

PRINS WILLEM MODEL SM 40

The PRINS WILLEM was probably the largest ship with a square stern belonging to the Dutch Company of the East Indies. Built at Middelburg during the years 1649-1650, under the direction of the carpenter Cornelis Speldernieuw, the PRINS WILLEM set sail on her maiden voyage towards Batavia on the 5th May 1651, with a crew of 276 including 93 soldiers and 22 women and children. On her return home, the ship was temporarily loaned by the Company to the General States which had entered into conflict with Great Britain. For her use as a battleship, in addition to the demolition of her forecastle and relative stern bulkhead, 6 guns were added to the battery below deck, by opening up 3 new portholes each side of the bow in the area of the removed bridge. For a short period, the PRINS WILLEM served as flagship to the famous Admiral Witte de Witt; in October, 1652, it took part in the battle of Duins when it was considerably damaged. Handed back later to the Company, the ship, from 1653 to 1660, operated again on the commercial routes to the Indies; on the 23rd December 1661, the PRINS WILLEM set sail from Batavia with some other ships heading for the Low Countries, commanded by Arnold de Vlaming Van Oudshorn, Governor of Ambon. The small fleet never reached its destination: perhaps due to a violent storm, the ships were wrecked near the Island of Brandon, going down with all their cargo. In this regard, Valentijn narrates how the Governor General Maetsuyker "saw" the tragedy take place during a dramatic premonitory dream, announcing the fact quite a while before the news reached Holland.

Our reconstruction on a 1:100 scale is mainly based on a model made in the mid 17th century, in the Rijksmuseum of Amsterdam, with the integration, for the purpose, of various iconographic sources such as Dutch engravings and paintings of the period. In 1978 the model, reproducing the battleship version of the PRINS WILLEM, underwent accurate restoration which restored its original appearance as a commercial ship, closing the 6 bow portholes and rebuilding the forecastle and relative bulkhead.

Our model in fact constitutes a detailed and faithful reproduction of the ship rigged out by the West Indies Company for commercial traffic.

GENERAL INFORMATION

Like the whole COREL range, the assembly kit contains everything required to assemble the model (apart from glue). The technically constructable wooden parts are supplied already cut and generally only need light buffing with a file or glass paper. The elements obtainable from board should, however, be simply cut by the model-maker, with a few notches or gains at the most. The accessories are finished and ready for glueing.

The model may be constructed with a few standard tools, e.g. a hammer, a few small files of different section and strenght, pliers with thin nippers, a pair of scissors, a knife-cutter, some sheets of glass paper of assorted grain sizes, a pair of small blocks of wood (prismatic and cylindrical), on which to glue or nail the glass paper, a flacon of vinyl glue and a tube of strong glue such as that for metal.

Before starting and not during assembly, it is advisable (particularly for the less expert) to read this booklet carefully and study the constructive plans. Besides offering a preliminary view of the various phases and assembly difficulties it will help to cut down the possibility of breakage or irreparable damage to the pieces, often difficult to find on the market. All plywood elements, for instance, are not available separately from the complete assembly kit so the model-maker must replace them, tracing the pieces with carbon paper on the material of the thickness indicated, cut with a fretwork saw. Thanks to the programmed combination of

various tones of wood, it is possible to complete the model "by sight", finished with varnish, wax or special preparations for wood (any mordant should always be applied before finishing and polishing the elements). For those who wish a more historical, reliable reproduction, we recommend coloring and ageing of the model, as follows.

COLORING - Apart from the hull, coloring (like any ageing should be carried out before glueing the pieces: acrylic paint, oil paint or enamel may be used for modelling, but they must be mat.

Dirty white: keel and helm up to the waterline.

Dark brown: hull and helm above the waterline, as far as wale no. 33; bulkead, inside bulwarks, frame timbres, standing rigging, internal wales, leeches and stanchion supports; gangways, racks for belaying pins, bollards, gratings, hatchways, winch, vent, gun carriages; masts (except the lengths including the booms and the caps and with the exception of numbers 231, 256, 278 and 293); flagpoles (with the exception of extremities and numbers 300, 306, 312 and 317); fixed rigging and relative blocks and dead-eyes.

Dark bluish green: bow bulkhead (no. 64); canvas between no. 33 wale and the rail no. 65 (no. 45 and 46); second list no. 47 starting from the bottom (i.e. from no. 33 wale); lower gallery area (no. 164); stern transom recess (no.-31); cupboard doors, doors and windows (no. 93).

Black:	wales, large gunwale; outside of mantelets; rail, bulwarks handrail, external face of frame timbers including two elements; stanchion handrails; extremity of the bow ram no. 129 (for the complete length of the figure-head); bow structure (particulars No. 128,130,132,133, 134; all the elements included between nos. 137 and 142; pieces no. 144, 148, 152, 153 and 154); barrels and bullets; door and window hinges; the armour of the commander on the transom; chainwales, chains, nails; slits no. 160; lengths of masts between the booms and the respective caps; masts no. 231, 256, 278 and 293; crow's nests, booms, bolsters, caps; bracket end and flag mast (no. 295,296,297 and 298); extremities of flagstaffs; flagstaffs no. 300,306,312 and 317; outriggers and relative irons; eye-bolts and rigging hooks; anchors and chains; inside of false openings (grating recess, canon portholes, hawses, helm housing, rigging holes).
Red:	first list no. 47 just above the no. 33 wale; round and square cannon porthole jambs; rabbet and inside of mantelets; no. 110 and 158 slits; external face of the 1st cutwater no. 145; latrine no. 143; figure-head, stern transom lions, coats of arms recesses; powdered kegs.
Rusted copper:	upper area of galleries (no. 165); scuppers.
Light blue:	canvas streatching to the stern between wale no. 33 and rail no. 65 (no. 47 with the exception of the two lower strips).
White:	clouds painted on the light blue canvas; cover on the stern transom.
Gold and dark yellow:	door and window frames; external faces of the 2nd and 3rd no. 146 and 147 cutwaters; friezes, borders, decorative elements in general (particulars no. 96,97,101,104,105,106,115,116,117,118,131,136,151, 157, 167, 170, 184, 185, 186, 192, 193, 194, 196,197,198,199, 203 and 207) mouldings (strip no. 166; all the elements included between no. 177 and 183; no. 187 and 201 particulars); figure-head mane and the manes of the lions on the stern transom; warriors' helmets; hair and clothes of the female figures.
Light green:	dolphins, drape and mast on the stern transom.
Skin colour:	bodies of the female figures; putti; warriors and commander's facer.
Natural wood:	bridges, cannon wheels; barrels; running blocks (shiny).
Natural cord:	running rigging.

AGEING - A realistic ageing patina (both on the "by sight" wood and the enamelled or oil painted zones or elements) may be obtained by applying on the surface involved some sepia or neutral grey water colour diluted with ox gall (on sale in fine art shops) or milk. For the gold decorations, proceed as follows: 1) dilute a little dark mordant colour in a receptacle with a few drops of vinyl glue, until the solution is rather fluid; 2) brush this mixture lavishly on the entire decoration surface (including the raised parts); 3) before the paint dries, wipe the decoration with a damp rag to remove colour from projecting parts. When dry, the raised elements will stand out from the dark colour.

TOUCHING UP GOLD SCULPTURES - To place up gold decoration, it may sometimes be necessary (due to a small printing error or previous error in the assembly or alignment of elements by the model-maker) to make a slight adaptation to same with a file, and this may ruin the gold patina in the zone concerned. It may also happen, although it is rather rare, that the gold surface is uneven or blackened in some parts in both cases, it is sufficient to touch it up with gold paint, in the same tones, if possible for metal. The transparent effect of the surface may be obtained with suitable varnish; however, in this case it is best to touch up the whole decoration to guarantee an even patina (complete touching up of the sculpture with gold paint will also be indispensable when the above mentioned operation does not obtain a colour perfectly identical to that of the rest of the surface).

SHEET BRASS ELEMENTS - All elements are connected to one support by means of small connecting points; due to the greatly reduced thickness, we recommend you to treat the entire sheet with great care; it will be best not to isolate the individual parts until finishing and assembly. The pieces can be detached from the support with a simple rotary movement. The connecting points can, however, be more easily and accurately cut using an ordinary pair of scissors. When the piece is isolated, the first step will be to pre-position the element on the model, checking its contours with any underlying elements; a small error may be corrected with a suitable sized file, used with great care. When the piece is shaped perfectly (with the necessary folds, as illustrated), it is advisable to decide upon the required finish, model-makers painting the entire model need only use the above mentioned colours. Those leaving everything "in view" can polish the brass elements with very fine sandpaper or special preparations, on sale everywhere.

FLAGS - For the preparation of the flags, proceed as follows: isolate the elements, cutting them put from their external white borders so that the fabric does not fray; you can apply them to their respective supports by wrapping round the staff the special part printed in white along one of the margins or, better still, by eliminating the latter and simply tying the flag to the support, at some equally-spaced points, with thin thread.

In order to give the flags a more realistic appearance, we would advise you to wet the fabric (the silk-screen printing guarantees the stability of the colours), so as to remove the starch and create some creases by hand. The appearance achieved can be maintained by painting both sides of the flag with transparent opaque varnish. Such procedure is also that most suitable for obtaining some "rigid" flags, thus reproducing the effect of the wind.

ASSEMBLY INSTRUCTIONS

It is important to read the following notes to assemble the model correctly: in fact, it is impossible to complete works with the exclusive aid of illustrations and personal experience. On the tables each piece has a number, which is repeated in the instructions; the full list of elements appears at the foot of the assembly notes. This list permits correct identification or construction of the components: after the number and name, it gives the material, measurements, any catalogue number (for the purchase of any parts the model-maker may damage), and the code, useful to recognize the piece in the pack. The letter "A" stands for "accessories" and indicates all components already finished and practically ready for assembly (decorations, eyebolts, rings, blocks, swivel guns, guns, anchors, flags etc.).

The letter "C" ("rope") indicates all manoeuvres and other details to be constructed with pieces of rope.

The wooden elements marked "P" in the "reworked pieces" box, and are generally already cut: a finishing touch and the piece is ready. It is useful, however, to make a through check on both the contours and gains of the pieces before removing them; in fact, there may be slight differences between the original drawing and the subsequent photographic or printed reproductions, tables included. Such differences, will, however, be extremely limited, and will not be sufficient to prejudice construction of the model. Careful piece checking and preliminary assembly without glueing will reveal any faults, so that any excess maybe previously removed with file or glass paper, and vacuums filled with small inserts of material along the edges.

The letter "R" indicates that the piece is not cut in the kit; the model-maker must "obtain it", with generally rather simple operations, from the board or material indicated. The wooden parts are generally glued together with slow-drying vinyl glue, so that pieces may be removed and repositioned even after its application; for details in "unstable balance" a fast-drying glue may have to be used, again of the type for wood. For difficult or resistant connections and use between different materials (again slow or fast-drying, according to the type and position of the pieces involved).

Before applying this glue, always degrease the metal surface with acetone or solvent; if greater adherence is required, it is also advisable to roughen the surface to be glued with a file or glass paper. This operation is also indispensable for the decorative sculptures, from which the gold patina will be removed up to the natural metal in the point where the glue is to be applied. Any type of glue, in particular in the visible parts of the metal, should, however, be applied in barely sufficient quantities to avoid drips or leaks.

As regards the preparation of vinyl glue, particularly to apply hull and deck planking, we recommend a mixture of glue and dark mordant; when dry, the connecting lines between the planks will be a realistic dark colour. And finally a hint on assembly times: don't rush to complete the model, take your time and check the details you have already prepared and carefully program the following operations.

FRAME - In order to assemble the model in the easiest way we would advise you to prepare a temporary wharf by fixing on a chipboard panel (base: 10-12x45-50 cm, thickness: 1.5cm approx.) two lengths of rod (section: 10 x 10 mm approx.) at a distance of 5 mm (the pieces for the wharf are not supplied in the pack - Table 5, Figure A). After the above-mentioned verification of the lengths of the elements, unite together without glue in the following order: the no. 1 keel, the no. 2 bow fillers, the frames from no. 3 to 14, the no. 15 stern deck, the transom elements no. 16 and 17, the bridge sectors from no. 18 to 23 and the no. 24 and 25 bulkheads, checking carefully the embedding, lining up on and respective angulation of the pieces (Table 5, Figure B).

Dismantle everything and make eventual corrections, shape the two no. 2 fillers and carefully make the slightly-inclined porthole holes in elements 16 and 17; connect all the above mentioned elements with slow-drying glue, continually checking alignment (for this purpose it is possible to plot the median axis of decks along which the pins or nails used to lock the entire structure will be planted).

When dry, glue the no. 26 filler at the stern under deck no. 15 and against the lower no. 16 transom; cover abundantly with glue the uniting lines of the piece and let everything dry again. Check with some plankings that the hull is complete; if these boards do not "run" perfectly on all the frames, make the necessary corrections with file or sandpaper fixed to the above mentioned block of wood if a frame is short, glue a suitably sectioned strip of planking along the short edge of same.

Then "taper" filler no. 2 towards the bow and the no. 3 and 7 frames and the no. 9 and 14 frames towards the stern as well as elements no. 15, 16, 17 and 26. This operation should be carried out with glass paper on rectangular block along the convex and straight parts of the structure, and with glass paper on cylindrical block at the bottom concave parts. Carefully make the housing for the false no. 173 boom of the helm in correspondence with pieces no. 16 and 26.

HULL PLANKING - Planking consists of two layers of overlapping boards, staggered as much as possible: one inside for support, in softwood, and an outside finishing layer obtained by combining different tones of wood.

The two lengths of planking at the bow are approximately parallel but, still proceeding towards the stern, while the first length of planking follows the curve of the side margins of the bridges (and, consequently the cannon portholes), the second runs parallel with the upper limit of the definitive bulwark, determining the characteristic curving of the wales. The no. 27 strips of the first length of planking also serve as a guide and rest for the no. 28 and 29 supports of the chopped-off gun-barrels; such supports, if situated correctly as illustrated, also enable the vertical margins of the porthole openings to be easily lined up, the width of which in fact coincides with the sizes of the internal notch on the supports. Before proceeding with covering the hull, make 20 lengths measuring about 14 mm, of the small no. 28 type, from the special "U" shaped rods and 22 lengths measuring about 16 mm, of the larger no. 29 type; then make, as illustrated, a hole for housing the chopped-off gun-barrels (note the exact position of the slightly-inclined and shifted-upwards hole). By referring to the natural-size pictures, glue, in correspondence with the already pierced porthole holes, 4 no. 28 supports inside the upper stern transom no. 17 (2 upper horizontal ones against the no. 1 keel and 2 lower vertical ones against the no. 15 deck) and 2 no. 29 supports vertically inside the lower no. 16 transom. As already mentioned, the no. 27 strips of the first length of planking serve to sustain and line up the no. 28 and 29 supports of the chopped off gun-barrels; when applying such strips it is indispensable to follow the diagram supplied. For this reason, in the pictures, the number of some strips is followed by small letters, indicating the placing priority. Alternatively, immediately cover the area of the no. 6 frame, between the no. 19 forecastle and the no. 20 cover and the area of the no. 12 frame between the no. 21 half-bridge and the no. 22 central bridge, accessible with some difficulty when the planking is complete. After further verification of the overall advancement of the structure, first glue, in the illustrated position, the no. 27a strip length, in correspondence with the side margin of the no. 23 small central bridge, then place, 10 mm below the previous one, the no. 27b length, following the margin of the no. 22 central bridge. Now glue, up against the internal face of the strips which you have just placed, the first 2 no. 28 supports, always referring to the illustrations supplied.

Then joint the no. 27c and 27d strips to the structure, placing another 2 no. 28 supports between the no. 12 and 13 frames and another 2 at the bow, between frames no. 4, 5 and 6. Glue along the margin of the no. 20 deck the no. 27e strip and then the no. 27f one; place the no. 29g strip, leaving a space of 10 mm below the 27f strip, carefully placing between the two strips the 8 no. 29 supports. Starting from the stern margin of the latter no. 29 support (included between the no. 11 and 12 frames) fix the no. 27h length, gluing, between this and the no. 27e strip, a further 2 no. 28 supports. Successively apply strip no. 27i followed, still at a distance of 10 mm, by the no. 27i one and glue, between these, to the stern, the last 2 no. 29 supports. Strengthen with glue the points of union between the strip, frames and no. 28 and 29 supports; then fill, with entire strips and no. 27 lengths, all the empty spaces left between both the already-placed strips as well as between the supports of the chopped-off gun-barrels, resting up against the side margins of the latter (Table 4, Figure A; Table 5, Figure C). Still using no. 27 strips, complete the covering of the hull, proceeding upwards to the end of the frame timbers of the frames and down as far as the keel (from no. 27l onwards, glue the strips, starting from the no. 2 filler); it is better not to cover the lower stern keel, stopping along the lower corner of the no. 11, 12 and 13 frames and the no. 16 element. It is advisable to apply the planking progressively on the two sides of the model, gluing a pair of strips either side. The previous curving of the strips in correspondence with the no. 2, 3, 4 and 5 elements can be obtained by using the special strip-bender or, more simply, by soaking them in hot water, or alternatively by utilizing any source of heat (candle, hair-dryer, etc.). During the work, fix the strips in the frames and on the keel with pins or nails (to be removed when the glue dries); the strips should not only be glued to the frames but also to each other, especially in the bulwark above the bridges. The "tapering" of the strips towards the bow for the first length of planking is not really indispensable: however, those who want to do so can refer to the pictures and indications supplied for the second length of planking.

When the covering is finished, after drying out, remove the excess glue and fill the eventual depressions with pieces of strips (plastering is not advised); eliminate at the stern the portions of strips in excess of the no. 16, 17 and 26 elements and thin down as much as possible the thickness of the last lower strips at the bow and, in particular, at the stern, in such a way as to obtain a continuous and uniform surface between the strips and the keel; it would also be opportune to already shape, very carefully, the upper margin of the bulkhead also in the area between elements no. 10 and 17; then finish with sand-paper. At this point, if the application has been carried out correctly, the portholes corresponding to the no. 29 supports must be well delineated and squared-off with an opening of approximately 10 x 10 mm; the smaller portholes, corresponding with supports no. 28, present, on the other hand, an opening of about 8 mm in width by 5 mm in height: it is therefore necessary to carefully remove a small sector of the upper strip so as to create a height of 8 mm approx.; now make a hole of about 5 mm in diameter (half way between strip no. 27c and no. 27d), in correspondence with the supports no. 28 situated under the forecastle no. 19. We also advise you to paint, in opaque black, both the area of the supports of the chopped-off gun-barrels visible

through the openings of the portholes as well as the hole for the helm boom. Contrarily to the first, the second planking requires "tapering" of the boards, i.e. gradual narrowing towards bow. The exact degree of reduction to be made to the boards is calculated by dividing the side edges of the frames by the same number of "whole" boards located on the edges of the center frame no. 8 it is not necessary, however, to divide all frames.

It is sufficient to repeat the number of "entire" strips on a vertical line traced on the first length of planking half way between the no. 5 and 6 frames, approximately regulating the rest. It is also indispensable to insert some triangular boards at stern.

The excess portion, for both the boards to be tapered and the stern triangles may be removed with a knife-cutter and a metal rule, or with glass paper fixed to a prismatic block of wood. Before starting the application of the second length of planking, perfectly shape, referring to the natural-size pictures, the no. 30 stern galleries, verifying the position on the model: the rear face of the galleries must form a uniform surface with the stern transom no. 17; glue the galleries and, when dry, cover the entire stern (elements no. 16, 17, 26 and 30) utilizing, as illustrated, the no. 31 and 32 strips in such a way that the successive second planking hides their heads.

The application of the second planking should be carefully carried out, following the progressive order of the strips: begin gluing the first no. 33 wale, the position of which should be traced with precision on Table 2, Figure A (it is advisable not to cut the wales in correspondence with the portholes, removing the excess later on), then the 3 no. 34 strips (only interrupting the central one in correspondence with the holes for the chopped-off gun barrels at the bow), the second no. 35 wale, the 2 no. 36 strips, the third no. 37 wale, the 5 no. 38 strips (interrupted proportionately between one porthole and another), the fourth no. 39 wale, the 3 no. 40 strips, the fifth no. 41 wale, the 3 no. 42 strips, the no. 43 large gunwale and then all the no. 44 strips right through to the keel (Table 5, Figure D). Always referring to the natural size pictures, glue the no. 45 strips, above the first no. 33 wale, in the centre; to one side of these, now complete the covering up to the extremity of the frame timbers of the frame, placing pieces of no. 46 and 47 strips towards the bow and towards the stern, respectively, set out "tile-wise", or with the lower margin superimposed over the underlying strip. When dry, eliminate the portions of the excess strips to the stern and shape, as illustrated, the line of the bulwark in correspondence with bridge no. 18; square off and finish with care the openings of the side and stern portholes, inside which, for greater realism, can optionally be added the false rabbet, made up of three lengths of strip no. 48. Then accurately smooth down, with even finer sand-paper, all the surfaces of the hull, chamfering the corners of the wales and large gunwale, but trying to keep the protrusion of the no. 46 and 47 strips integral.

BRIDGES AND RELATIVE SUPERSTRUCTURES After having cut into the frame timbers, which sustain the bulkhead, level with the bridges, remove them carefully. Eliminate eventual traces of glue from the bulwark, cover both the inside of the latter (with the exception of the length corresponding with the bow bridge no. 18) which the area of element no. 17 positions above the poop deck no. 23 with strips no. 49. Utilizing vertical lengths of strip no. 50, cover the free areas of frames no. 6, 12 and 13 and the bulkhead no. 25. The planking of some bridges is constituted, for great realism, by strips of two thicknesses: the higher central area, where the gratings are embedded, and the thinner sides (Table 6, Figure A).

The no. 19 forecastle and the no. 20 cover follow the same covering scheme: first glue the two no. 51 strips at a distance of 37 mm one from the other; referring to the real-life pictures in table 4 (shapes with more marked line of dashes), draw the outline of the gratings on the bridges and the relative surroundings to be embedded (elements no. 69 and 70), then cover the remaining space between the two no. 51 strips with lengths of no. 52, leaving the holes for the masts free as well; now complete the covering of the bridges up to the bulwark, utilizing the thinner no. 53 strips. On the no. 22 quarter deck, first place 2 no. 51 strips at a distance of 32 mm, and, internally, against the latter, 2 no. 52 strips either side; repeat again the outline of the grating and cover the remaining space with no. 52 lengths; then cover the no. 18 bow bridge again with no. 53 strips up to the bulwark. The no. 21 half-bridge and the no. 23 poop deck should be covered by utilizing only lengths of the no. 53 strip. Glue the sectors of the no. 54 waterway against the bulwark, along the margins of the no. 19, 20, 21, 22, 23 bridges and the no. 17 stern transom, and transversally finish off the bridges by adding the no. 55 surrounding lengths in correspondence with the no. 25 bulkhead and the no. 6, 12 and 13 frames. Referring to the special life-size view, carefully make all the false no. 56 frame timbers. In correspondence with no. 7, 8 and 9 frames, place above these the no. 57 strip and the no. 58 sectors. Mark the position of the openings for the cannons on the bulwark and glue the no. 59 reinforcement inside, between the 2 corresponding no. 56 frame timbers. When dry, make holes in the bulwark and accurate finish the circular openings. Complete the inside adding, as illustrated, the false standing rigging no. 60 and the no. 61 strip.

Now glue along the margin of the bow bridge no. 18 the lengths of no. 62 surround; apply inside the bulwark the vertical elements no. 63 (between the no. 3 and 4 frames such elements must project by about 5 mm beyond the end of the bulwark), then cover the no. 24 bulwark with pieces of strip no. 64, set out "tile-wise". Make the sectors of the no. 65 rail and glue them above the margin of the bulkhead, against the false no. 56 frame timbers; place, as illustrated, the lengths of no. 66 handrail; at the bow, add

the no. 67 lengths and finish the curved cut of the planking with the no. 68 strips.

Now make all the superstructures of the bridges and the inside of the bulwark (elements ranging from no. 69 to 127), following the numerical sequence supplied in the special list, the respective material indications and illustrative diagrams. All the difficult joins (eg. pieces no. 84, 88, 89 and 90), in addition to the above-mentioned glues for metals, can be strengthened by inserting, before piercing, a small piece of headless nail. The no. 69 elements of the gratings are first assembled dry then immersed in diluted vinyl glue; when dry, the grating should be cut in the shape and size required by the drawing (before gluing the gratings, we would advise you to paint the corresponding sectors of the bridges in opaque black). When carrying out the thickest covering of the bridges, only the no. 69 gratings with the no. 70 surrounds should be embedded, and particulars no. 72, 73, 74 and 75 all the other elements (no. 71 grating surrounds, foot of no. 81 mast, smaller no. 82 and 83 portholes, etc.) must instead be placed above the covering. Previously pierce the head of the no. 76 winch, the no. 84, 88 and 89 bollards, the no. 87 and 90 racks for belaying pins and the no. 114 handrails of the two stanchions of the no. 19 forecastle; make the openings in the forecastle for the false control terminals, finishing those in the grating with lengths of the no. 72 surrounding and those in the bridge with both no. 72 and 83 lengths. Glue the pieces of no. 93 strip on the back of the respective frames in brass foil then finish carefully, following the outside margins of the frames themselves; add the no. 95 hinges, opportunely cut, then unite to model.

EXTERIOR OF THE HULL - Still referring to the special list and the pictures supplied, make the external superstructures of the hull and place all the decorative elements (particulars ranging from no. 128 to 212). Always verify every piece on the model, including decorations, before gluing, carrying out eventual adjustments; particular attention should be paid to the placing the no. 129 bow ram and the no. 130, 131, 135 and 136 elements, in line with the keel. The grating platform in the bow should be assembled as follows: unite, as described, the strips of the grating; cut the no. 140 sectors which are slightly abundant in correspondence both with the cutwater (no. 137 and 139) as well as the curved margin of the hull planking; make the various no. 141 bow rams, still leaving them abundant in correspondence with the external surrounds of the platform; using a panel covered in cellophane, glue the no. 141 and 140 elements very well; when dry, utilizing a cardboard shape placed on the model, make the platform inside the no. 142 surround the exact size and place it on the group of no. 140 and 141 elements; carefully shape the platform, gluing along the side and rear margins of the same the lengths of no. 142 slip, slightly inclined, and joint to model; fill the spaces between the no. 139 frame timber with pieces of the no. 141 strip, then adapt and place the no. 143 elements, sustained by the no. 144 supports.

Note: the no. 149 caryatids of the cutwaters, all of different heights, should be made by opportunely cutting the 20 mm figures and not utilizing similar shorter figures, destined to other areas of the model.

Accurately verify on the galleries and the stern transome, before assembling, all the particulars ranging from no. 176 to 207, retouching eventually the margins of the pieces. Finish and glue to the sides of the model the bulwarks (elements ranging from no. 208 to 212). Make four round holes in the hull for the hawses, in correspondence with the no. 128 pieces; make, in element no. 129, both the two rectangular openings for the no. 320 gammons as well as the two holes the passage of the 629d tacks; pierce the planking and embed the no. 158 and 160 slits and the no. 161 scuppers. Make the hole for the no. 954 boat sling in the helm. It is also possible to cover all the visible margins of the keel and the helm with pieces of the thin strip (no. 46, 47 etc.), opportunely combined; still optionally, it is possible to reproduce, by cutting with a very fine metal point, or simply drawing, both the nails as well as the surrounds of the embedded elements which in the real ship make up the bow ram, the keel and the helm (thin lines on table 2) and the interruptions of the wales and the hull planking as can be done in the case of the planking of the bridges.

We would finally advise you to place on the model all the elements, numbered further on within the sphere of the respect (eye-bolts, blocks, cleats, peg-pins, etc.).

MASTS - Carefully make, and previously assemble dry, the sectors of the masts, crow's nests, cross-trees, flagpoles, antenna, etc. (pieces ranging from no. 213 to 317); the sizes, position and "tapering" of the various elements can be traced from the natural-size pictures in table 7, 8, 9 and 10 and from the special list. To "taper" the pieces, i.e. to regularly narrow them towards one end, first use large grain glass paper fixed to the usual block of wood then increasingly fine abrasive paper.

For the linking up between the extremities of the masts and the respective caps we would advise you, as illustrated, to insert some pieces of nail, all fixed with two-component glue. The no. 223 handrails of the crow's nests, made from a flexible strip, should be curved by utilizing as a template the respective bases in plywood, then carefully glued to the special supports. Make the holes for the masts very carefully in the caps as well as those with grooving for the passage of the no- 605 and 702 halyards; in the same way, make the holes in the masts, still for the halyards (no. 572, 637, 670, 736, 771, 852 and 876). It is advisable to add, to the crow's nests and the flagpoles, the particulars destined for the rigging. Do not glue the mast firmly into place, or the bowsprit, until you have checked inclination (see Table 1). During drying, the masts may be easily fixed in correct position by means of temporary wires tied in various

points of the hull (viewing the model from bow to stern, both must be perpendicular to the waterline).

RIGGING -The rigging components (items no. 318 to no. 899) have been numbered singly to simplify setting up as much as possible; here again, they are numbered in order to assembly priority. As usual, the material and measurements of each elements (e.g. the section of the cord to be used) are indicated in the special list. If you have any difficulty in inserting the end of the cord indicated in a block, slowly widen the hole with the point of a red-hot pin, but do not exert too much pressure, otherwise the block will break. It is also suitable to seal each tie with a coat of glue to guarantee its wear. To prevent deformations in the masts trim, the stand rigging (from 320 to 525), although taut, should never exert too much force on the piece to which they are fixed, but balance each other with the symmetrical elements, located on the other side of the model. The running rigging seem much more realistic if left not completely taut, i.e. with a suitable bend (in this connection, see the manovres in Plate 1). The order of the rigging positioning on the upper sectors of the masts, starting from the bottom, is still the following: first the pieces no. 321d, 331d, 341d; then all the ropes (no. 351d, 357d, 364d, etc.) the eventual mast-tops (no. 420d, 428d), the unfurling of the stays (no. 436, 441, 446 etc.) and, lastly the strops of the blocks (eg. no. 467, 610).

A couple of centimeters of the rigging, which terminates inside the model, should be inserted into the no. 160 slits of the hull, simply by applying a little glue in the slit. The same applies to the no. 643,660d and 676 ropes, the end pieces of which should be inserted and blocked in the special openings on the forecastle: in fact, in reality, there was a deck below this bridge supplied with bollards like those reproduced by us at the foot of the main mast the no. 608 rigging also presented a large bollard identical to that of the main mast; in order to simulate the tackle as faithfully as possible, we would advise you to make it by utilizing the block with three holes no. 607, and carefully inserting the tackle covered with glue for metal in the special recess in the no. 5 frame (the no. 608 rope can be joined up to itself or blocked with glue on the no. 607 block); when dry, the rigging will be taught as though there really was a large bollard under the forecastle.

In addition to the illustrations and the usual list, please refer to the special diagram for the order and assembly of the rigging.

FINAL SUPERSTRUCTURES - Fix to the masts, as previously described, the flags (items from no. 900 to 904).

After accurate verification of the inclination of the holes, already made in the no. 28 and 29 supports, glue the respective chopped-off gun-barrels no. 905,906 and 907 to these; make, as illustrated, the mantelets (elements ranging from no. 908 to 914) and joint them to the upper margin of the portholes. Assemble the cannons (pieces from no. 915 to 921) and place them on the model, optionally adding the particulars indicated from no. 922 to 927. Assemble and firmly fix at the stern the two lamps (items from no. 928 to 937), inserting the end of the no. 928 and 937 supports for several millimeters into the hull. Joint the no. 938 anchors to the no. 939 chains, then to the no. 940 rings, optionally completing them with the buoys indicated from no. 941 to 944 (the no. 943 wound cord should, to respect the scale, be at least a meter long); add the no. 945 cables (terminating in the two of the already-made four holes nearest to the keel, in correspondence with the no. 128 coverings) and the equipment indicated from no. 946 to 953d (the anchors can be suspended vertically from the crane by means of the hoists alone, or bolted to the bulwarks as illustrated). Complete the helm with the particulars described between no. 954 and 959d. Then assemble the final base by gluing elements no. 960,961 and 962 it is not excluded that, after checking that the hull is correctly positioned, the fork no. 961 require slight adjustment due to the slight variations in the overall dimensions of the underbody, due to the greater or lower degree of finishing with glass paper of the frames and planking. The name plate no. 963 is optional.