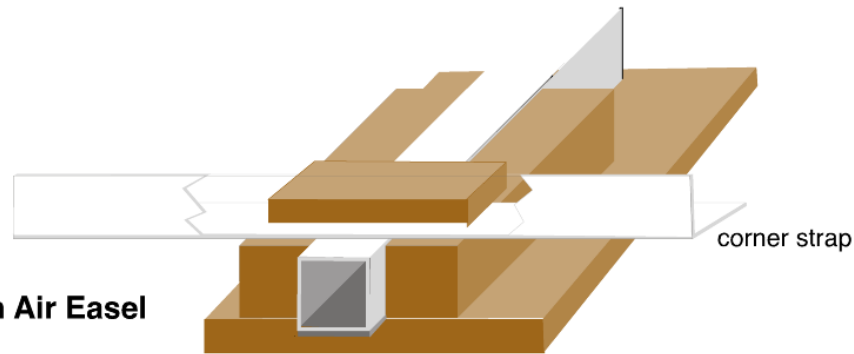
corner strap

C- Enlarge the holes in the corner strapping to 3/16"

D- Counter sink the holes



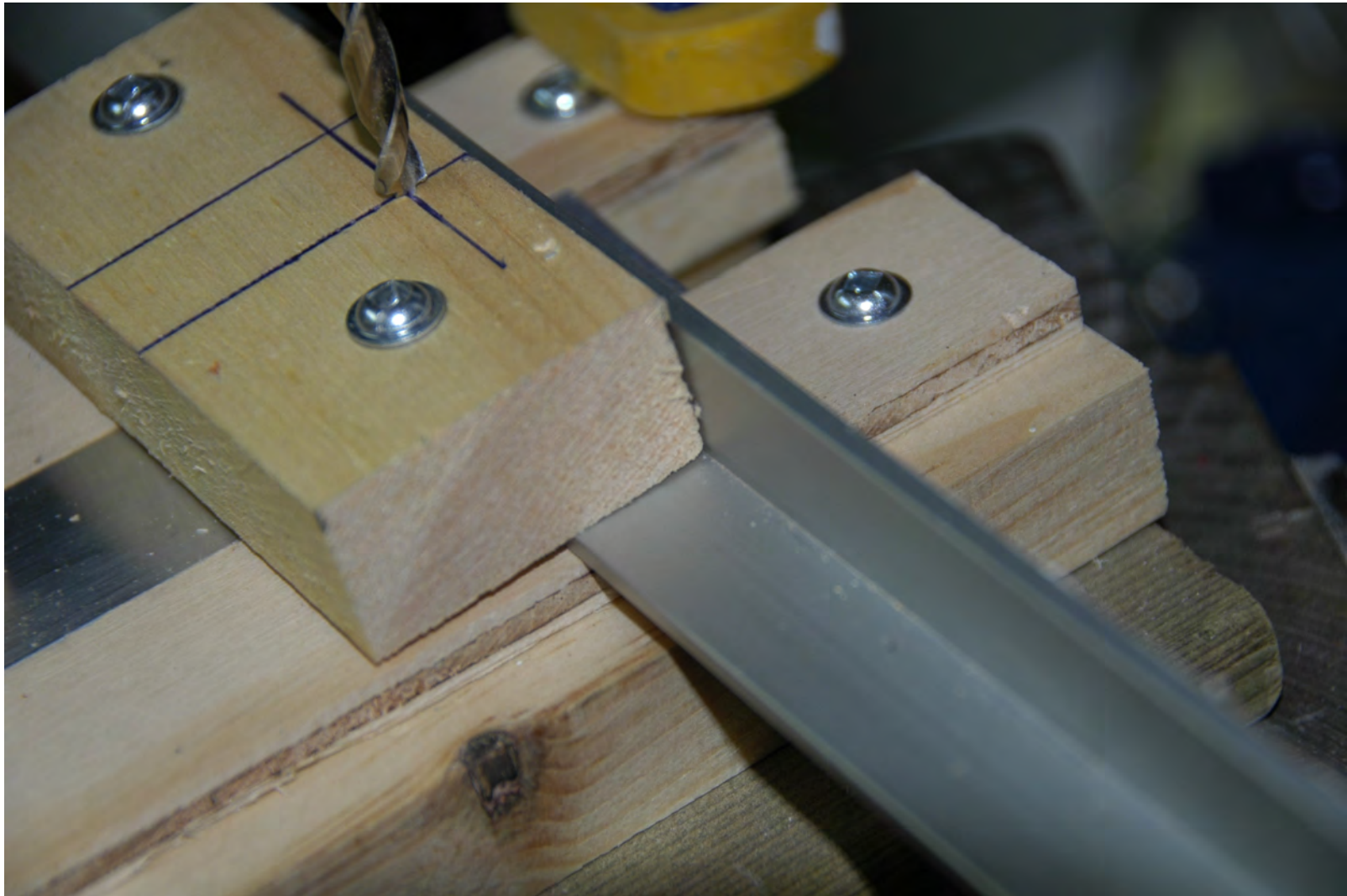
In order to have the hole in the corner strap line up with the holes in the one-inch tube place the tube and the corner strap in the jig as shown and drill through the wood block, the corner strap and tube at same time.



one-inch tube

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Drill through clamp, angle strap and one side of 1" tube





- Use a countersink drill to countersink holes in front of panel holder.



- Use a tap to cut threads into the body of the lower assembly

Screws must not protrude into the inside of the 1" tube, otherwise the inside channel will not slide smoothly



- Cut 3/8 screws shorter so that they don't protrude into the inside channel.
- File the ends of the screws until they are flush with the inside of the channel.

Upper panel holder

Creating the upper painting surface holder

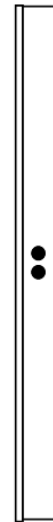
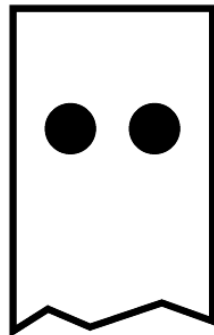
A- Drill two 3/16" holes through 3/4 inch tube and the corner strap.

In order to have the hole in the corner strap line up with the holes in the 3/4-inch tube place the tube and the corner strap in the jig as shown and drill through the wood block, the corner strap and both sides of the tube at same time.

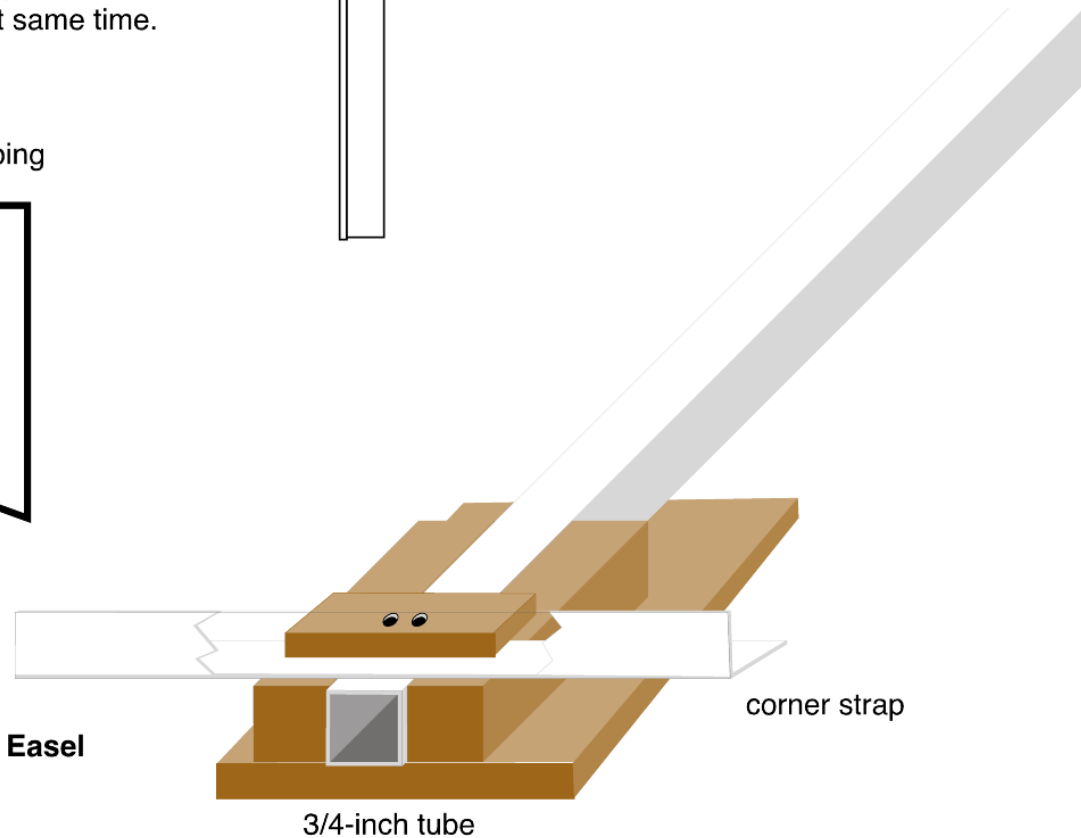
B- Counter sink the holes in the corner strap

3/16" holes
1/8 from each edge
3/4" from end of tube

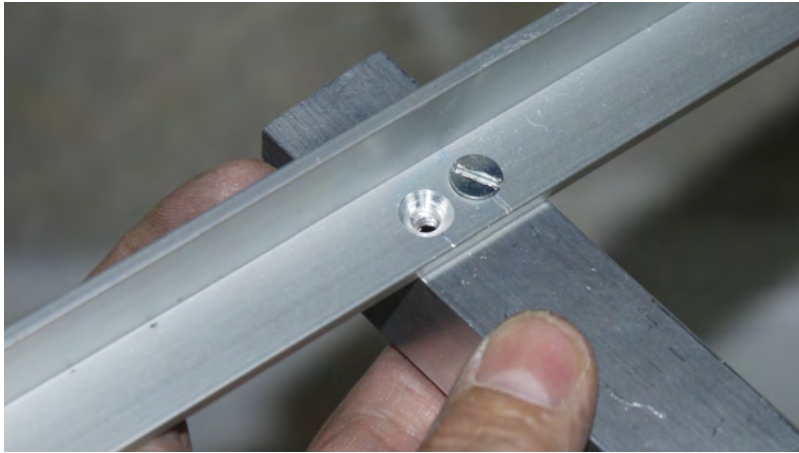
3/4-inch tubing



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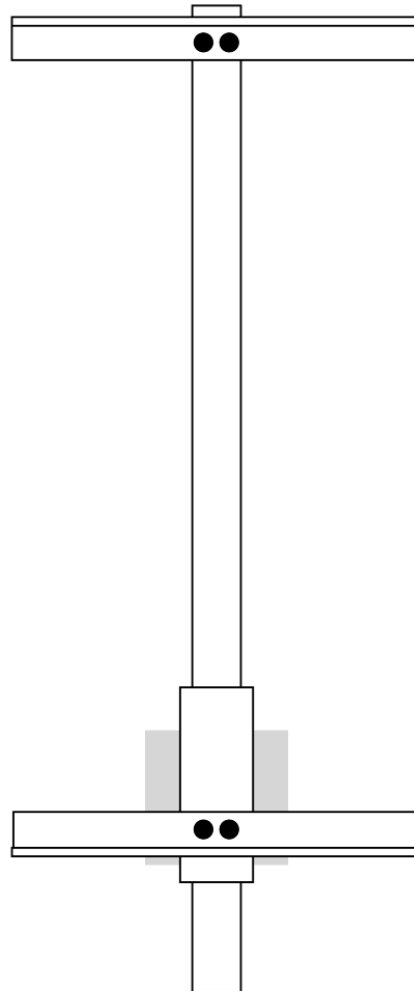


Assemble panel holders

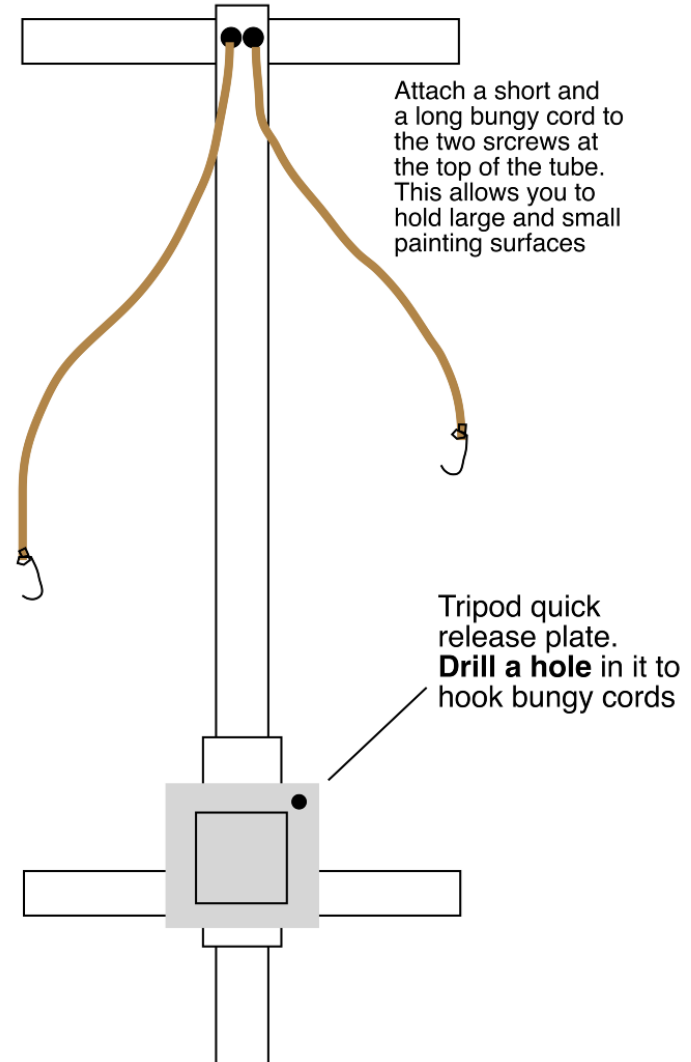


Attach tripod quick release

Front view



Back view



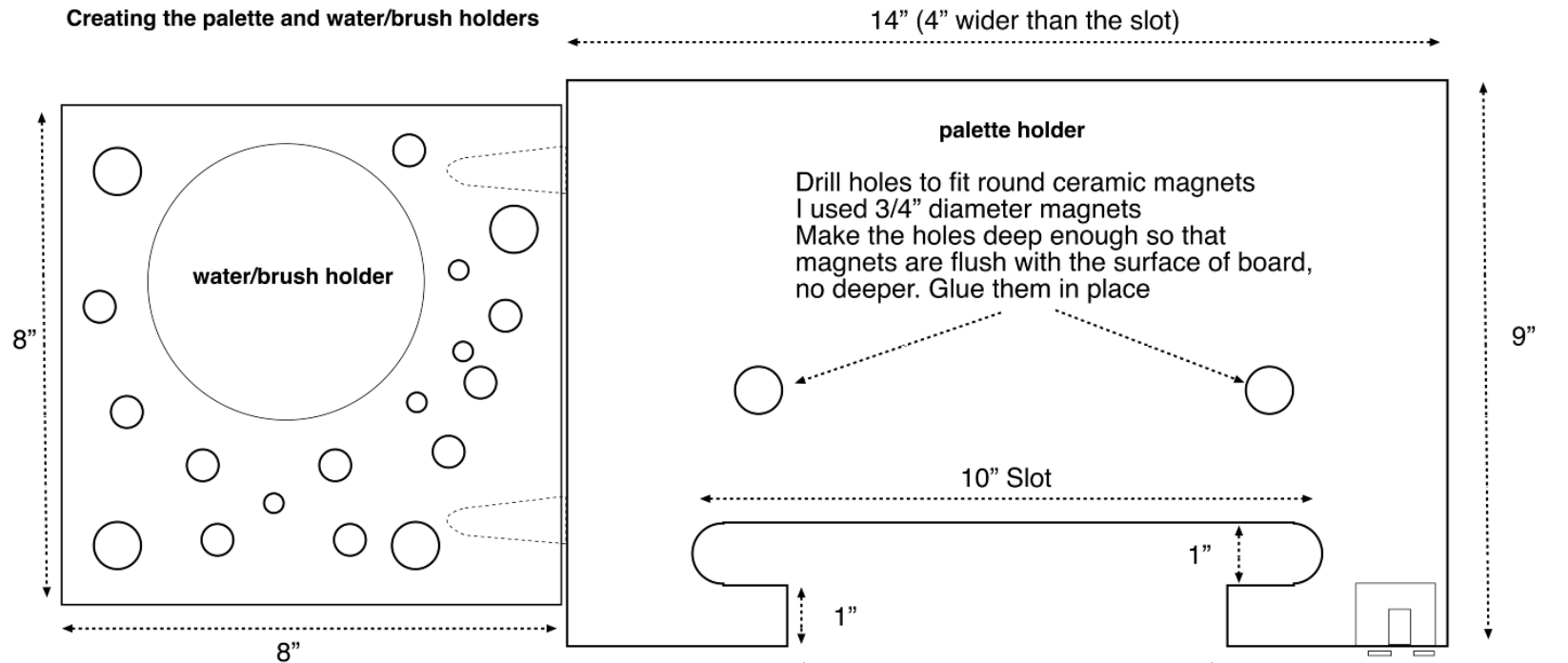
Attach a short and a long bungee cord to the two screws at the top of the tube. This allows you to hold large and small painting surfaces

Tripod quick release plate. **Drill a hole** in it to hook bungee cords

Building the palette holder

Building the palette, brush and water holder

The dimensions of these two pieces depend upon the size of your tripod. The thickness of the tripod's legs and the spread of its legs determine the width of the slot and therefore the outside dimensions. The following are what work for my tripods.



Materials Required

- 1) 1/2" plywood approximately 14" x 9"
- 1) 1/4" plywood approximately 8" x 8"
- 2) strap hinges
- 2) 3/4" magnets
- 1 pair) 1" shelf hangers
- 1) rectangular box approximately 4x5x3 (like those nails come in)
- 4) 6-32, 3/4" long machine screws, washers and nuts
- 4) 6-32, 3/4" flat head wood screws
- 2) 6-32, 1/2" flat head wood screws.

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Tools Needed

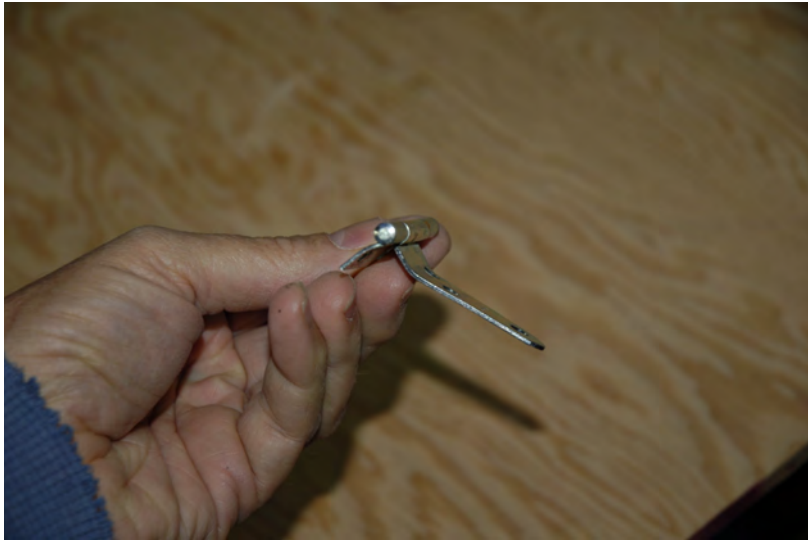
- Regular saw for cutting plywood (electric or hand)
- Electric drill
- Jig saw for cutting slot and water holder opening
- Drill bits to suit magnets and brush handles
- Screw driver to suit screws

Add a small 1" x 1" x 1/2" thick piece of wood near corner. Use scrap cut from slot.

Measure for palette holder



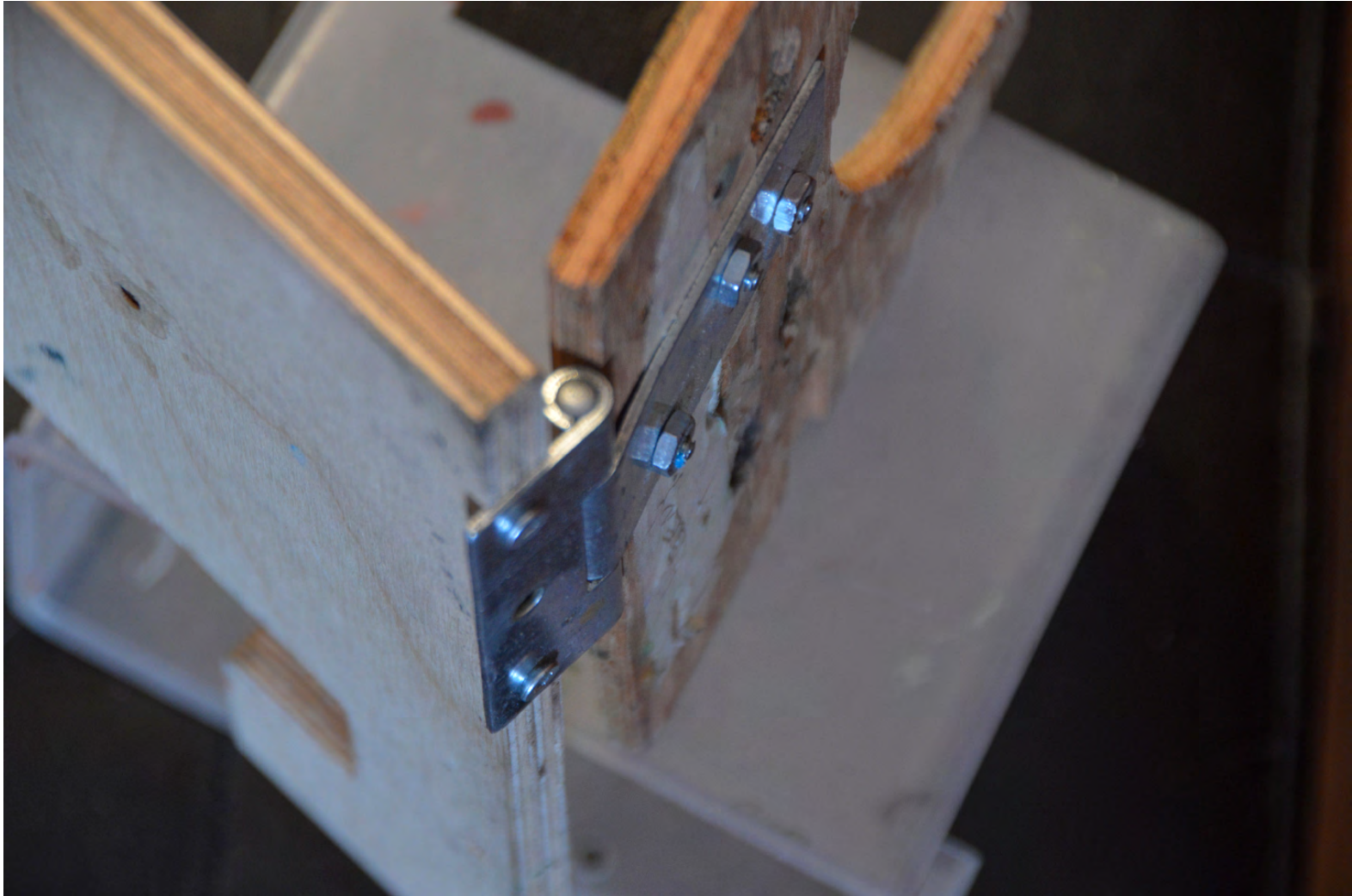
- Measure the width of the outside of your tripod legs, at the height you want it to sit.
- Measure the thickness of the legs at the same spot.



- Bend the hinge as shown

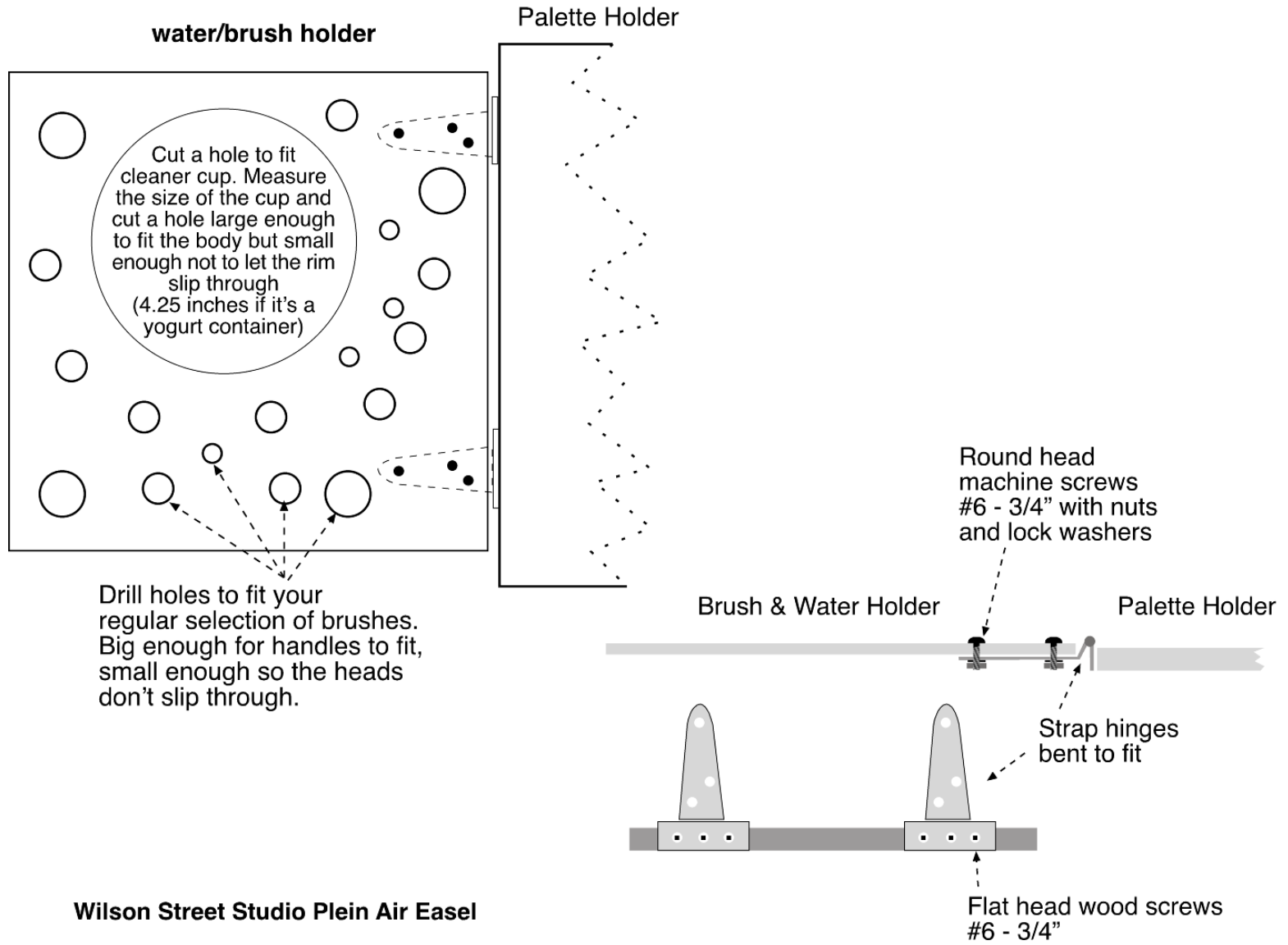


- Drill holes just large enough to fit magnets and glue magnets in place.



Hinge bent and installed

Water-brush holder



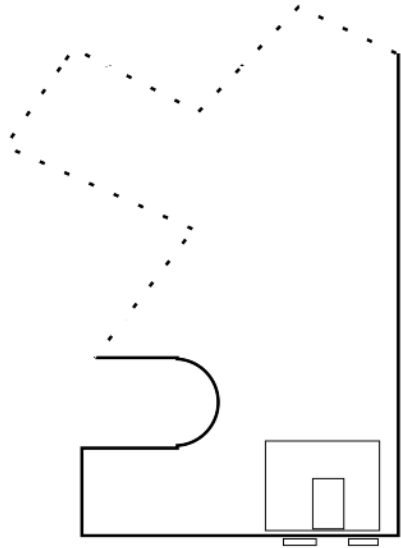
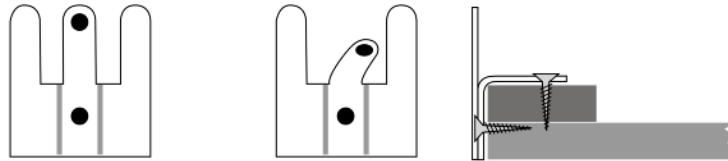
Attach hinges to side of palette holder

Paint tube holder



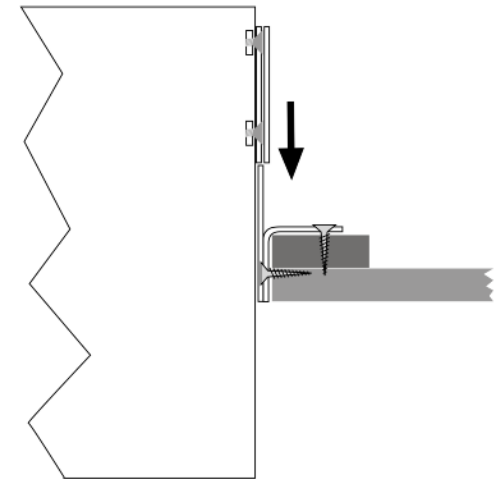
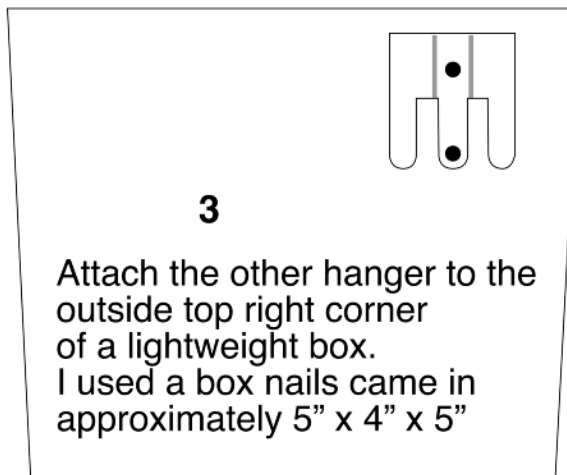
Adding a paint tube holder

- 2 Take one pair of 1 inch shelf hangers, bend centre tong of one 90 degrees, attach it to wood block with the two remaining prongs facing up and out



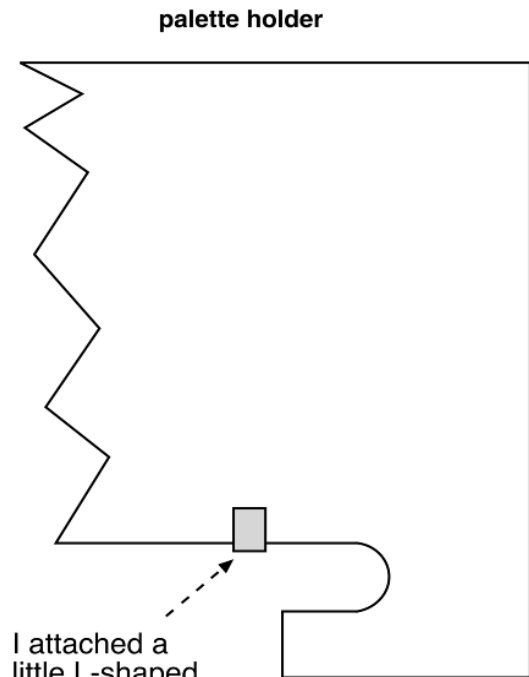
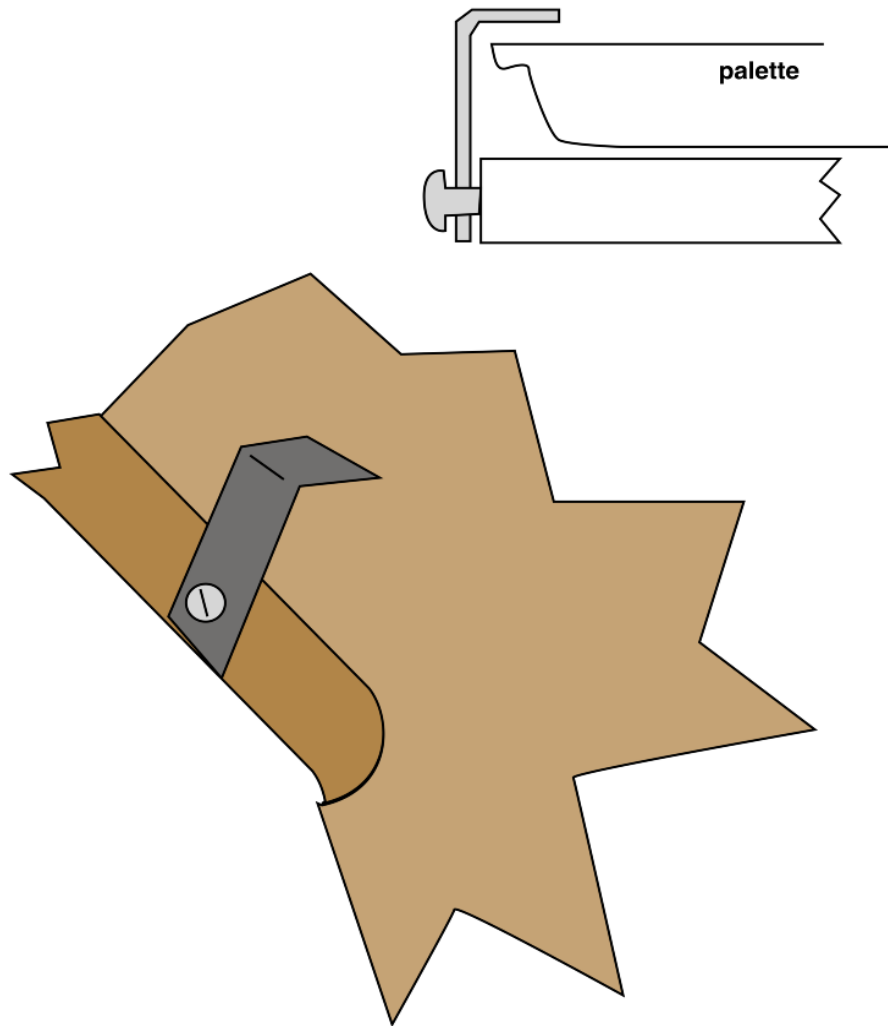
- 1 Glue a small 1" x 1" x 1/2" thick piece of wood near back corner of palette holder

- 4 The hanger on the box slides into the hanger on the palette holder



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Building the palette, brush and water holder



I attached a little L-shaped strap of metal here to help hold down the palette. Bend it out of a 1-1/2" long piece of 1/2" flat steel strap

Palette hold-down strap



End Result



End result

