

NINA, 1492
SCALE: 1/72
Length: 340mm
Width: 100mm
Height: 360mm

HISTORY:

The Nina was a ship in a fleet of Christopher Columbus on his voyage to America. Other ships were flagship Santa Maria and Pinta. The voyage of the Christopher Columbus starts in August 1492 in port Palos de la Frontera. After two months at 12 October sailors saw a land. There are no exact drawings of the Nina but it is supposed that a length of hull of the ship was about 20 meters and displacement about 100tons.

Recommended tool list:

- 1) Modeler's knife or scalpel
- 2) Mini drilling machine
- 3) Drill bits
- 4) Selection of abrasive paper
- 5) Scissors
- 6) Pliers
- 7) Clothes pegs or crocodile clips
- 8) Pencil
- 9) Rule
- 10) Set of needle files
- 12) Sewing machine
- 13) Electric plank bender

Before you begin:

Before you begin to build the model it is necessary with a vengeance read building instructions and plans. Also chronology of assembly steps is necessary to keep. You check if the parts go together before you glue it respectively you make any corrections with sandpaper. During the gluing, painting, lacquering and at work with another chemical materials is necessary well ventilated in your working room. You cut the parts from sheet until actually required for fitting. You cut by knife only in direction off ward your body so that you head to injury risk.

Coloring:

Medieval ships were protected against influence of salt water and woodworms by a mixture of tar and thanks to it the hull of ships was a reddish-brown or brownish-black color. This effect it is possible to get by staining of the wood by dark wood stain. It is recommended to use the wood stain before gluing of the parts. Decks of the ships were probably in naturally color of wood. Anchors and other metal parts were a black color.

Bending of wooden strips:

The Wooden strips will be more flexible if you will boil it in hot water about 10-15 minutes. You can bend the strips along any cylindrical area but ideal is using of special plank bender (it would be best to use electric plank bender). If you need to do very small radius so you must bend it in more steps.

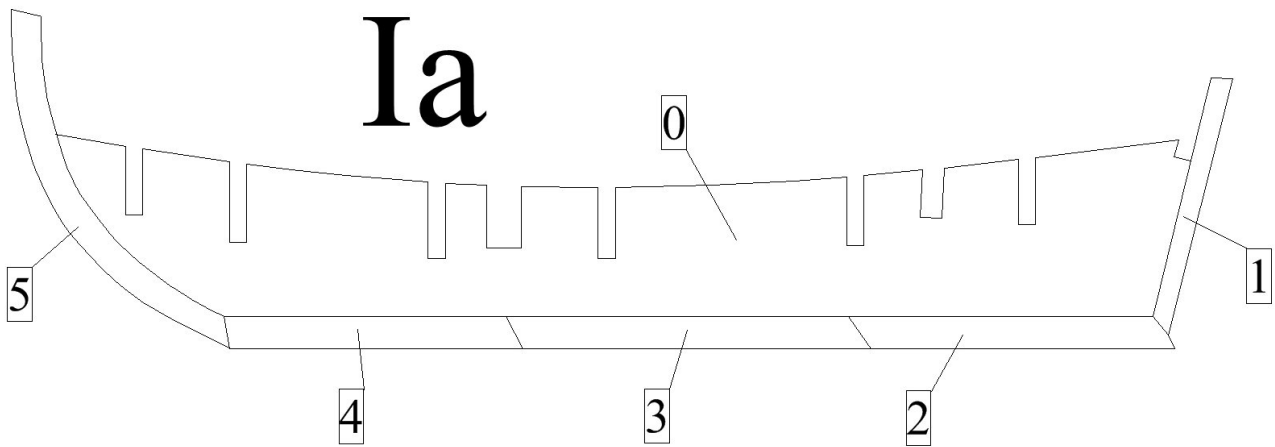
Work with photo etched parts:

Very carefully cut out parts by a pliers or scissors from a sheet. The photo etched parts glue by fast-drying adhesive.

Model building process:

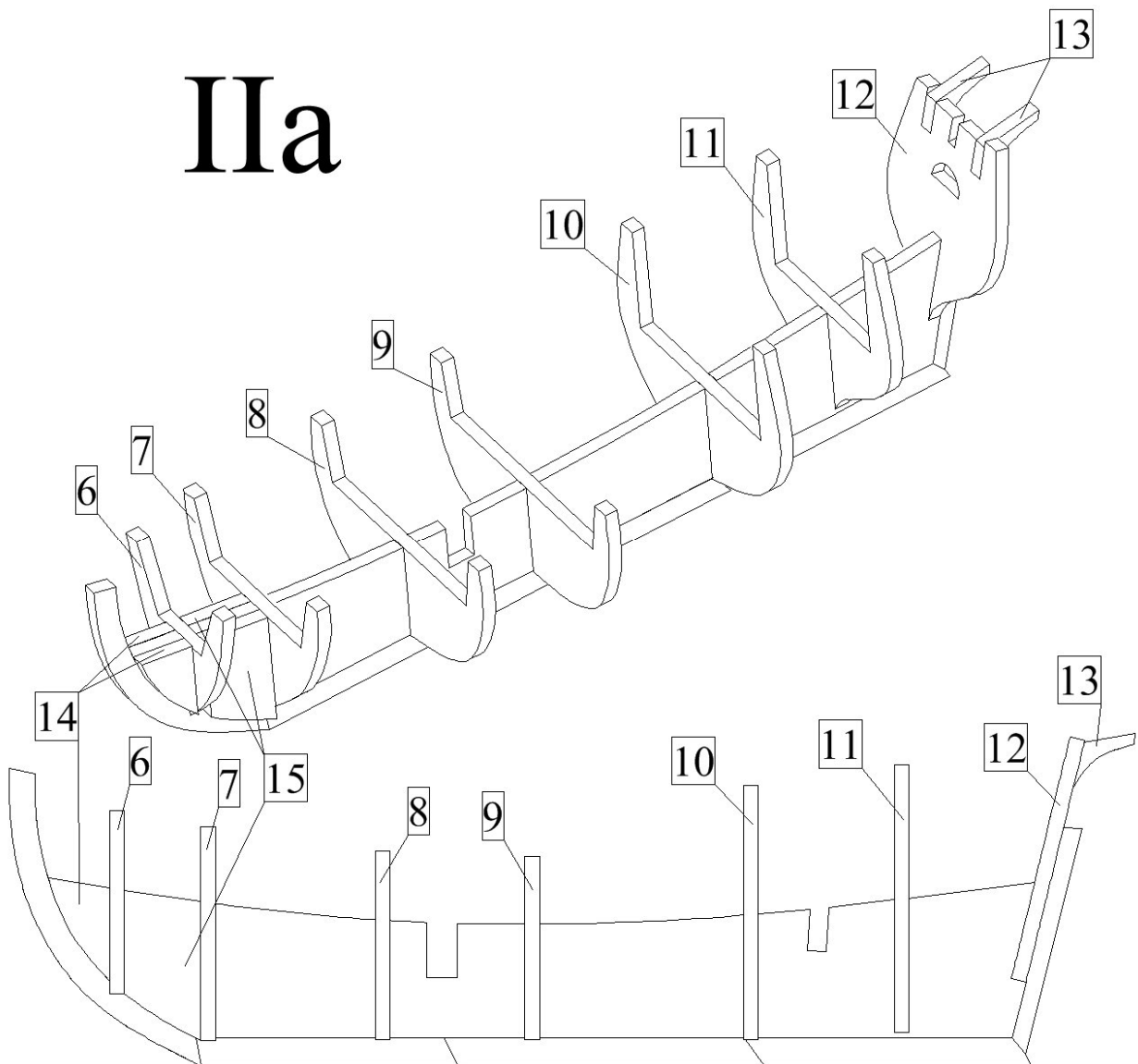
I) Keel:

a) First glue a keel which is compound from parts 0-5.

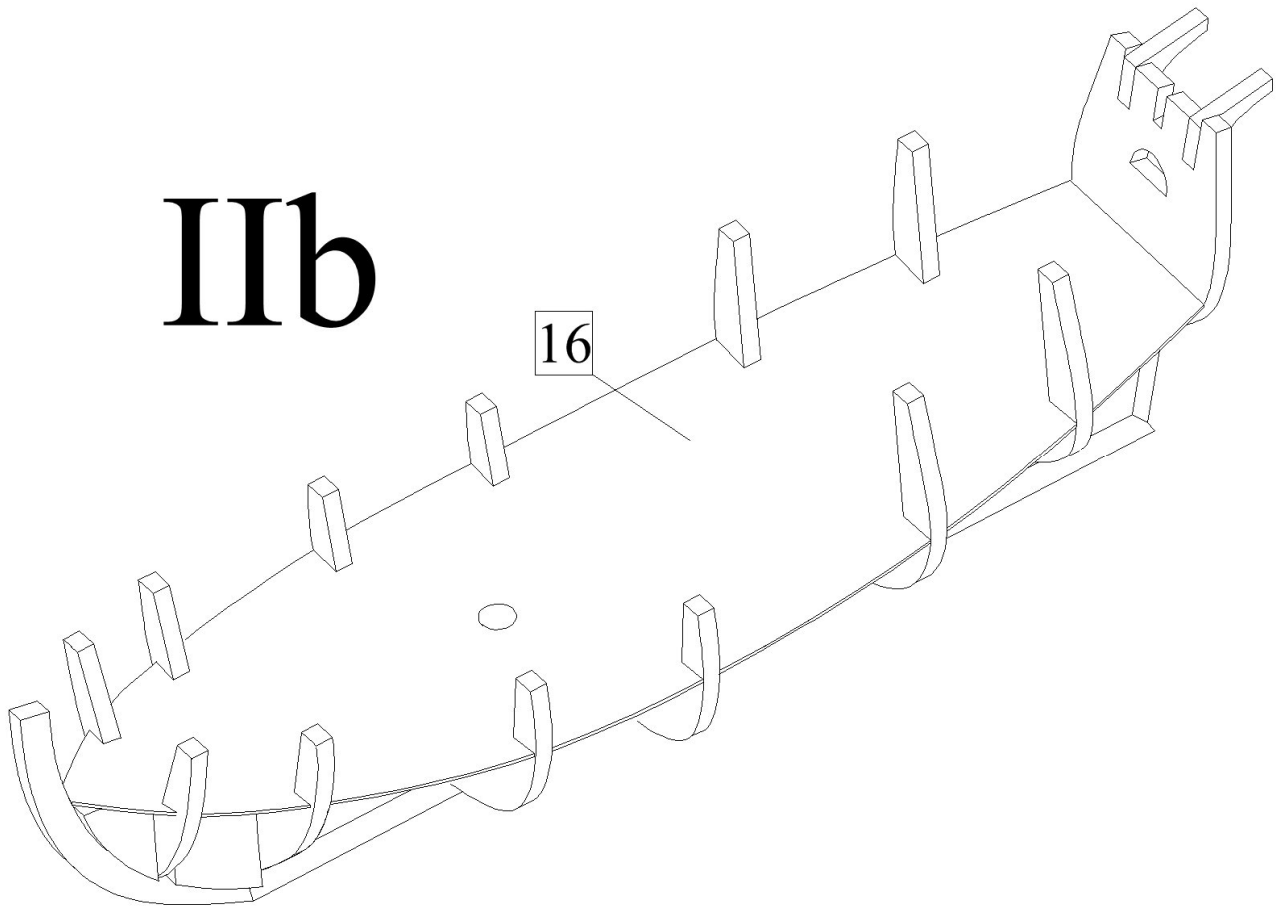


II) Framing of a hull:

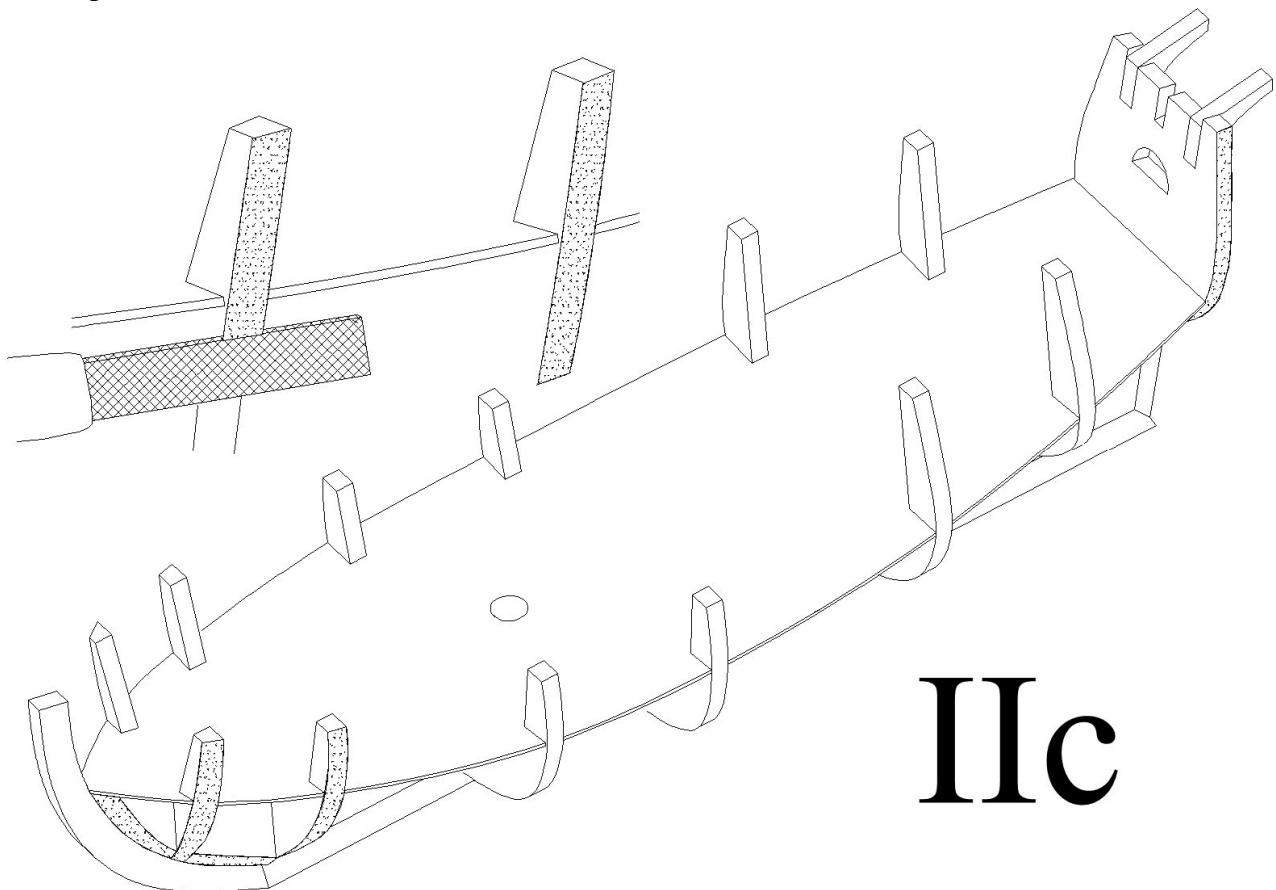
a) First run frames 6-12 to the keel 0 but do not glue them yet! Then glue to the keel reinforcements 14 and 15 to the keel and reinforcements 13 to the frame 12.



b) First run a deck 16 to the frames and then glue all frames, deck and keel together.

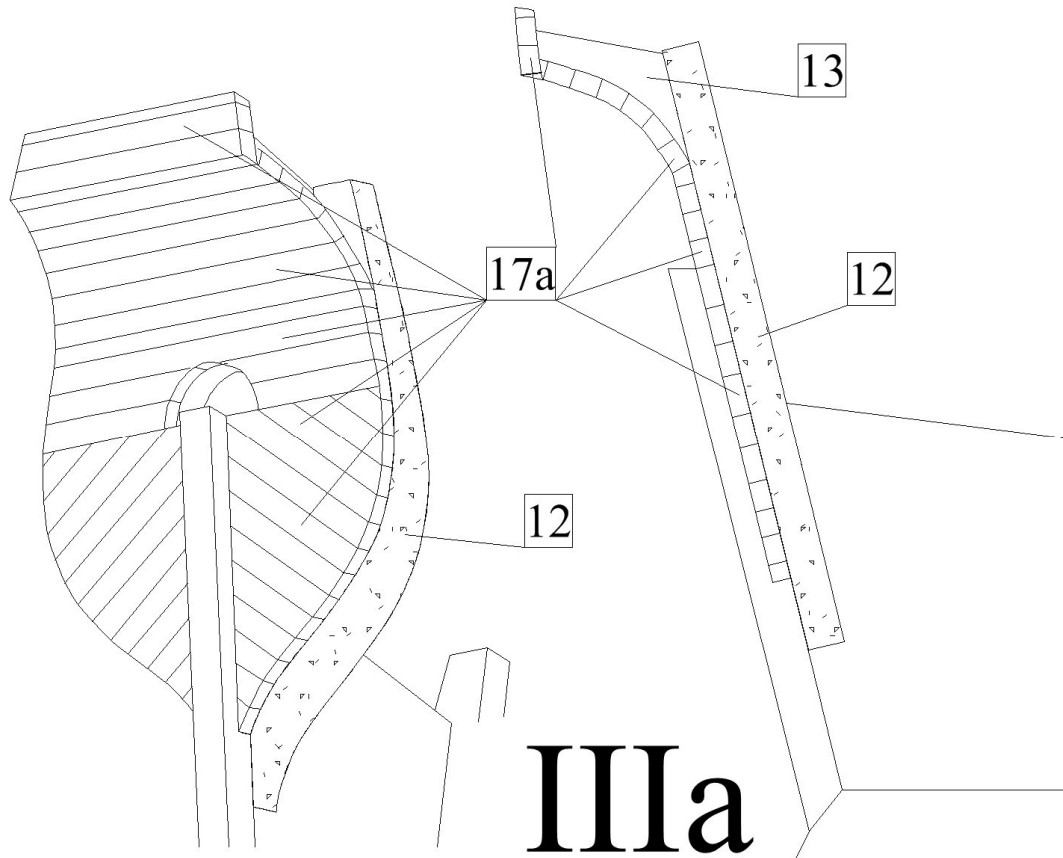


c) Sharpen frames and reinforcement as it is shown below.

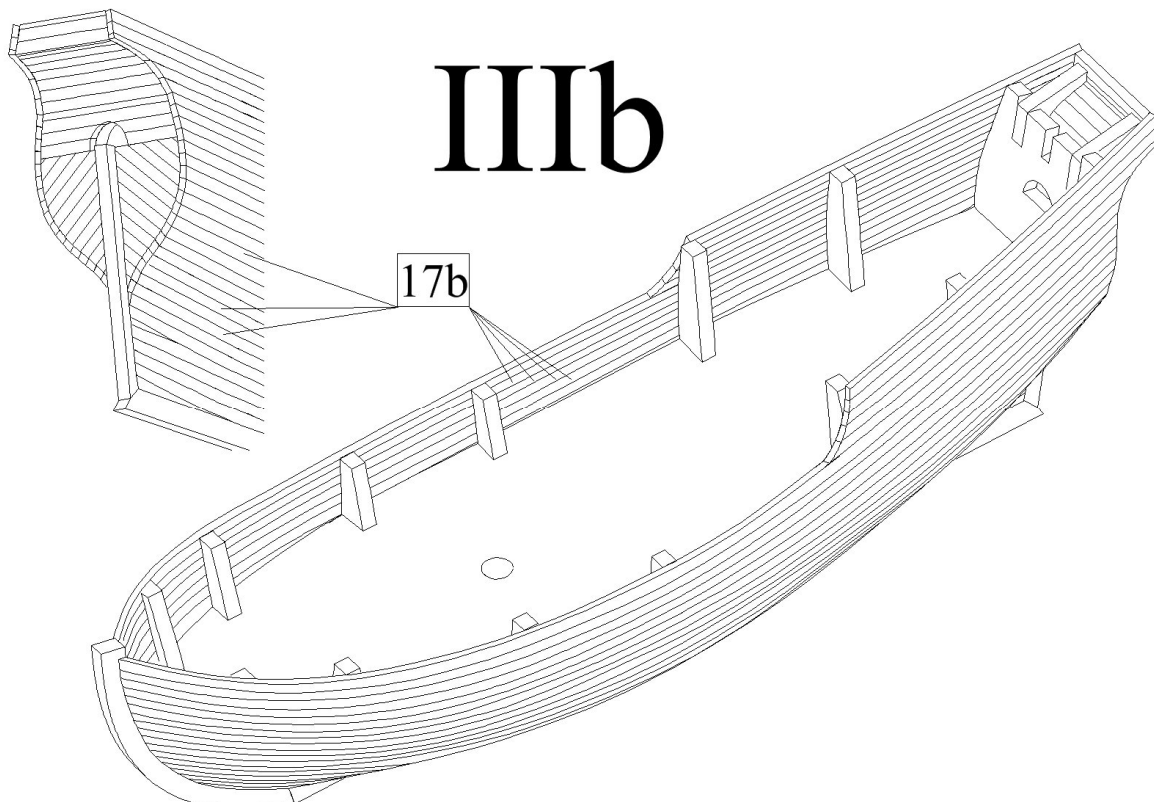


III) Hull planking:

a) First plank a stern of the ship by strips 17a.

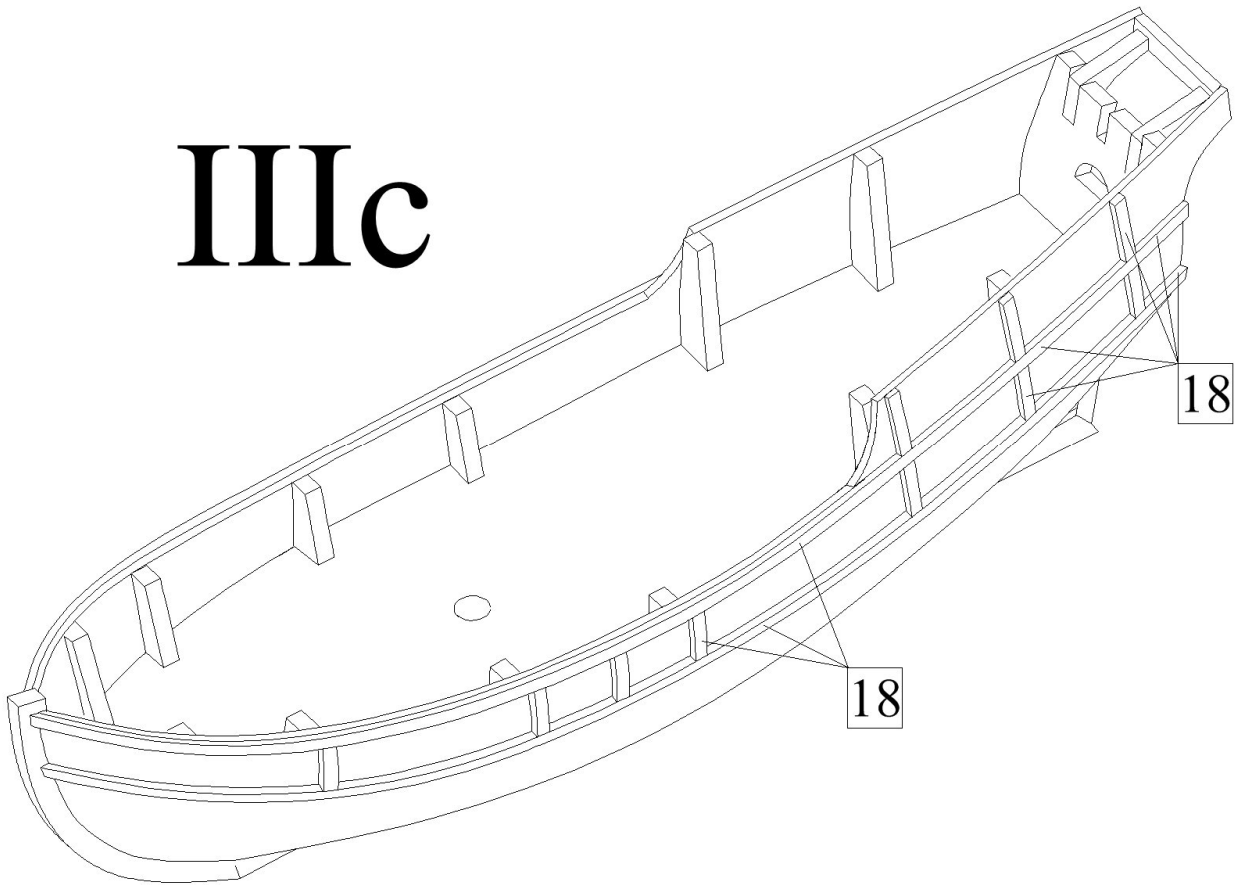


b) Plank a hull of the ship by strips 17b. Before planking bend the strips into required shape (A procedure of the strip bending is described in a start of this document). Start the planking from stem with strips on upper edge of the hull. Then continue with planking to the stern.



c) Glue wales 18 to the sides of the hull.

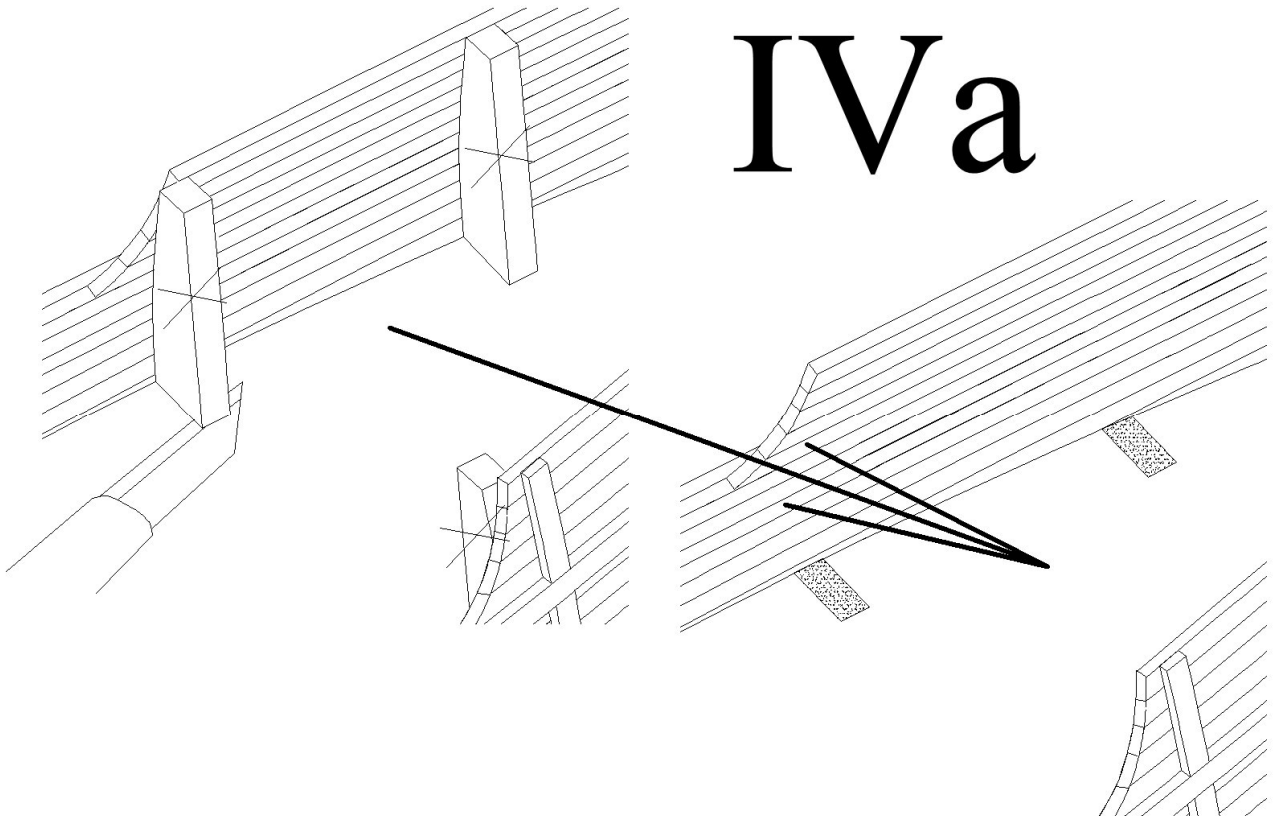
IIIc



IV) Deck:

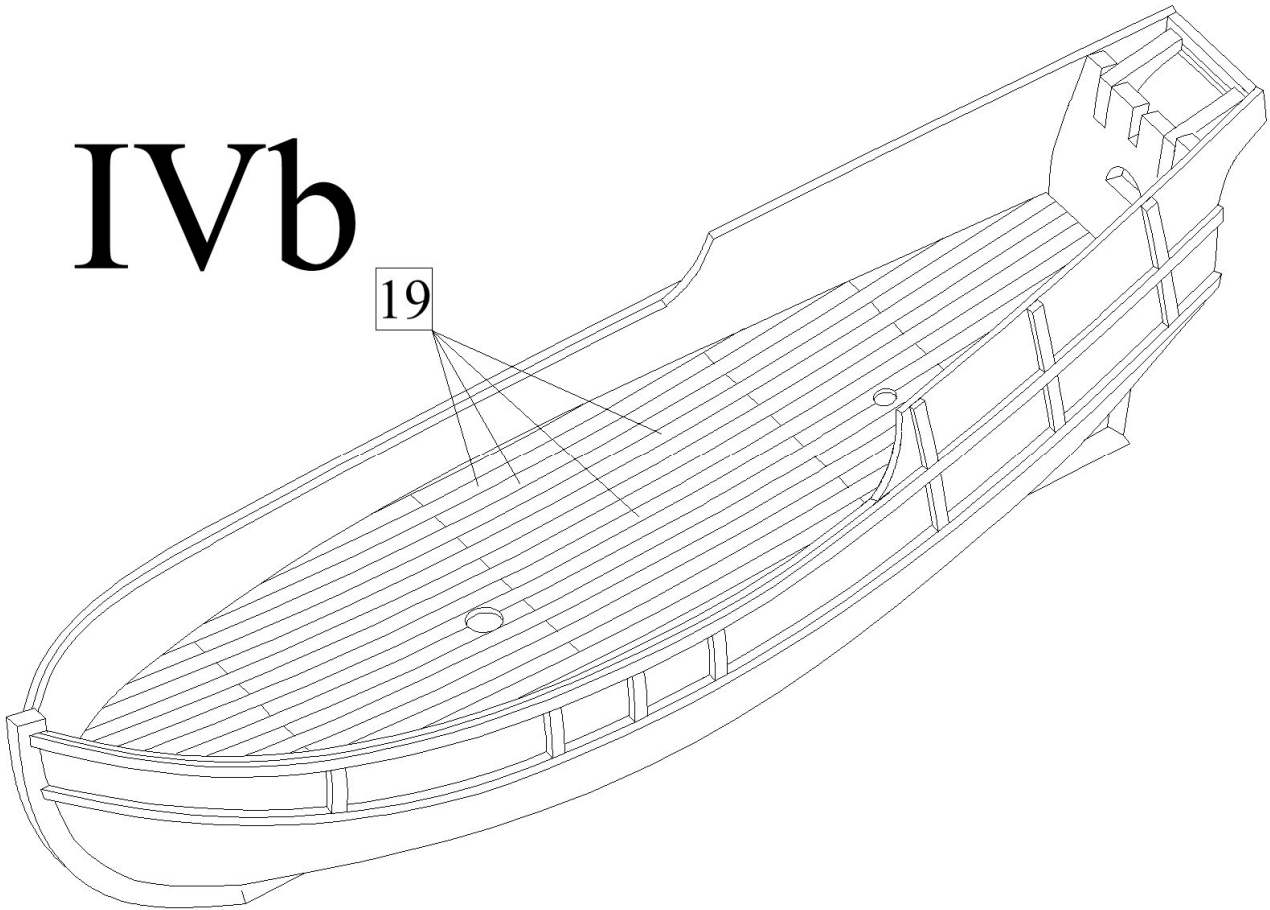
a) First cut out parts of the frames which stick out from the deck and then sand remains of them by a sand paper.

IVa



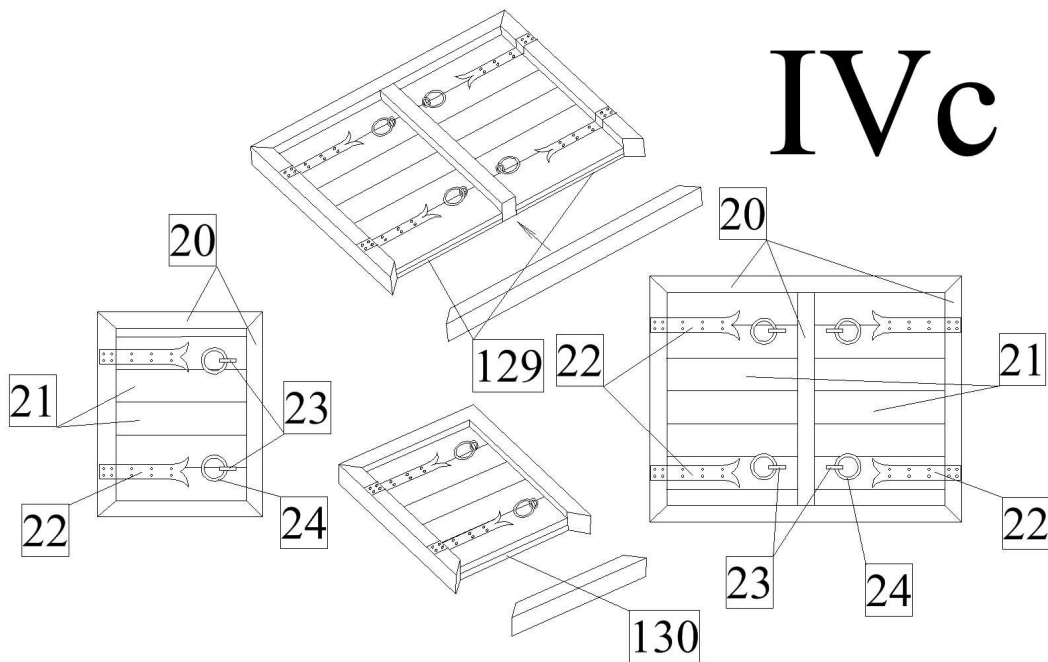
b) Plank the deck by part 19.

IVb

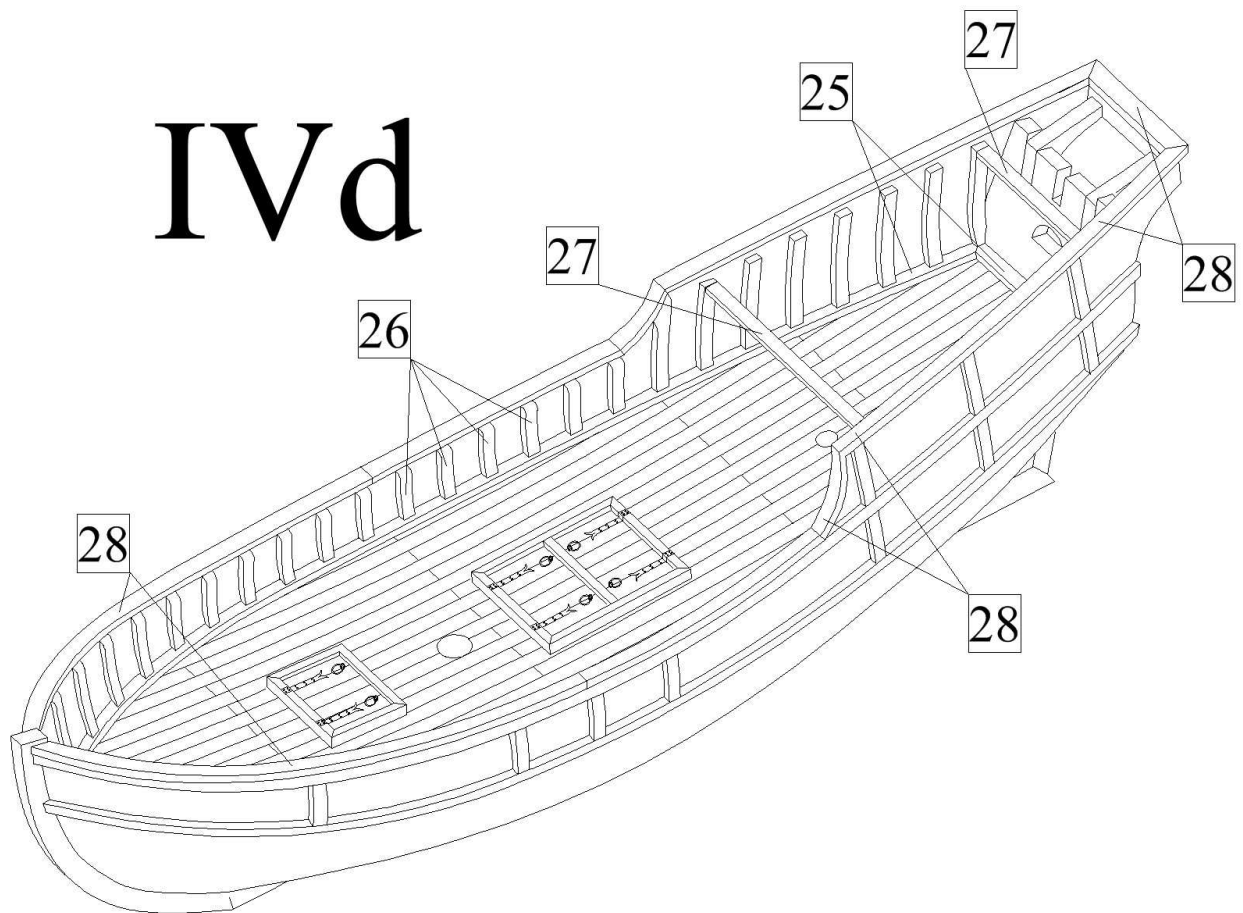


c) Make hatches on the deck. First glue frames of the hatches from parts 20, 129 and 130. Then glue this frames to the deck. Then plank the hatches by strips 21. Finally glue parts 22-24 to the hatches. The hatches are in 1:1 scale shown in the plan 4.

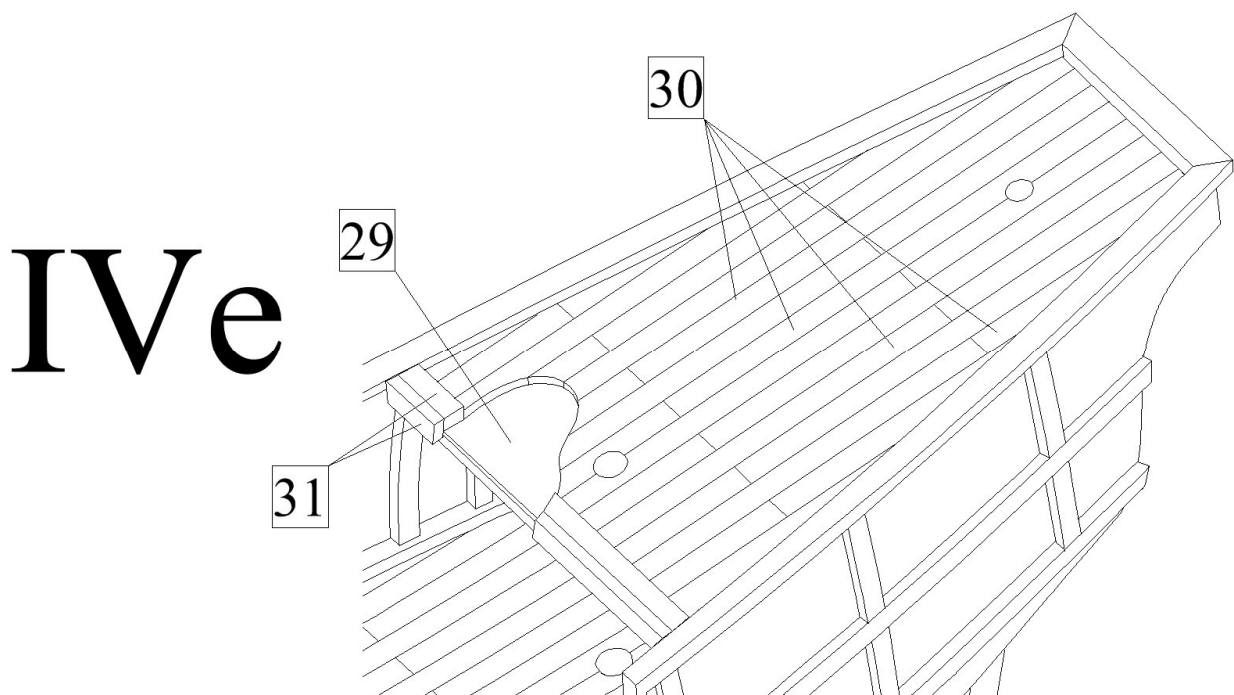
IVc



d) Edge the deck by waterways 25. Then glue to the inner sides of the hull frames 26. Then glue transverse beams 27 to the stern. Finally glue edging 28 to the hull.

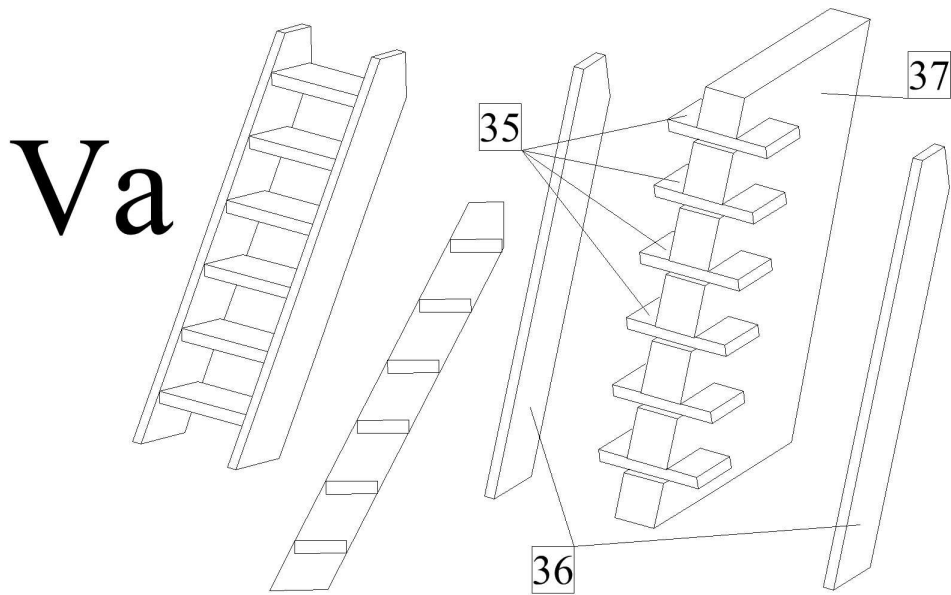


e) First glue a deck 29 to the transverse beams 27. Then plank the deck by strips 30 and then edge it by strips 31.

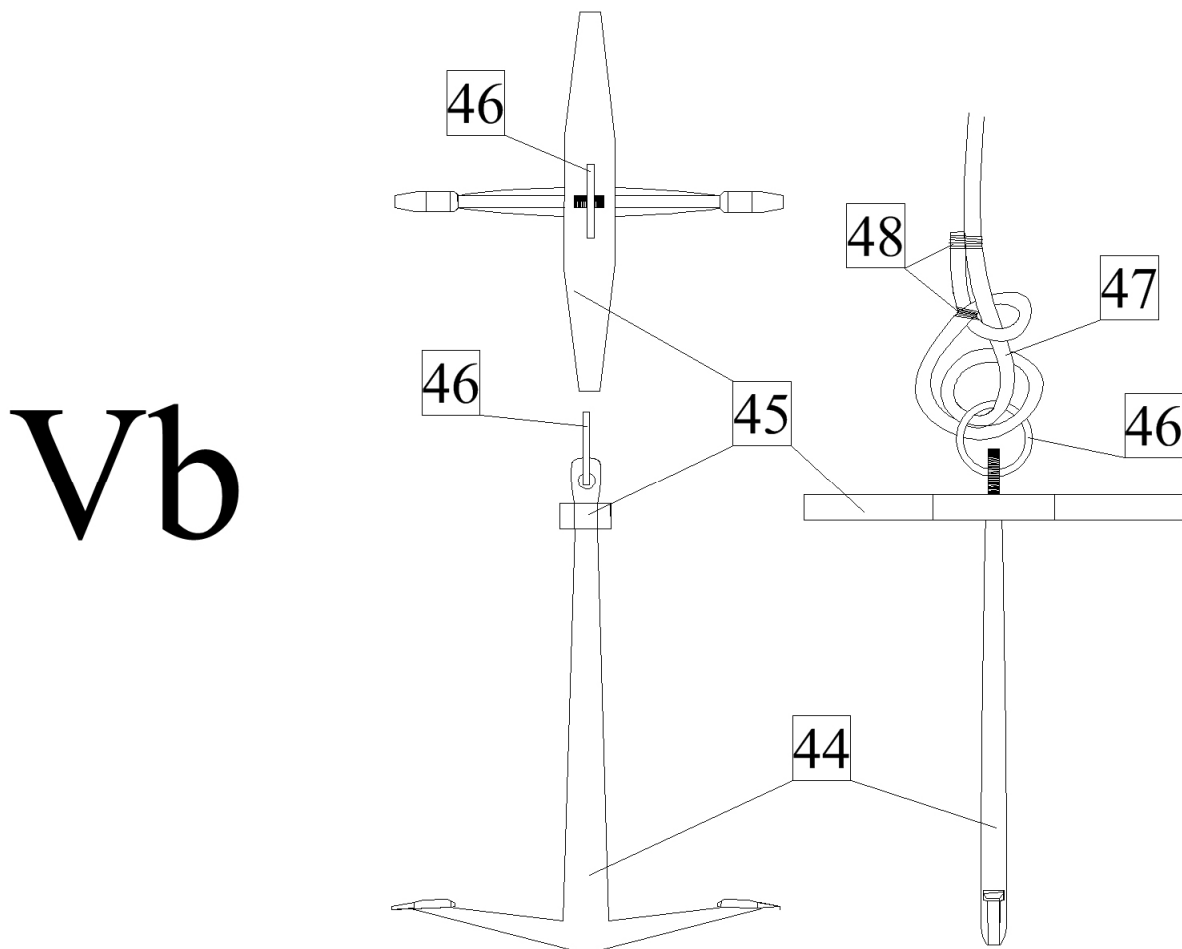


V) Details:

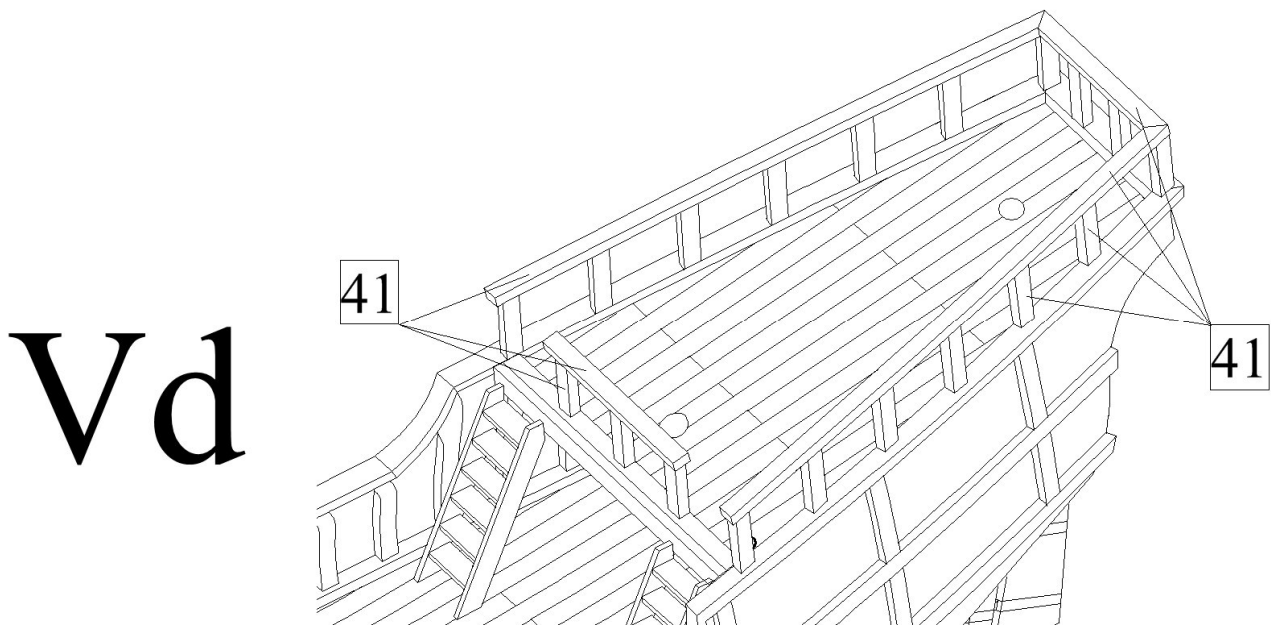
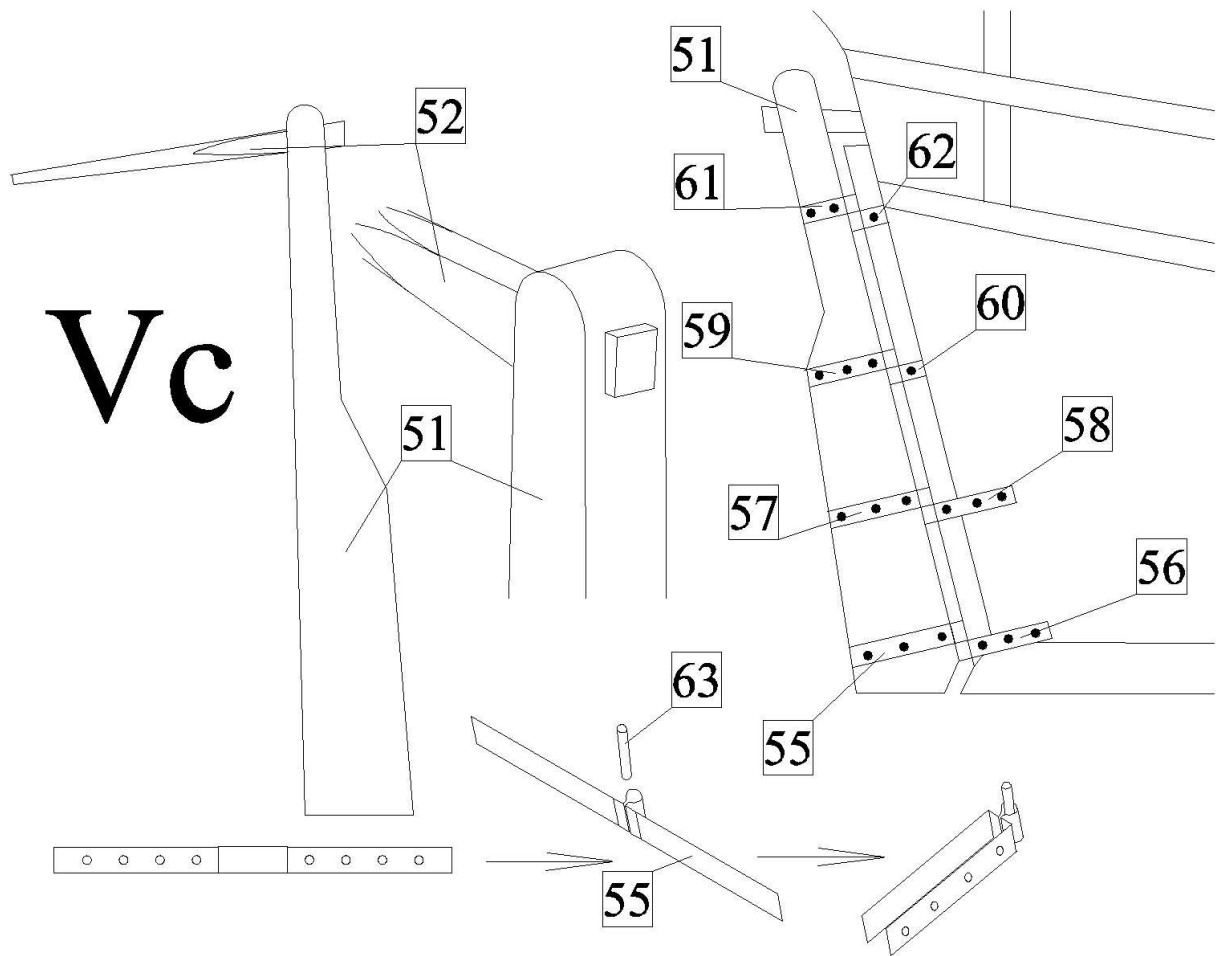
a) Make stairs. First run parts 35 into a preparation 37 but do not glue them! Then glue side parts 36 to the parts 35. Finally glue the stairs to the deck. An exact position of the stairs is in 1:1 scale shown in the plan 1.



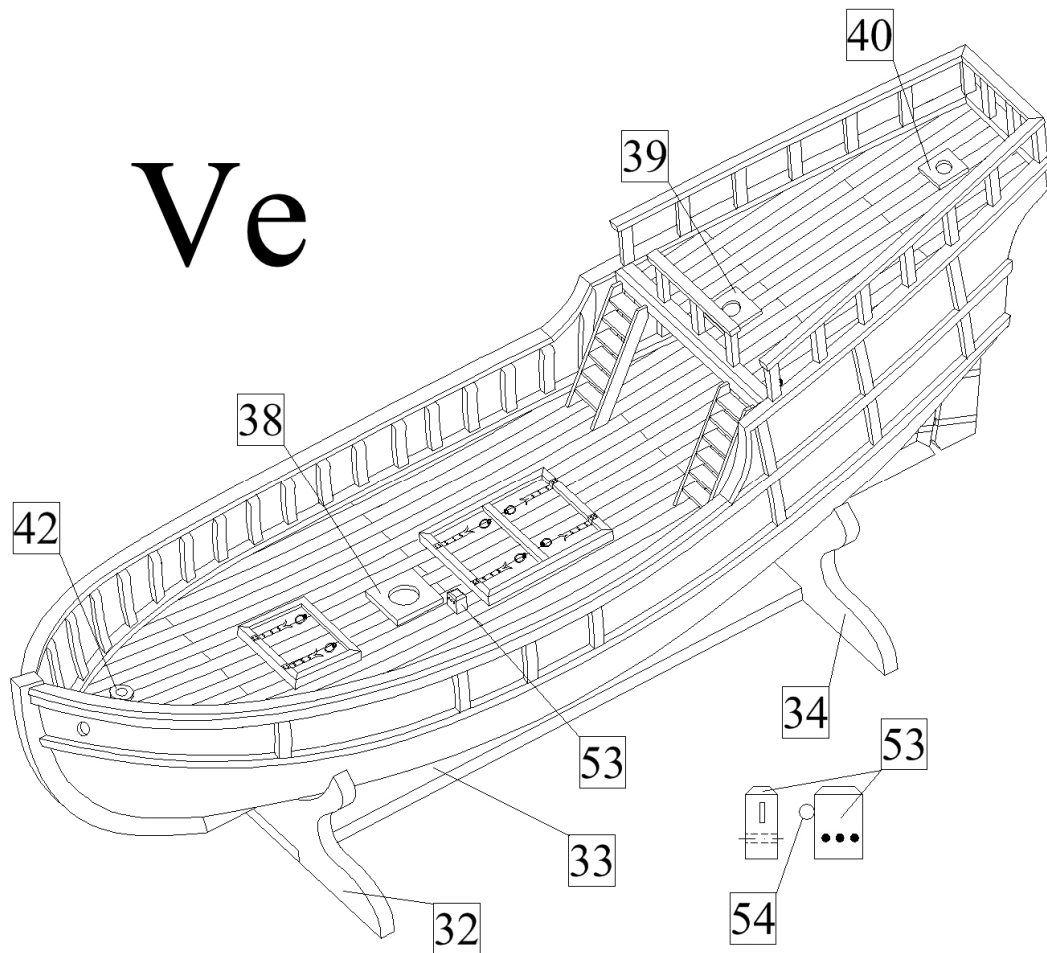
b) Make anchors. Glue together parts 44 and 45. Then run a ring 46 through the hole in the anchor. Finally tie a rope 47 to the ring 46.



- c) Make a rudder. By using of a sand paper make an arm of the rudder 52 from strips 2x2mm and then glue it to the rudder 51. Then glue hinges of the rudder 56, 58, 60, 62 to the stern and hinges 55, 57, 59 and 61 to the rudder. Then glue pins 63 to the hinges 55, 57, 59 and 61 and then whole rudder install to the stern.
- d) Glue railing 41 to the poop deck.



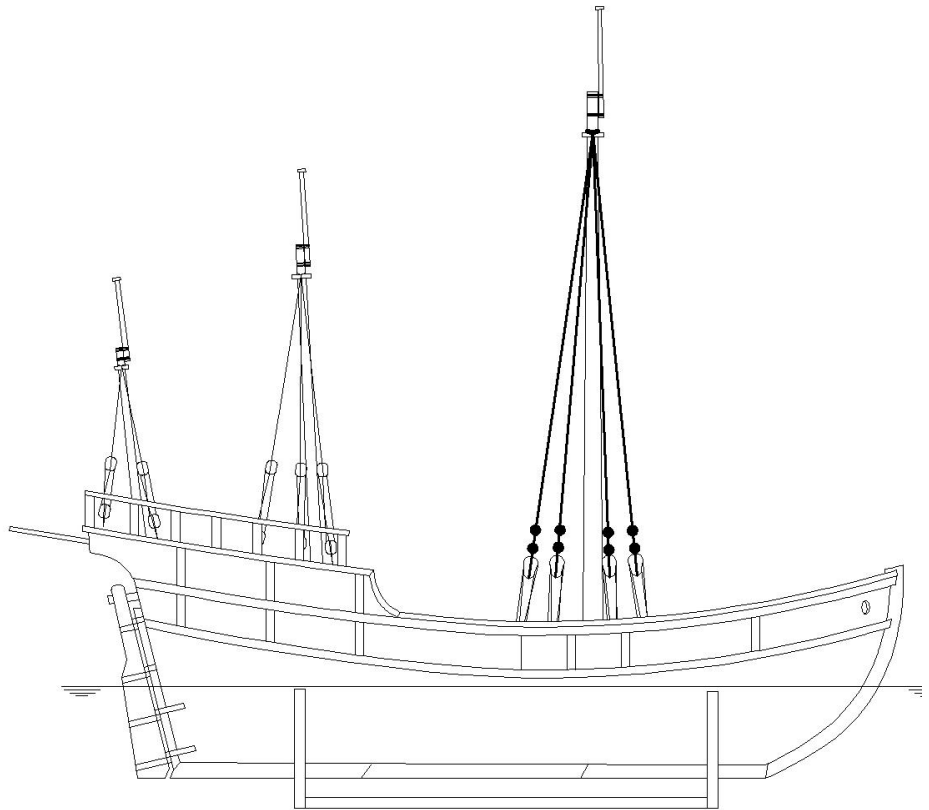
e) First glue parts 42 to the deck. Then drill 2mm hawse holes into the parts 42 and into the bow. Then glue mast foots 38-40 to the decks. An exact position of the hawse holes and mast foots is in 1:1 scale shown in the plan 1. Then make a knighthead from parts 53 and 54. The knighthead is in 1:1 scale shown in the plan 4. Finally glue a stand from parts 32-34.



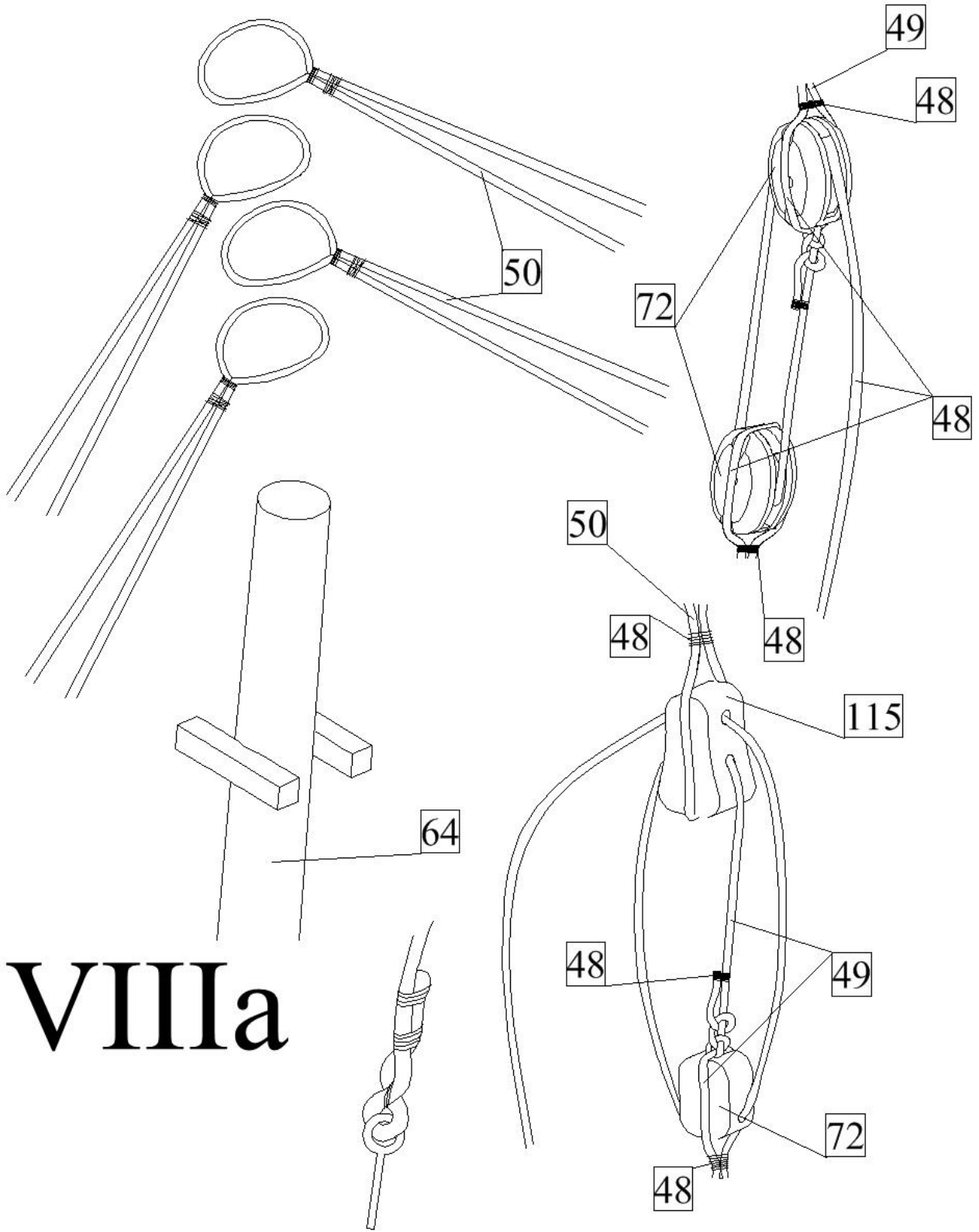
VIII) Standing rigging:

A scheme of the standing rigging is shown in the plan 2A.

VIII



a) First glue masts 64-66 to the hull. Then tie shrouds 50 to the mast 64 and shrouds 49 to the masts 65 and 66. Tie violin blocks 115 to the end of the shrouds 50 and block 72 to the shrouds 49. Then tie the shrouds by a rope 49 to the eyebolts. A scheme of tying of the shrouds is shown in the figure below.

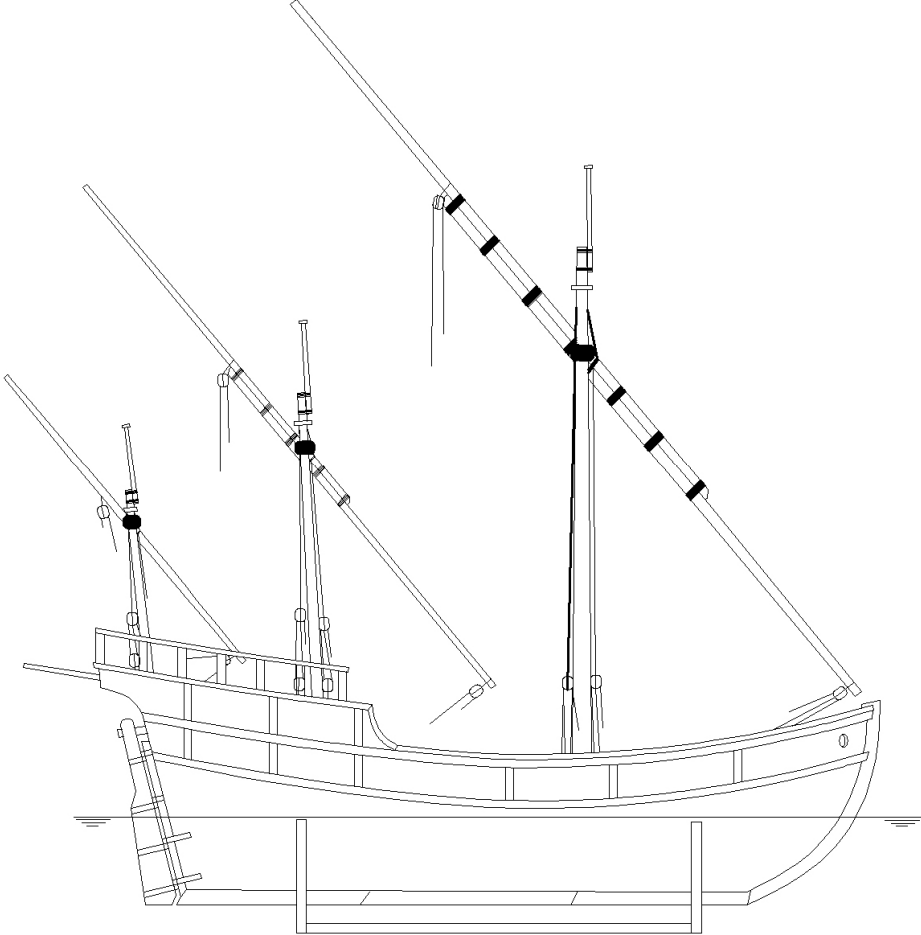


VIIIa

IX) Running rigging:

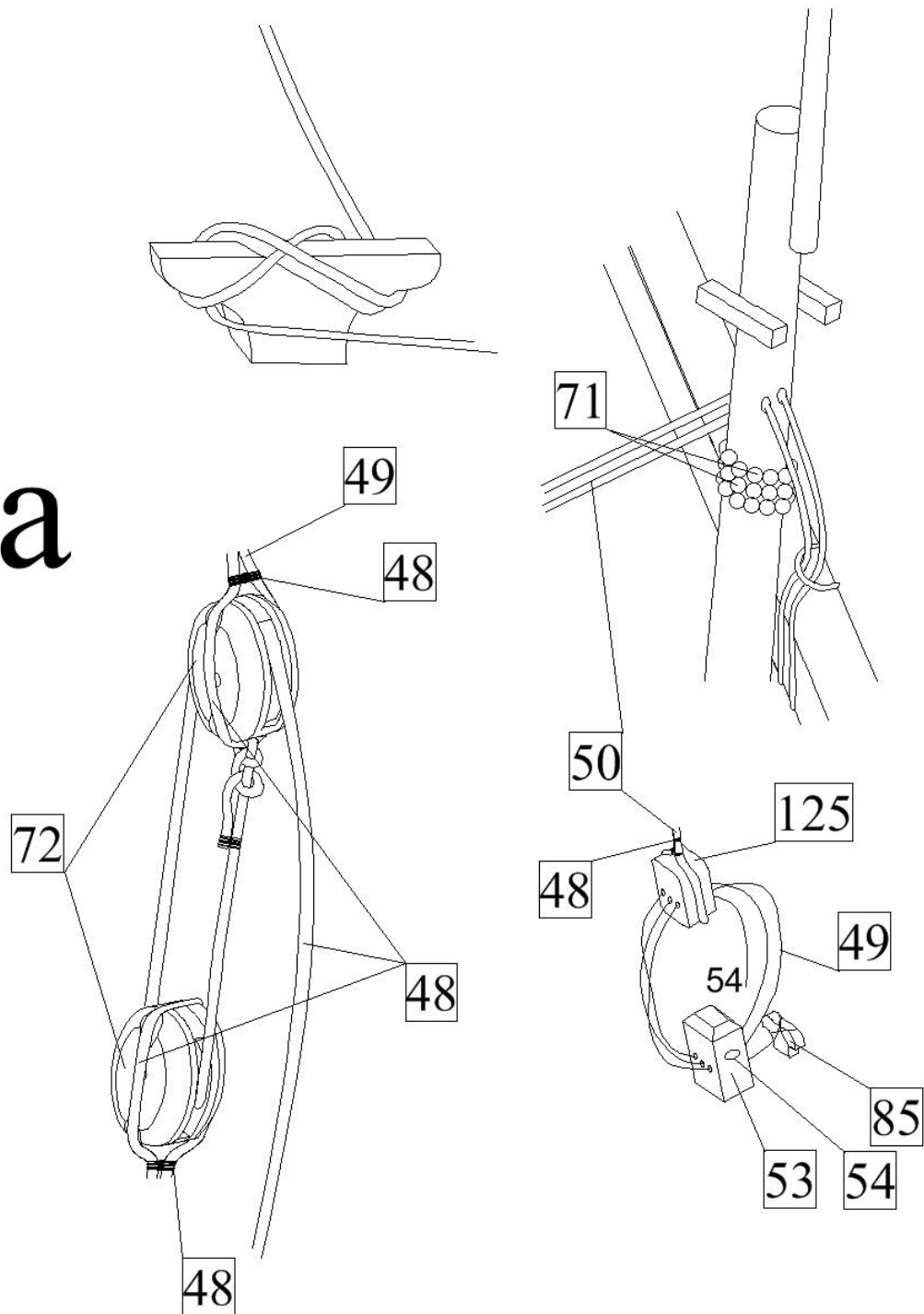
A scheme of the running rigging is shown in the plan 2B.

IX



- a) First tie yards to the masts. Then run the ropes for raising and lowering of the yards through holes in the masts. Then tie a second end of the rope for raising and lowering of yard 67 through the knighthead to a cleat 82 how it is shown in the figure below. Finally tie the ropes for raising and lowering of yards 68 and 69 through blocks 72 to cleats 87 and 90.
- b) Tie to the yards also rest of ropes for their control how it is shown in the plan 2B.

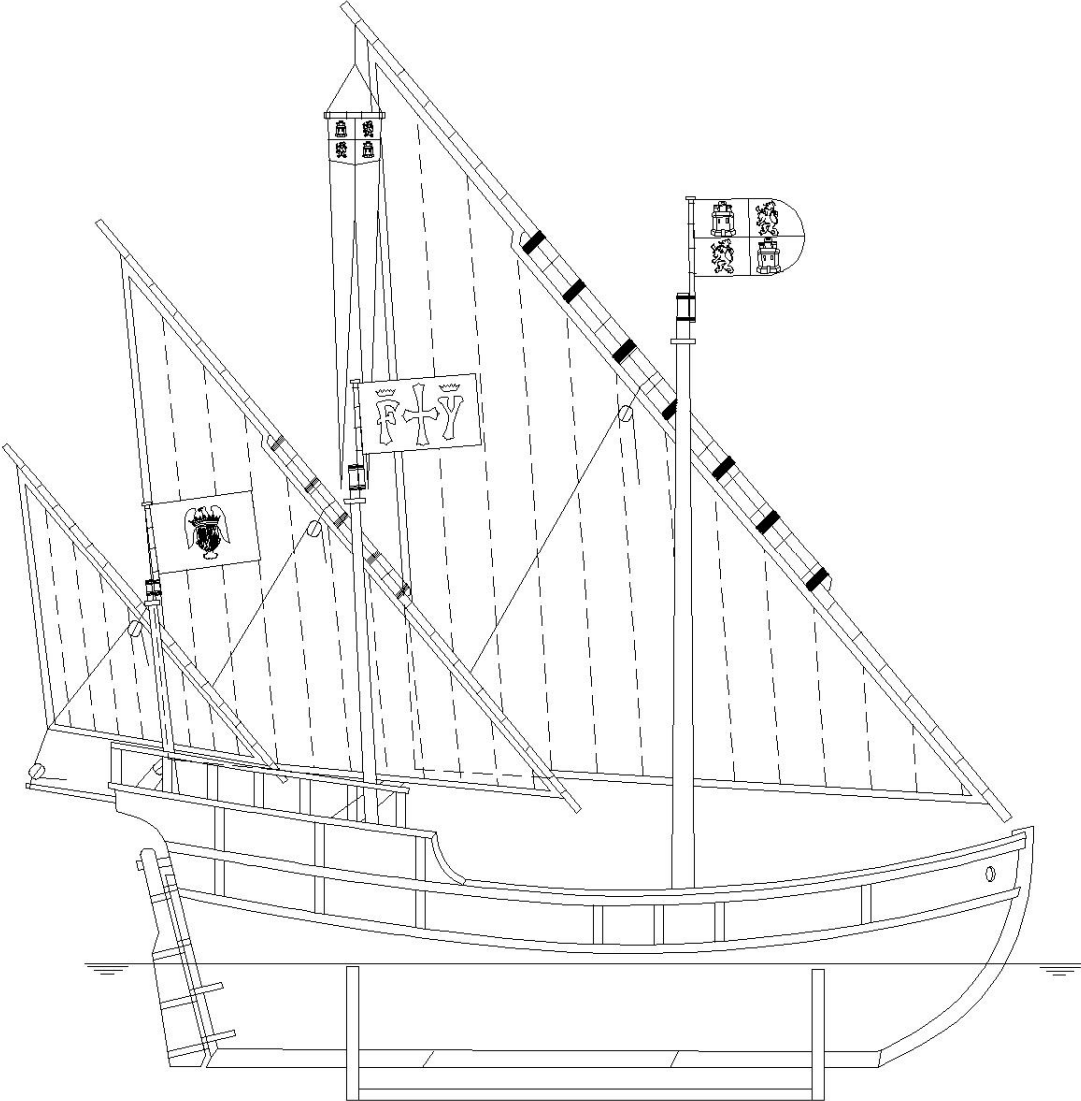
IXa



X) Flags and sails:

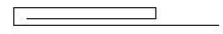
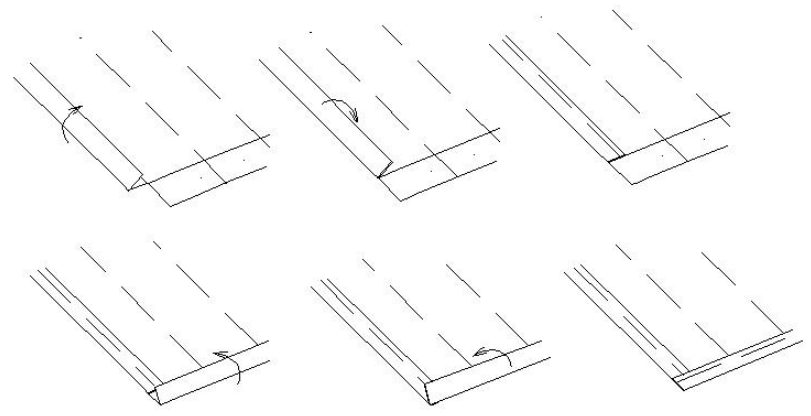
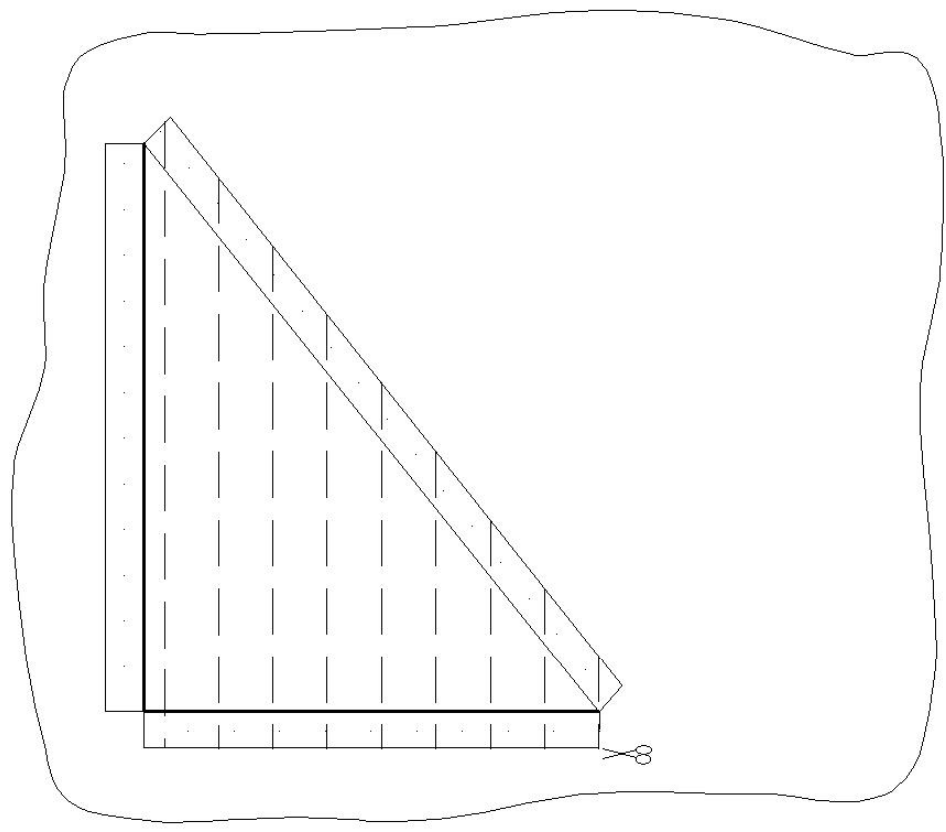
A scheme of position of the flags and sails is shown in the plan 3D.

X

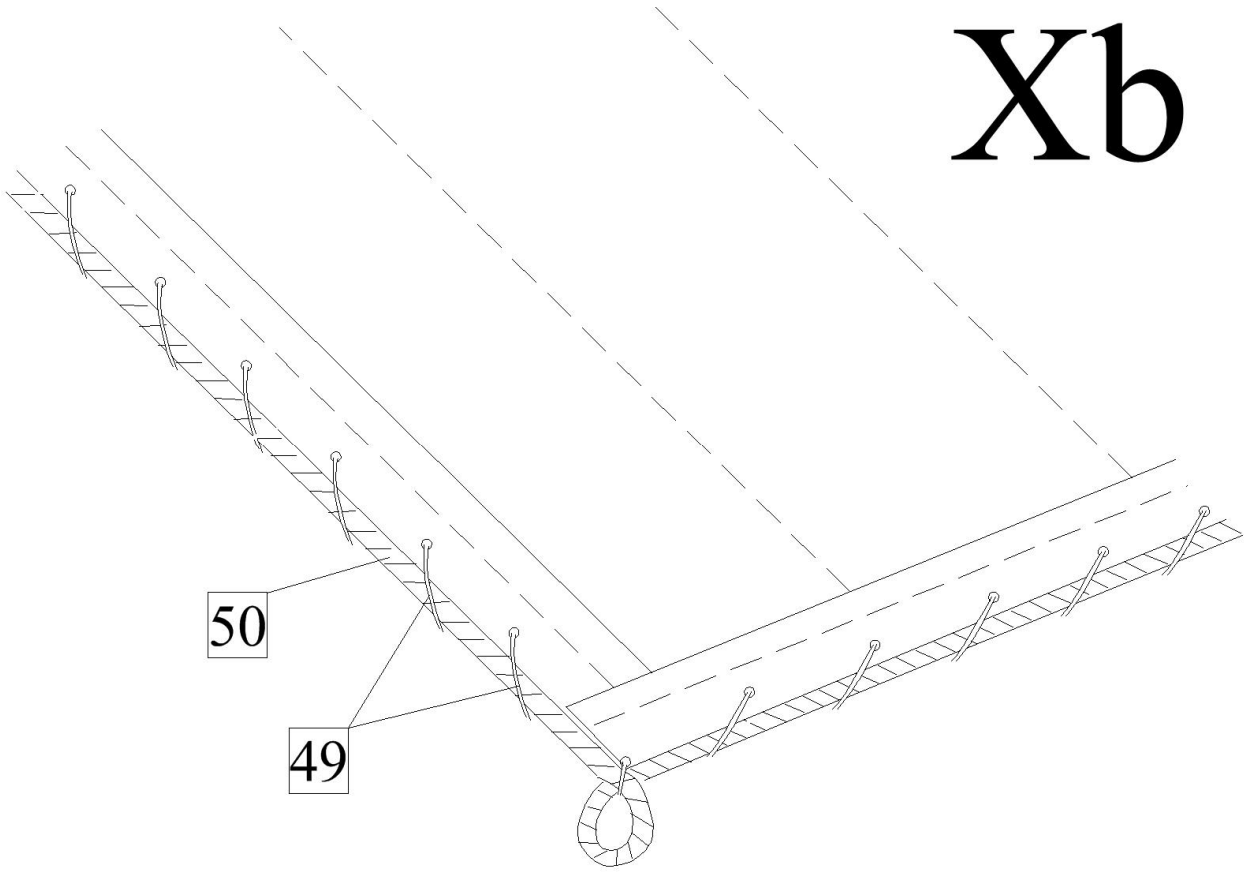


- a) Make a sail 116-118. The sails are in 1:1 scale shown in the plan 1D. First draw by pencil contours of the sail on the. To the border of the sails add about 10mm for fell. By the pencil draw on the cloth also seams which divided the sail into simple segments. Then scissor the sail with fells and sewn it like it is shown below.
- b) To the circumference of the sails sew on ropes 50 so that in the corner of the sail will eyes with diameters about 3mm.
- c) Tie the sails to the yards by ropes 49.
- d) Tie fags 119-122 to the flag masts.

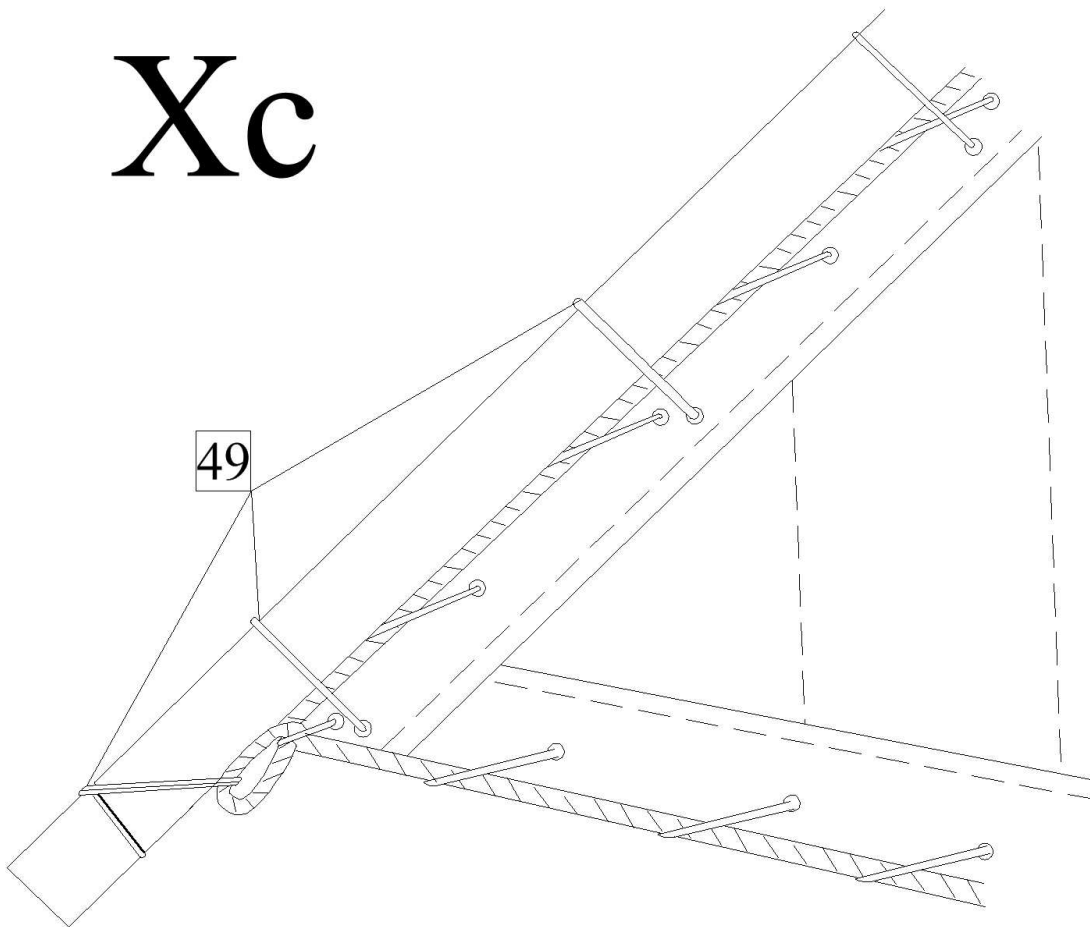
Xa



Xb



Xc



Part list:

0	Keel	plywood 4mm	1pc
1-5	Keel	wood 4mm	1pc
6-12	Frames	plywood 4mm	1pc
13-15	Reinforcements	plywood 4mm	2pcs
16	Deck	plywood 1mm	1pc
17	Planking	strip 2x3mm	65pcs
18	Wales	strip 2x3mm	65pcs
19	Deck	veneer 0,6mm	1pc
20	Hatches	strip 2x2mm	2pcs
21	Hatches	veneer 0,6mm	1pc
22	Hatches	photo-etched parts	6pcs
23	Eyebolts	eyebolt	40pcs
24	Rings	ring 4mm	6pcs
25	Waterways	strip 2x3mm	65pcs
26	Frames	strip 2x3mm	65pcs
27	Beam	strip 2x3mm	65pcs
28a-e	Edging	wood 2mm	2pcs
29	Deck	plywood 1mm	1pc
30	Deck	veneer 0,6mm	1pc
31	Edging	strip 2x3mm	65pcs
32-34	Stand	plywood 4mm	1pc
35	Stairs	plywood 1mm	12pcs
36	Stairs	plywood 1mm	4pcs
37	Preparation for stairs	plywood 4mm	1pc
38-40	Mast foot	wood 2mm	1pc
41	Railing	strip 2x3mm	65pcs
42	Hawse holes	wood 2mm	2pcs
43	Beam	dowel 2mm	1pc
44	Anchor	cast	2pcs
45	Anchor	wood 2mm	2pcs
46	Ring	ring 6mm	2pcs
47	Rigging	rope 1.75mm	0.5m
48	Rigging	rope 0.25mm	20m
49	Rigging	rope 0.5mm	20m
50	Rigging	rope 0.75mm	5m
51	Rudder	wood 4mm	1pc
52	Rudder	strip 2x3mm	65ks
53	Knighthead	wood 4mm	1pc
54	Eyebolts	eyebolt	40pcs
55-62	Rudder hinges	photo-etched parts	1pc
63	Rudder hinges	wire 1mm	0.1m
64	Mast	dowel 8mm	1pc
65	Mast	dowel 5mm	1pc
66	Mast	dowel 4mm	3pcs
67	Yard	dowel 4mm	3pcs
68	Yard	dowel 3mm	2pcs
69	Yard	dowel 3mm	2pcs
70	Trees	strip 1x1mm	1pc
71	Rollers	roller 2mm	100pcs
72	Blocks	block 5mm, 1hole	55pcs
73-75	Flag masts	dowel 2mm	1pc
76	Cap	dowel 3mm	2pcs

77-92	Cleats	wood 2mm	30pcs
93-114	Eyebolts	eyebolt	40pcs
115	Deck	block 8mm, violin	8pcs
116-118	Sail	cloth	1pc
119-122	Flags	flag	1pc
123	Flag pole	dowel 2mm	2pcs
124	Blocks	block 5mm, 2 holes	2pcs
125	Block	block 5mm, 3 holes	1pc
126-128	Cleats	wood 2mm	30pcs
129	Hatches	plywood 1mm	2pcs
130	Hatches	plywood 1mm	1pc