



**Resin Parts for HMS Victory Heller 1:100**

# **Masts and Rigging**

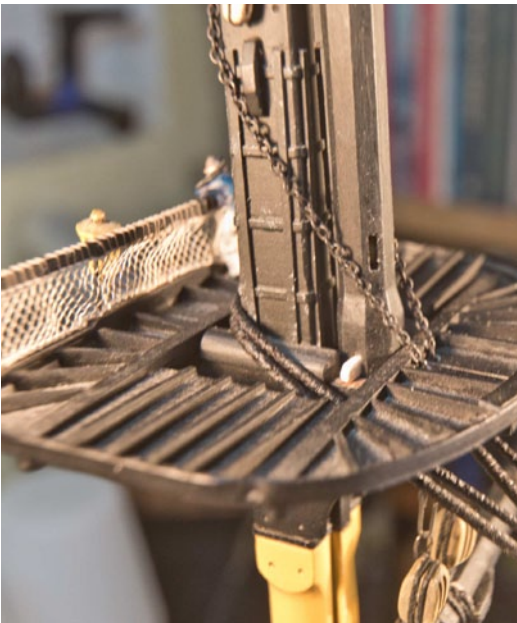


# Resin 15 Mastheads and Fighting Tops



## [Tips & Tricks for Model Makers]

# Mastheads and Fighting Tops

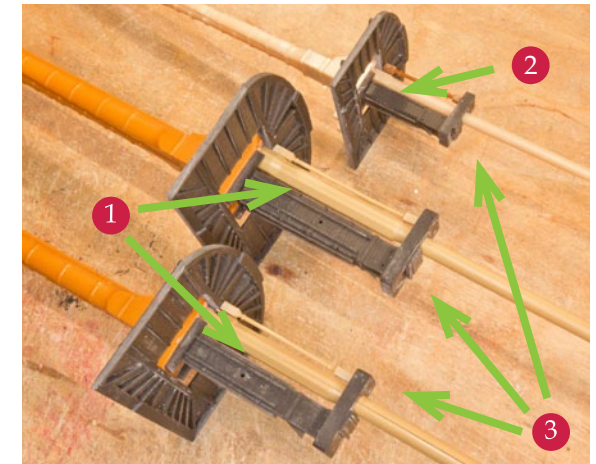
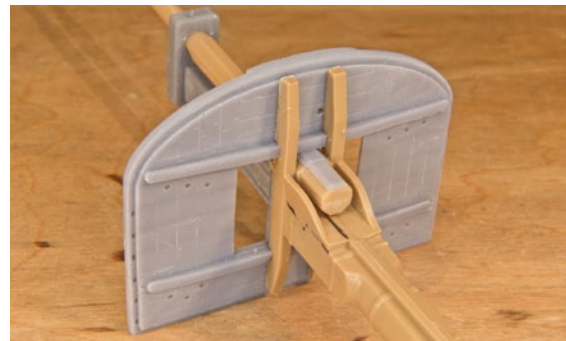


According to an order from the Admiralty dated 20 November 1802, the large fighting tops had to be built in two parts. This made assembly much easier.

The major difference to the older designs was that two stringers on the upper side had to hold together the two halves with the help of the cross trees, which made it necessary to realign the previously radial connecting battens.

The set consists of mastheads **1**, the fighting tops **2**, the mast caps **3**, the brackets/shoulders **4** and the mast foot of the fore top mast **5**.

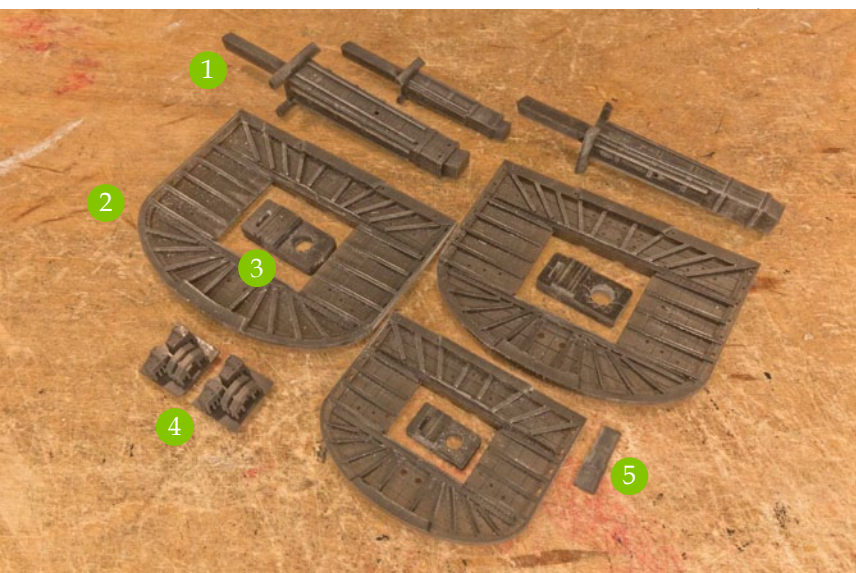
The addition to the mast base is attached to the fore top mast.



**Attention:** The distance between the masthead and the topmast must always be chosen so that there is enough space for the shrouds. For foremast and mainmast this should be approx. 1.5 mm **1**, for mizzenmast 1 mm. **2** If necessary, correct with a file.

Please check the available space with a sample shroud. **Do not glue the mast cap before attaching the shrouds!** **3**

The brackets/shoulders are an addition to the mast tops as a support for the jeer block hanger. Today the Victory has the clamps, in contemporary literature the shoulders are used. The integration is identical.



The stanchions for the rear railing come from the etched parts set plate 4, the handrail from Evergreen or from the cannibalised handrail of the waist. The net is either included with board 4 or is supplied with the topps. The eyebolts for the mast caps are from board 7 or have to be made from wire yourself.



# **Resin 10-12 Deadeyes, Hearts and Blocks**



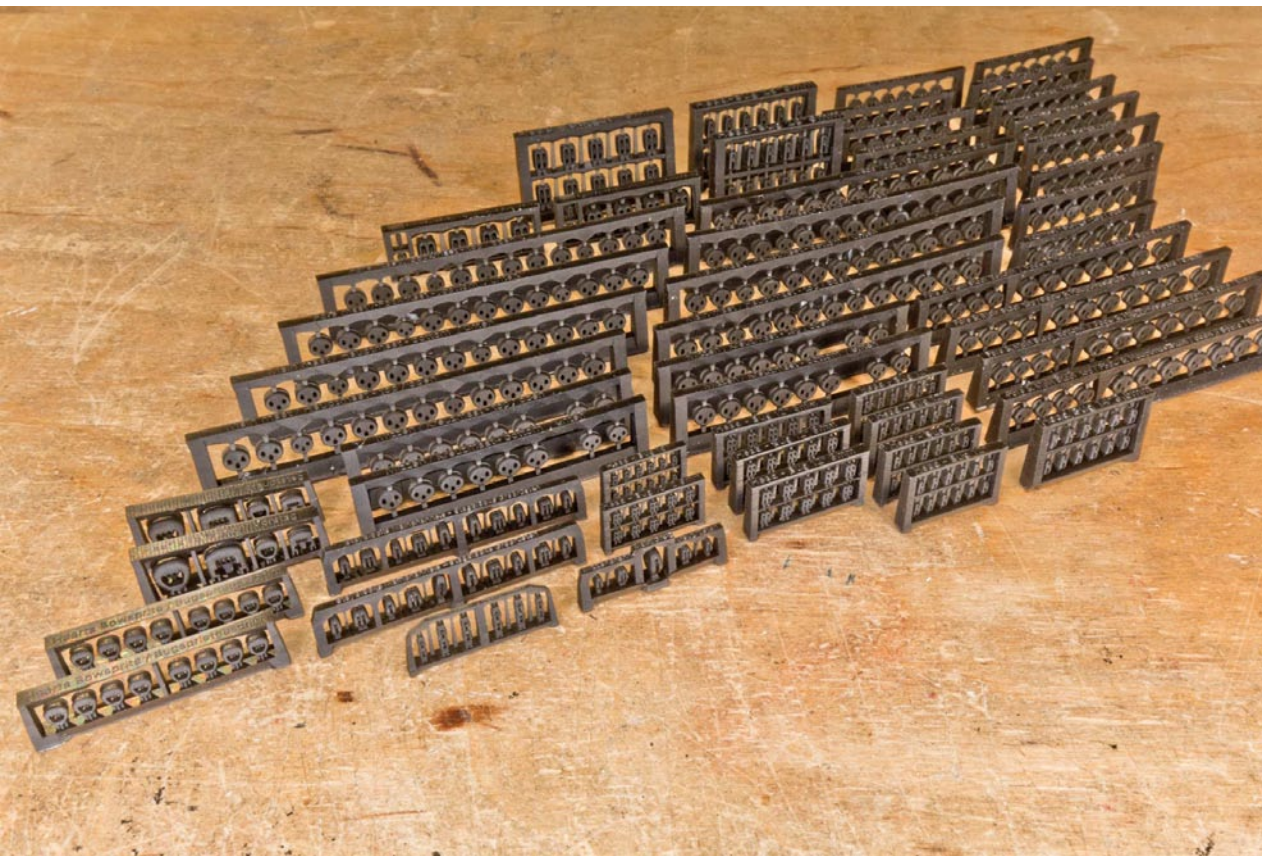
## [Tips & Tricks for Model Makers]

# Blocks and Tackles

There is a three-part set of blocks and other rigging parts for the HMS Victory.

The first is the deadeyes, which are precisely matched to the chains of plate 3. Building on this, there are the standing rigging and the running rigging.

The blocks are grouped according to location. There is also a table for use based on Anatomy of the Ship AOTS by McKay.



Note: The sprues/supports are designed to be as thin as possible. Accordingly, individual blocks may come loose during printing, washing or packing, especially smaller ones. This is not a problem, as all blocks and especially the small ones have more than enough replacement on the frame.



## [Tips & Tricks for Model Makers]

# The Spreadsheet

Your Excel spreadsheet is supplied for the use of dead eyes, hearts and blocks. The numbering of the individual positions is based on AOTS Anatomy of the Ship by McKay. This data has been checked and corrected in some places. The AOTS also contains the belaying plans.

The table contains four sheets:

- Sheet 1 is the standing rigging
- Sheet 2 is the running rigging
- Sheet 3 is other ropes and rigging
- Sheet 4 is for rope makers.

*Number AOTS* ① refers to the designation there. The English and German *names* ② are given for each position.

Next comes the *original circumference* ③ of the corresponding rope. The *conversion to diameter in 1:100* ④ is located behind this.

The column *Blocks* ⑤ refers to the type of blocks. An assignment of the abbreviations ⑥ can be found at the bottom of the respective chart.

The rows *Sets* and *Number* ⑦ give the required *Total* ⑧ of corresponding blocks. *Size in inches* is the original size ⑨, *mm in 1:100* ⑩ is the converted value and the *rounded* column ⑪ contains the blocks supplied in 0.5 mm increments.

The *Notes* ⑫ column is followed by the *original length in fathoms* ⑬ and the *conversion of the lengths in mm 1:100* ⑭.

**Attention!** The rope lengths are only a guide and must be checked by each model builder himself! It should also be taken into account that half of the ropes have the total rope length measured, i.e. that which hangs on the bits and belaying points. These lengths are traditionally faked by the model builder and hung over the nails afterwards.

Note: All values are based on my current research. I would be grateful for any additions, comments and corrections.

	Number/ Nummer McKay	Name en	Name De	Circumfer. in Inch, Umfang in Zoll	Conversion Umrechnung Ø mm 1:100	Blocks	Sets	Quantity per Anzahl pro Set	Total Blocks	Size in Inch Größe in Zoll	mm in 1:100	Round ed/ Ge- rundet	Notes/Hinweise	Length in fathoms/ Länge in Faden	Conversion Umrechnung mm 1:100
Bowsprit Bugspriet	①	②	②	③	④	⑤	⑦	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭
	1	Gammoning Seizing	Wuhling Bindsel	8	0,64		2						9 Turns per Set, 9 Schlingungen	187	337
	2	Shrouds Collar Seizing Lashing Lanyard	Backstag Kragen Bindsel Lasching/Zurrung Taljereep	8 6,5 1 2 3,5	0,64 0,52 0,08 0,16 0,28	H1 ⑥	2	4	8	14	3,6	4	Iron Hooks	39 12 18 13 22	70 22 32 23 40
	3	Bobstay Collar Seizing Lashing Lanyard	Wasserstag Kragen Bindsel Lasching/Zurrung Taljereep	8 8,5 1,5 2 4	0,64 0,68 0,12 0,16 0,32	H1	3	2	6	14	3,6	4	Iron Hooks	36 9 35 10 20	



## [Tips & Tricks for Model Makers]

# Preparing the Ropes

A beautiful rigging also requires a fine differentiation of the ropes used.

Of course, it is best to use self-made ropes. I use 8/0 and 6/0 fly fishing line and a home-made rope walk made from Fischertechnik. You can find lots of instructions online, from Lego models to professional machines.

I also like to mix different shades of color when laying, as ropes on real ships can also be found in very different colors. This also allows the ropes to be produced to the tenth of a millimeter according to specifications.

If purchased ropes are used, the supplier should be able to provide as many different sizes as possible. The required diameters can be found in column 4. Please find a good balance in between needed sizes and available ones.

Classic dressings are possible on a scale of 1:100, but they are very difficult and usually not true to size. That's why I use White Glue, which is applied in approx. 3 layers and then painted black. In my opinion, the visual appearance and the differentiation from normal ropes is good enough for thin ropes and slings.

For exposed ropes such as stays, you can use fly fishing thread 3/0 to dress the rope on the dress machine.



Picture 1 on the right dressed with fly fishing thread and coated with White Glue and picture 2 with color.



For eyes like on mice, I pinch off the rope at an acute angle with a side pincher, bend it, glue it in place with superglue and cover the cut with fly fishing yarn. Due to its fibrous nature, it does not build up like normal thread.

Forestay and preventer forestay, one on the left and one on the right.





## [Tips & Tricks for Model Makers]

# Coloring of Blocks

Depending on taste and desired style, the blocks still need to be painted. Black resin was chosen as the base color to avoid bright flashes.

Traditionally, the dead eyes are painted black, the other hearts and blocks are painted a wood tone.

I recommend always painting the blocks on the frame.

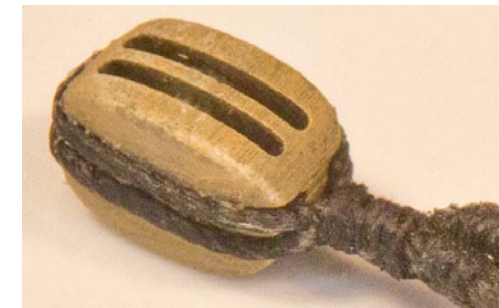
I choose a medium-dark wood tone as the base color, which I apply several times in a very thin layer, always blowing out the holes. The thin paint prevents the holes from closing up and the paint can also get into the grooves on the side.

If the base tone is as desired, then a lighter wood tone is applied as a spot color using dry brushing. This makes the color a little more uneven, a lively wood appearance is achieved and the recesses also remain free and darker, simulating depth.

If necessary, you can dab out a little more before the stropping.



Images from pre-production. The color nuances can be seen beautifully in the close-ups.





## [Tips & Tricks for Model Makers]

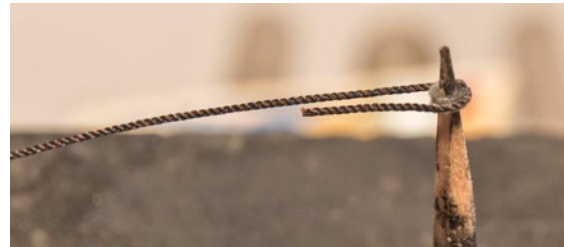
# Stroping in Thimbles



The thimbles are available in 3 sizes: 1.5 mm, 1.75 mm and 2 mm. The middle size is most commonly used.



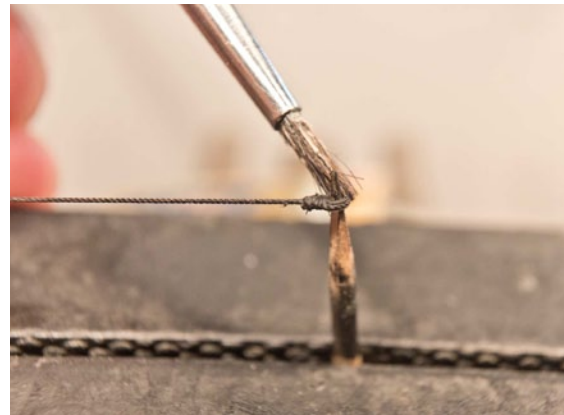
As usual, thread the thimble onto a toothpick, apply some glue to the back - or the thread - and hang the thread around the back of the thimble and pull the ends to the front, tie them together with fly fishing yarn and knot them alternately at the top and bottom.



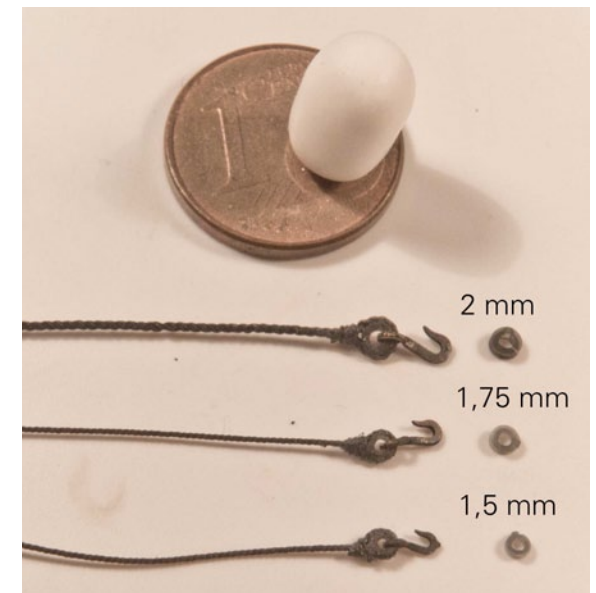
Shorten the free end ...



... and dab over any glue residue with a little black paint.



Then cut open a suitable hook and press it back together in the thimble.





## [Tips & Tricks for Model Makers]

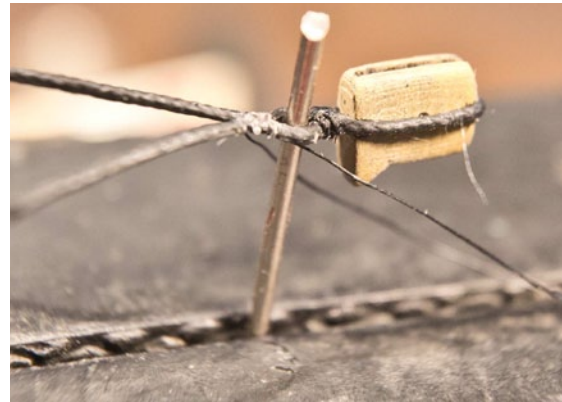
# Butluy Stays

Please insert the gammoning in early as preparation, it will be much more difficult later - guess how I know that. Ideally 9-11 turns, the area between the supports should be filled in.



Several sets are included for the stays: for the main stay, the forestay and the bowsprit stays and shrouds. The first two are not identical, so please note the labeling!

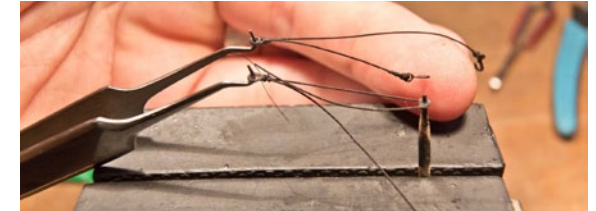
First, the shoulder block of the tack is tied in. This strop was dressed, for which I would again recommend the white glue option. This is bound as already described: On a toothpick, glue the strop from the back, pull it to the front and knot it there.



Then it is repositioned onto a piece of wire with the diameter of the tip of the boomkin antenna that is used as a rigging aid. This eyelet is later slipped over the tip of the antenna. A thimble is then placed in front of it.

Place the required eyebolts on the hull, slip the shoulder block over the tip, bend the thimble on the underside to the required angle and determine the lengths to the eyebolts. Note the length of the seizing between the thimble on the block and the thimble of the boomkin stay, this also serves to compensate for the length.

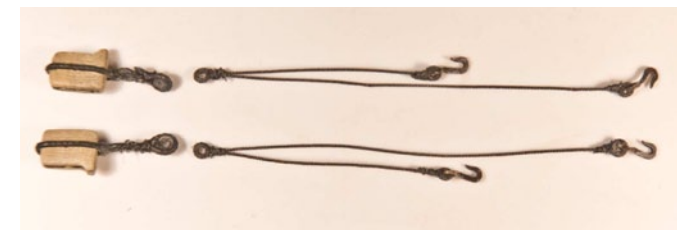
I made a small jig to work accurately.



First I tie the thimble in the middle, then I put the thimble on the hull side on a toothpick and can easily adjust the length. The first finished side is pinned in place and serves as a guide for the other side.



Then the hooks have to be attached to the thimbles on the hull side and the binding pulled in between the shroud and shoulder block. Finished.





## [Tips & Tricks for Model Makers]

# Preparation of the Stays

The kit comes with 4 sets of hearts: for the main and main preventer stay, for the fore and fore preventer stay, and 2 sets for the hearts of the bowsprit shrouds and stays.

The first two differ in shape, so please do not mix them up! Please note the labeling.

The collar of the stay was always dressed, again white glue and black paint.



The mainstay and forestay were wormed along their entire length, i.e. a thin rope in each of the three grooves. Ideally, there should be a small color difference between stay and yarn so that they are visible.

The best way to do this is on a dressing machine; there are also lots of DIY constructions on the internet.



It is important that the stay is firmly beaten so that the yarn does not push it open. Occasionally secure it with a drop of glue.



The two preventer stays were not wormed along their length.

However, all these stays were fully dressed in the area of the masthead, the mice and the hearts. For this I used 3/0 fly fishing yarn, which doesn't build up, followed by some white glue and paint.



For the eyes of the mice, I pinch off the rope at an acute angle with a side pincher, bend it, glue it in place with superglue and dress the cut. The mouse is simply wrapped with yarn until the shape fits.

Forestay and preventer fore stay, one on the left and one on the right. They lie over the shrouds.

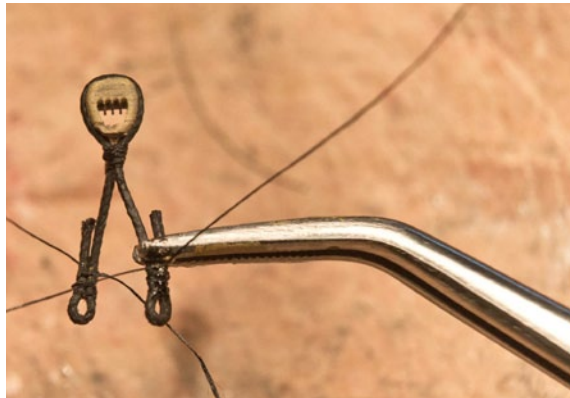




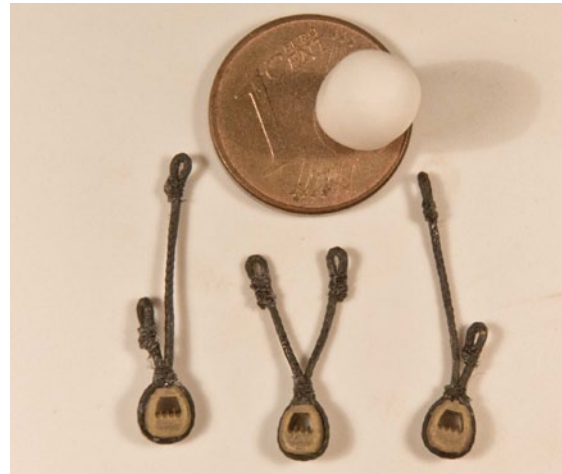
## [Tips & Tricks for Model Makers]

# Open Heart Surgery

The hearts for the bowsprit shrouds and stays are basically all the same, only the length of the legs needs to be taken into account, depending on which side they point to.



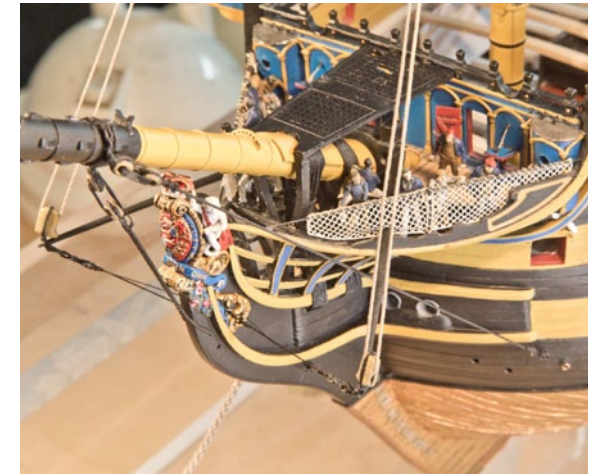
I also use an jig for this. These are the 3 shapes.



The collars are seized together at the top. This is best done with a needle.



The shrouds and stays are also lined with white glue.

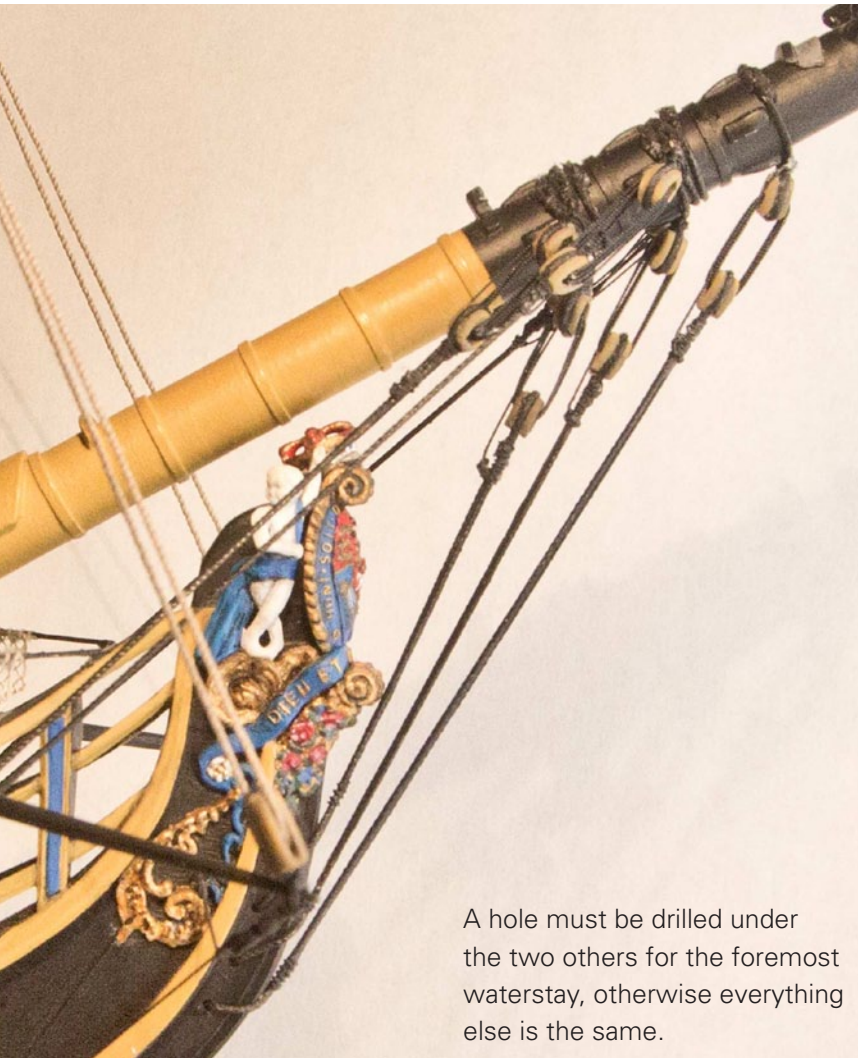


Here is the first layer of the hearts, the same goes for the other two layers.

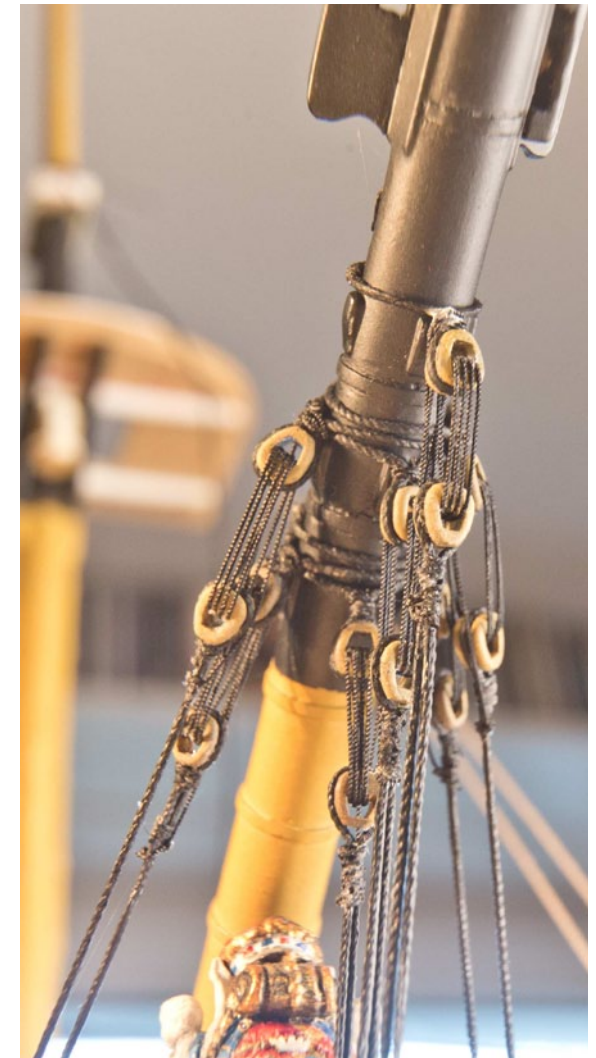


[Tips & Tricks for Model Makers]

# The Bowsprit Stays and Shrouds



A hole must be drilled under the two others for the foremost waterstay, otherwise everything else is the same.



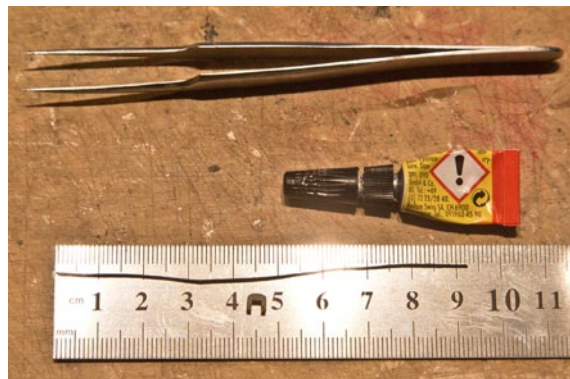


## [Tips & Tricks for Model Makers]

# Hearts Fore- and Preventer Forestay

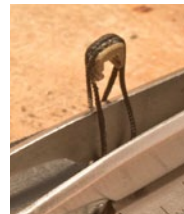
You can recognize the hearts for the fore and preventer fore stay by the fact that on the bowsprit side it has a double groove.

First you have to determine the length of the collar, in my case it was about 9,5 cm with both hearts. This must be checked on your own model.



**Please note that the jib boom still needs the space to slip underneath! ①**

Then glue the collar in the middle of the heart in a keep and close the circle to create a long loop.



This loop is then folded in half and glued in the other groove so that the collar has a loop of the same length on the left and right.

The collars are tied to the underside of the bowsprit. The heart of the stay can then be tied in and the lanyard fitted.



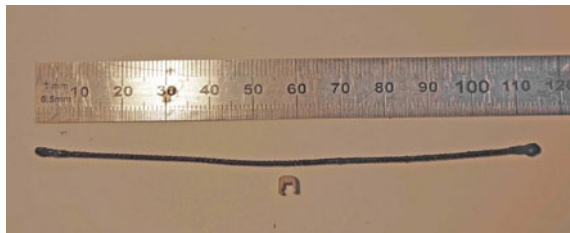


## [Tips & Tricks for Model Makers]

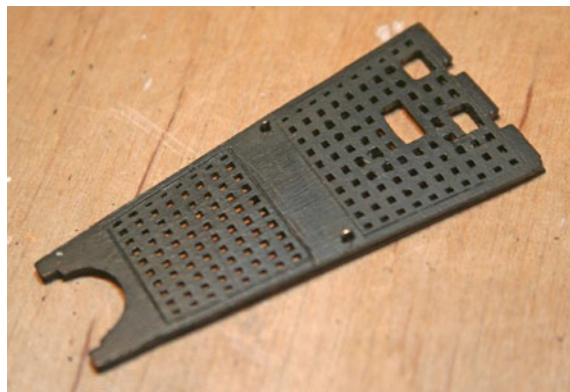
# Hearts Main- and Preventer Mainstay

You can identify the hearts for the main and main bowsprit by the fact that the bowsprit side has a single groove.

First of all, the length of the collar must be determined by pulling a dummy thread through it and measuring it. Both collars also have different lengths!



As both stays are led asymmetrically past the starboard side of the foremast, the hole pattern of the mariner walk must also be adapted. To do this, cut out carefully the unnecessary crosses with a sharp scalpel and used them to patch the other holes.



The collar of the mainstay has to pass through the Mariners Walk, then through the timber heads, then down to the hole in the knee of the stem and back up again. This guide has several sharp corners and dressed ropes are stiff and there is not much air in the through holes! Please work without force, pull the respective stay with an auxiliary line and use tweezers at the back to ensure that it does not get caught on any edges. If necessary, carefully widen the holes.

Only now can the stay's second eye be tied, on the side just behind the heart.

The collar of the main preventer stay is a little easier: you can prepare both eyes, making sure that the second one still fits through the passage of the mariner walk.

Then it only has to be passed through the mariner's walk, over the timber heads and then tied together under the bowsprit aft of the aft gammoning.

For this reason, the seizings should be of sufficient length so that the eyes can be easily tied in and pulled under the bowsprit.



For the lanyards, it is advisable to always secure it briefly with glue after 1 to 2 turns.



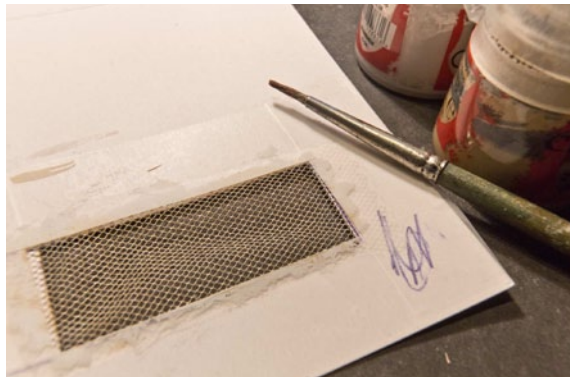


## [Tips & Tricks for Model Makers]

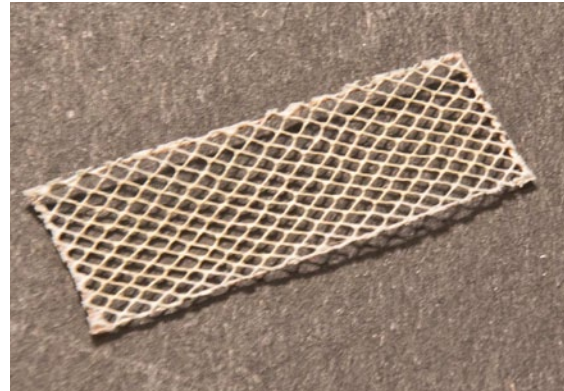
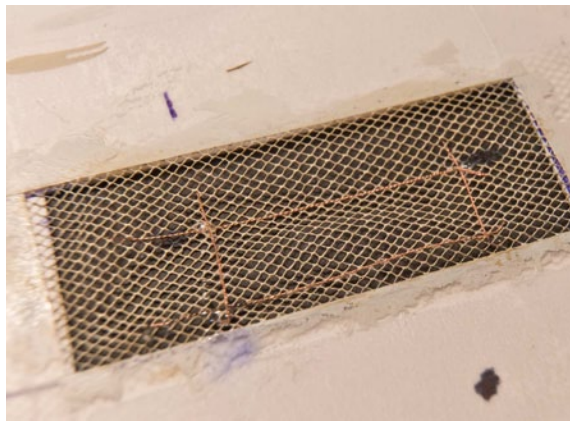
# Staysail Netting and Man Ropes

A small net was used so that the forestay sail could be recovered safely and not come to rest directly on the bees.

To do this, the net material of the hammock holder is glued into a cardboard template and painted with a mixture of dirty white paints. This gives a slightly better texture and color.

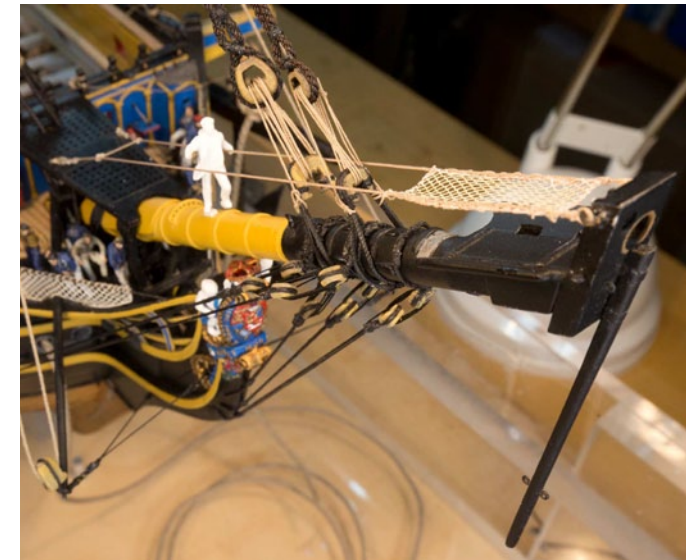
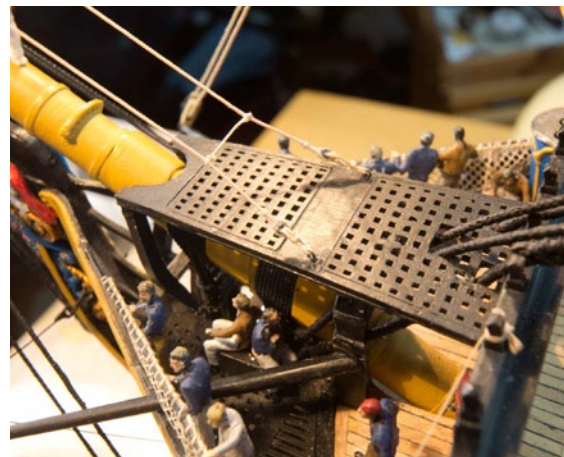


Then glue on a thin wire in the correct dimensions, paint it and cut it out.



Then fasten the two man ropes between the bow head and the mariner's walk. Contrary to the literature, the eyes for the man ropes on the bowsprit cap are better placed on the back side and not on the lateral side, then they do not collide with the stays of the violin.

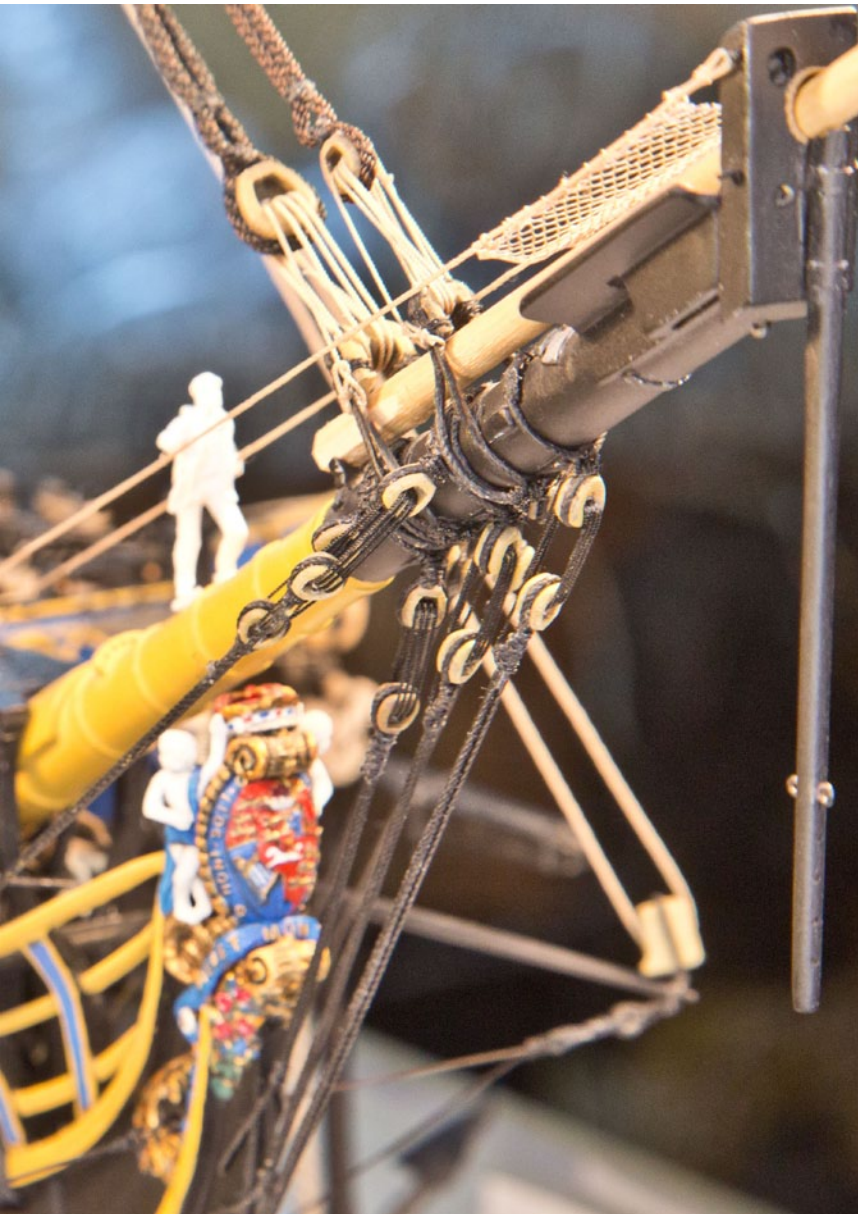
Finally, sew the net to the man ropes. Contrary to much of the new literature, these had no knots like the foot ropes of the jib.





## [Tips & Tricks for Model Makers]

# Gallery Head Gear



On the left you can see how the jib boom passes under the forestay hearts.

In the picture below, the shrouds that usually lie under the stays are still missing. You can also see the chain hangers of the yard, which were used in wartime. Alternatively, a rope hanger can be used, hanging over the grooves of the mast cap.

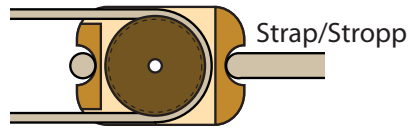




## [Tips & Tricks for Model Makers]

# Tie in small Blocks: Double Blocks

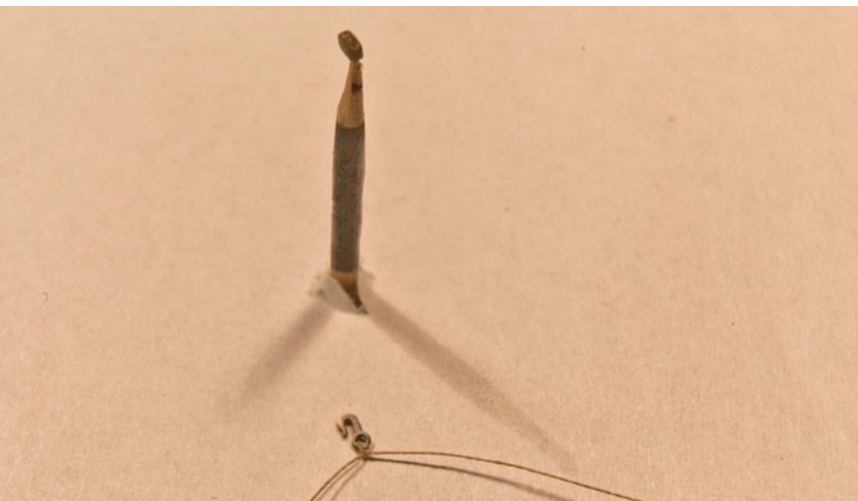
Takel/Tackle



Holder/Halter

Needle/Toothpick  
Nadel/Zahnstocher

First you have to find out how the strop has to sit on the block, i.e. which side the through hole has to be on. As with the correct block, the through-hole side for the rope is larger on the printed blocks. This is the correct hole for the mount.



This block combination is intended for guns. They therefore have a hook at each end of the strop. A hook from board 7 is tied in with a normal double knot. I used normal fil à gants here for test purposes.

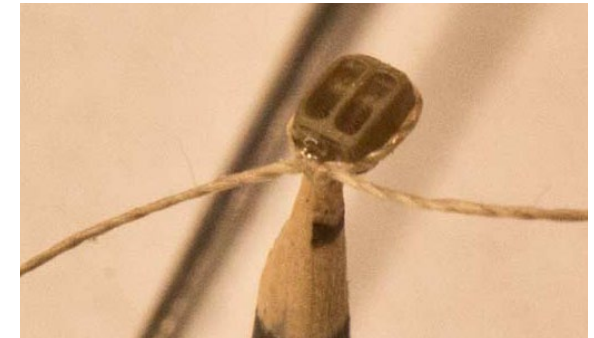
First the double block. Here the hook is on the side of the through hole. To make it easier to continue working, the block is turned so that the needed side of the block is facing away / at the back.

The yarn is coated with a drop of superglue across the width of the block and pulled against the block from behind to position it firmly ...

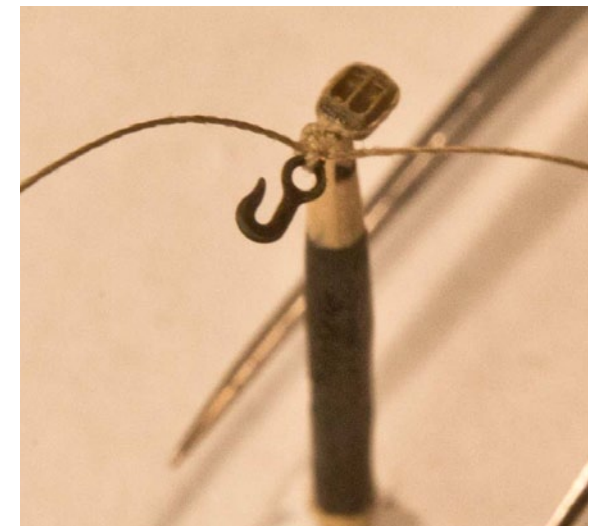


... and the free ends are pulled forward.

There they are tied with a normal knot and secured with some glue.



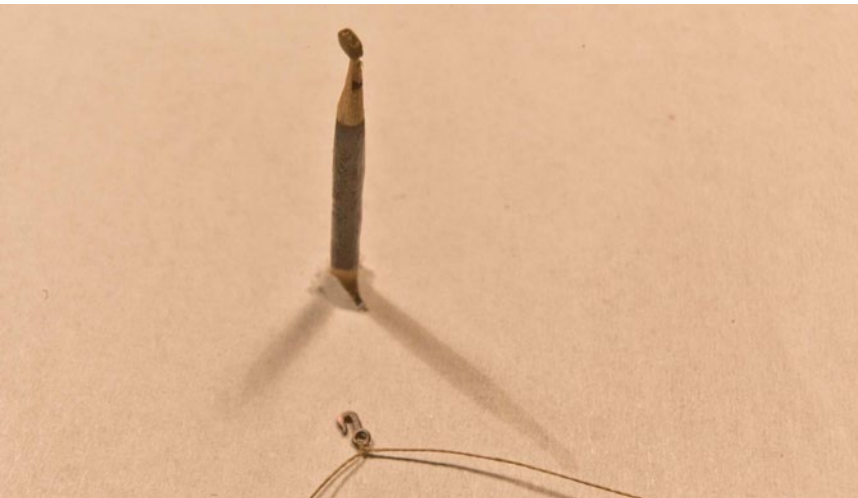
Now tie in the hook and secure with glue.



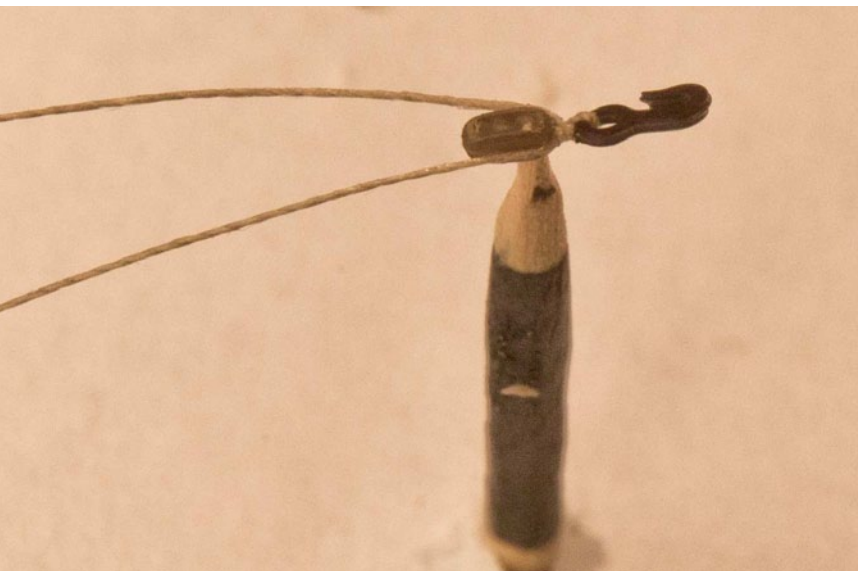


## [Tips & Tricks for Model Makers]

# Tie in small Blocks: Single Blocks



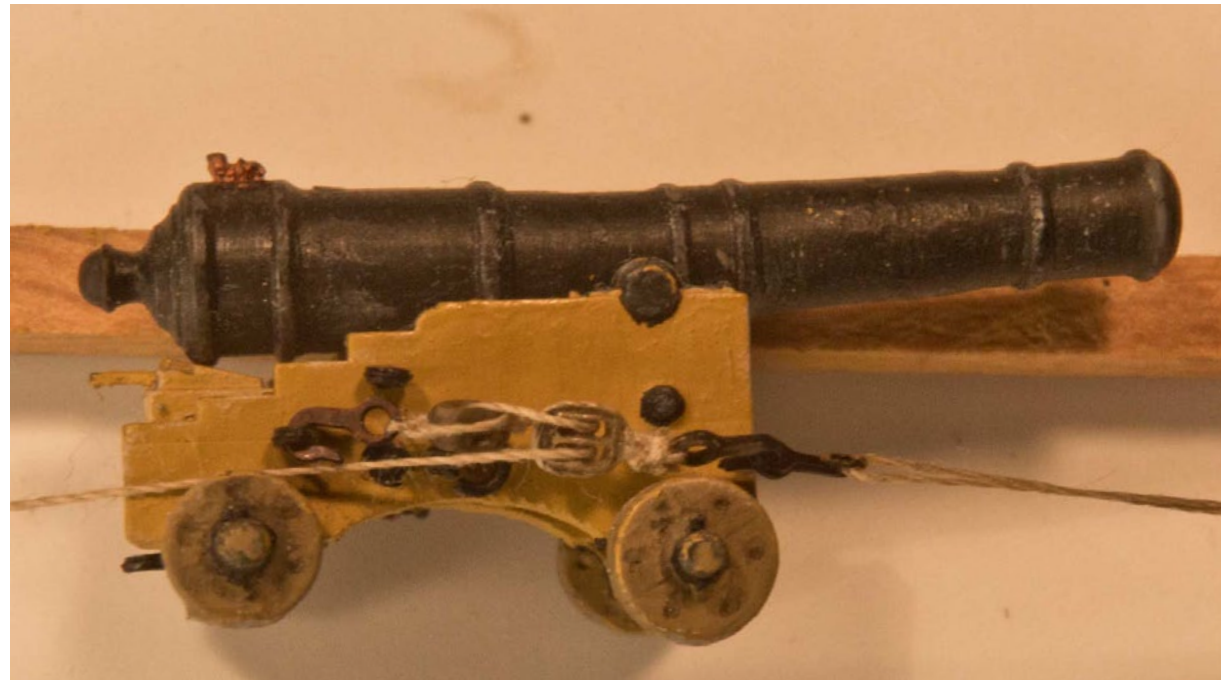
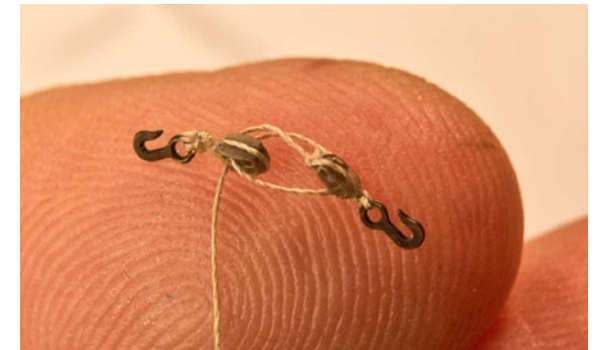
For the single block, first knot in a hook, apply some superglue to the hook and as with the double block ...



... attached to the back with a little superglue and the ends tightened towards the front.

Tie a knot, secure and cut to length.

Now comes the most difficult part in my opinion: the correct run through the tackles so that nothing crosses over :-)





## [Tips & Tricks for Model Makers]

# Stropping in Jeer Blocks 1

Jeer blocks hold the main weight of the large yards and are among the largest blocks on the ship.

The hangers are dressed. Since the lining is both difficult and usually not to scale on this scale, I decided to use a fake version.

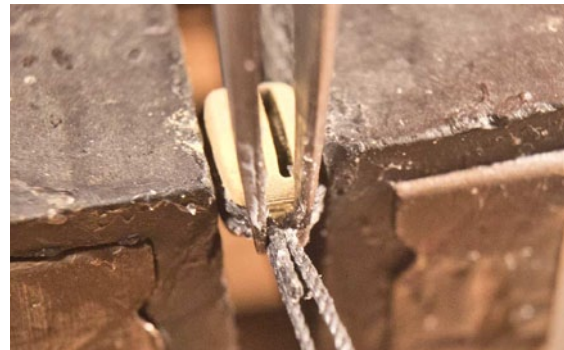
For this, the rope is coated with white glue in 3 passes so that the yarn structure disappears and then painted over with black paint.

The strop is glued into the first groove.

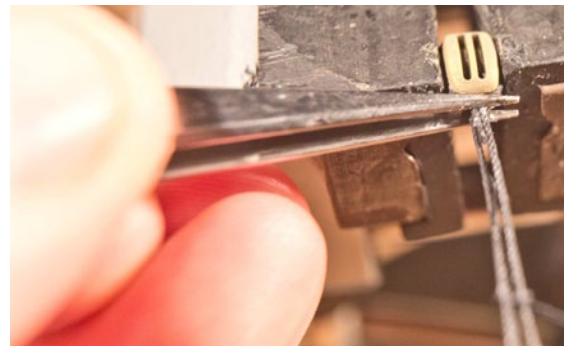


Then place the second one in the other groove so that the short ends are diagonally opposite each other, i.e. one at the top and one at the bottom.

Then place the whole thing in the holder, put a drop of superglue in the middle and ...



... and press together vertically and horizontally with sturdy tweezers.



Then tie a safety knot close to the block.



Then cut the short ends as short as possible.



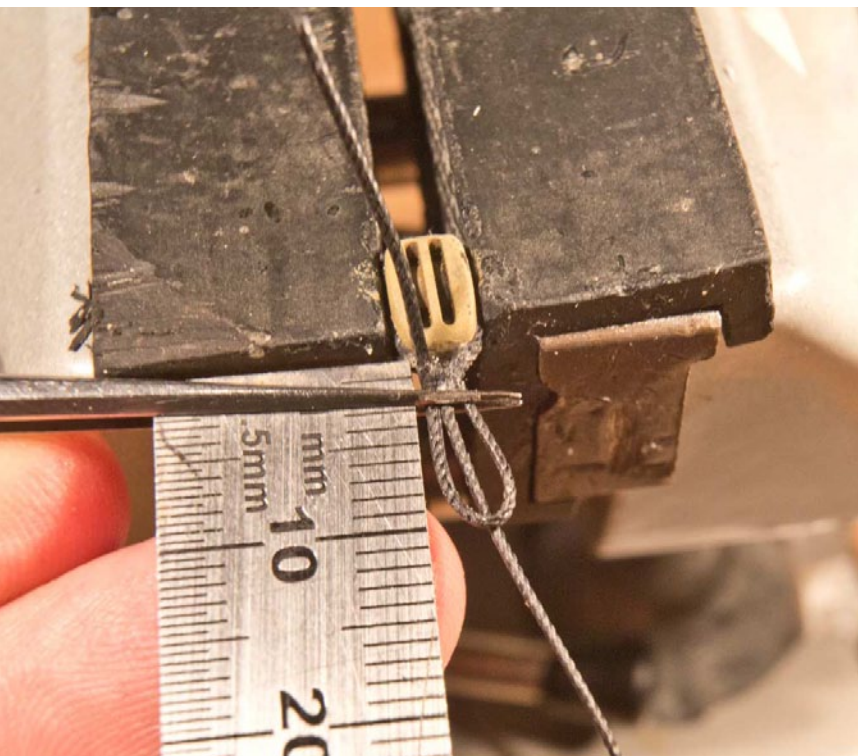


## [Tips & Tricks for Model Makers]

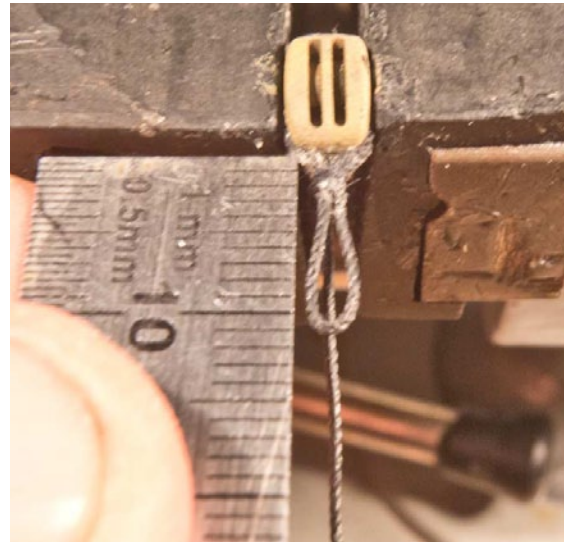
# Stropping in Jeer Blocks 2

The circumference must now be determined on the yard. The block must be centered at the top, with the seizing at the front. The length for the short end at the front and the longer legs at the back must therefore be defined. In the case of my model, it was 10 mm and 16 mm for the main yard.

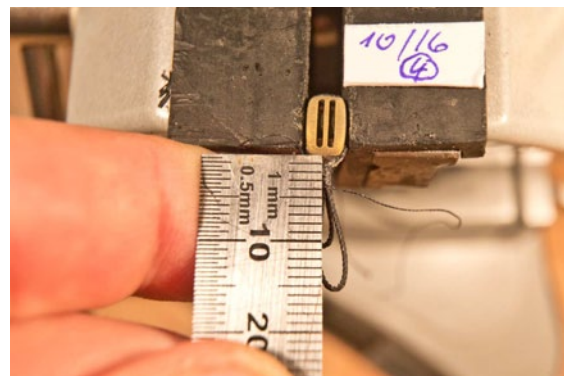
Then set the determined length for the short loop, cut the rope to length, fix it in the middle with a drop of glue and press it together again with the tweezers.



Check length.



Adjust the long loop and proceed in the same way.



The whole thing should then be stable enough to make a test fit at the place of use - it fits here.



Then place a knot for the seizing at the specified distance of 4 mm from the block and then alternate the knots at the top and bottom up to the block. This is quick and, unlike the original winding, nothing slips in between.





## [Tips & Tricks for Model Makers]

# Stropping in Jeer Blocks 3

Use a little black paint to soften the white glue spots ...



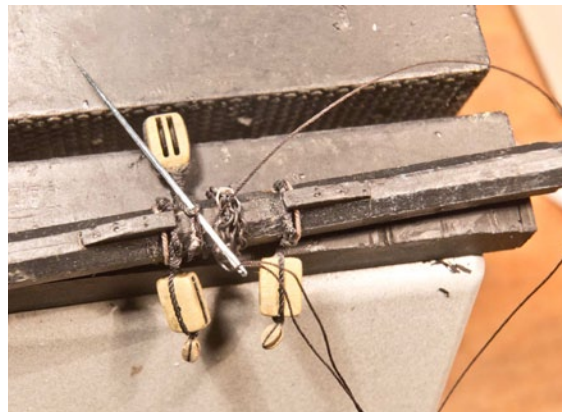
Tied the lanyard in place ...



And then to enjoy the view.



... and put the whole thing in place and the lashing sewn in with a needle. The sheet quarter block on the inside had already found its way to the yard :-)





## [Tips & Tricks for Model Makers]

# Parrels

The kit comes with 3 different types/sizes of parrels:

- 3 sets large with ribs for fore top yard, main top yard, and crossjack
- 4 sets small with ribs for Spritsail topsail yard, Fore topgallant yard, main topgallant yard, and cross topgallant yard
- 1 set for gaff and boom

I apply a first coat of paint still on the support, then the parts are lined up on a suitable wire and painted finally.



The right number of parrels for the yards is important to ensure that the rack sits firmly but can be moved.

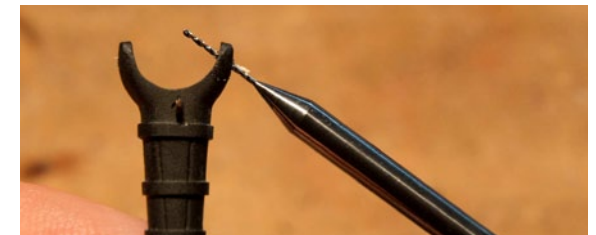
In my experiments, I used 6 beads for the top yards, 5 for the topgallant yards and 8 for the gaff. However, this can vary.



To thread: Tie a loop or thimble on one side (here on the left), then thread on the beads and ribs. Check on the mast how loose it needs to be so that you can get around easily. Then attach the thimble/loop to one side of the yard, pass it around the mast, secure it with a knot and use the long ends (here on the right) to tie it to the yard. The excess length is used to bring the two ends back through the notch in the ribs to the other side and secure them there. Ideally, the rack should run freely. If you wish to have a heavily braced yard, the rack should be laced more loosely to get past the shrouds. Please try it out.



Marking the gaff sail drilling point ...



... drill, thread and check fit.





## More exemplary Blocks



Sister blocks between the shrouds for the lifts and reef rackle pendants, clew garnets for the clew-lines and a long tackle for the foremast stay, which is hooked into the timber heads.

