

JSC

NR KATALOG.

267

MIKROFLOTA

ISSN 1508-5449

3
1999

PANCERNIK

DREADNOUGHT

MODEL KARTONOWY W SKALI 1:250



At least since the beginning of the XXth century sailors and naval architects contemplated an idea of „all-big-gun-battleship”, armed with a considerable number of uniform, large calibre guns, instead of two or three calibres meant to open fire at different distances. The experience of the naval engagements of the Russo-Japanese War prompted Royal Navy to hasten the construction of such a ship, which already was under development as a logical step in British warship construction. Laid down in Portsmouth Dockyard in October 1905 and named DREADNOUGHT, she was built in 14 months. She was a revolution in the naval warfare, making all existing battleships obsolete. In addition to the enormous firepower (250 % increase) she was fitted with steam turbine propulsion, which enabled her to steam 3 knots faster than other battleships. Another feature, not to be seen immediately, were lower running costs compared to previous types.

Other nations were quick to follow: USA (already working on such a ships - the SOUTH CAROLINA class), Japan, then Germany and, considerably later, other nations. The DREADNOUGHT herself was obsolete by the beginning of the First World War. Nevertheless, in 1914 she was a flagship of the 4th Battle Squadron of the Home Fleet. She participated in many operations. The DREADNOUGHT has the distinction of being the only battleship to sink a submarine, when on 18 March 1915, during a North Sea sweep she rammed and sank the U29. After 1916 refit (which drastically altered her silhouette) the DREADNOUGHT became the flagship of 3rd Battle Squadron. Since March 1918 again flagship of 4th BS, Grand Fleet. Deleted in 1919, the DREADNOUGHT was sold in 1921 and broken up a year later.

TECHNICAL DATA	
Displacement:	17,900 tons standard, 21,845 tons full load
Length overall:	160.32 m / 525.98 ft
Beam:	25 m / 82.02 ft
Draught:	8.07 m / 26.48 ft
Main armament:	10 × 305 mm / 12 in 27 × 76 mm / 3 in (1906), 24 × 76 mm (1915)
Torpedo tubes:	4 × 450 mm / 17.7 in (under waterline)
Machinery:	18 boilers Babcock & Wilcox steam turbines Parsons, 4 screws
Power:	26350 HP
Speed:	21.6 knots
Fuel:	900 tons minimum; 2,900 tons maximum
Crew:	695 - 773

The DREADNOUGHT has the distinction of being the only battleship to sink a submarine, when on 18 March 1915, during a North Sea sweep she rammed and sank the U29. After 1916 refit (which drastically altered her silhouette) the DREADNOUGHT became the flagship of 3rd Battle Squadron. Since March 1918 again flagship of 4th BS, Grand Fleet. Deleted

written by Marek Twardowski

ASSEMBLING INSTRUCTION

- 1-3 Hull base. Connect the parts by means of tabs. Keep the centre line straight.
- 4-13 Longitudinal stiffenings of hull. Assemble parts 4, 7, 10, 11, 12 as boxes. Glue stiffenings 5, 6 into parts 4 and stiffenings 8,9 into parts 7. Stiffenings 13 connect parts 10 and 11. Glue all parts on base (Fig. 1).
- 14,15 Stiffening of hull raise. Assemble part 14, glue stiffening 15 at the front and glue the part on 7.
- 16-33 Frames. Glue the parts on base and to longitudinal stiffenings. Port side (L) and starboard (R) are marked on frames. Bend side tabs of frame 31 to bow and glue to parts 4 and 14.
- 34,35 Deck. Glue part 34 to stiffenings and frames after cutting out marked openings. Connect part 35 with 34 by means of tabs and glue it also in front part with tabs directed to the inside of frame 31.
- 36-41 Bow part of raised deck. Cut out marked openings and assemble part 36. Glue oblique part of side wall 37 at starboard. Glue tabs 38 where deck is connected with walls. Glue oblique hawse-pipes walls 39 from inside where the openings are and glue them by means of side and back tab, so that they are bent to the bow (Fig. 2). Glue stiffenings 40 and 41 in marked positions. Place ready deck on part 14, frames 31-33 and part 35.
- 42-44 Central part of raised deck. Assemble the part and glue it on part 35, 36 fastening it to tabs in stern part of 36. Glue parts 43 from below to protruding deck part in bow part of 42. From the stern place parts 44.
- 45-47 Stern part of sides. Bend part 45 half-round in stern part and connect both parts of sides by means of tab 46. Bend stern frame 47, fold it along marked line and glue in axle to tabs of parts 4. Glue parts 45 to deck and base starting from stern.
- 48-52 Bow part of sides. Glue part 49 by means of tabs 50 to part 48 after bending the part and cutting out openings. Glue oblique walls of hawse-pipes 51 in bottom part, so that they are placed diagonally and opened in upper part inwards (Fig. 3). Glue ready parts 48, 49 starting from bevel of side to deck and base. At the front glue stem 52 bent in upper part and broken in bottom

- part.
- 53 Central part of sides. Glue the parts to tabs of parts 43, 46 and to base and deck.
- 54-58 Side walls of midship superstructure in bow part. Cut out marked openings and glue parts 54, 55 at the sides of part 36. Glue their front parts to deck of 36 and connect them in central part by means of part 56 bent half-round along marked line. Glue part 57 at starboard and place on it oblique bulwark part 58.
- 59-63 Side walls of midship superstructure in stern part. Glue parts 59, 60 in half-round and oblique part of 42 and glue them to parts 57 and 55. Glue half-round bent parts 61 at both sides of break in bulwark. Cut out marked openings and glue parts 62 from stern. Cut out openings and glue part 63 in central part.
- 64-67 Assemble superstructure 64 on part 36 and glue it to part 56. Assemble funnel bases 65, 66 and glue them on parts 36 and 42. Assemble part 47 and glue it on part 42.
- 68-79 Ventilators. Cut out bases 68 and wrap them with strips 71. In similar way wrap strips 72 around parts 69 and strips 73 around parts 70. Assemble covers 74-77 and bend half-round ends of rectangular part. Assemble stanchions 78, 79 and glue them on tops of longer edges of bases strips: two stanchions 78 and two stanchions 79 on two bases 68, four stanchions 79 on two bases 68, two stanchions 78 and two 79 on bases 69, two stanchions 78 and two 79 on bases 70. Glue covers on stanchions: covers 74 with higher part directed downwards on two bases 68, covers 75 horizontally on other two bases 68, so that one longer wall overlaps side wall, covers 76 on bases 69 and covers 77 with higher part directed upwards on bases 70 (Fig. 4). Ventilators without covers should be glued on part 36 from the side of bow behind part 64. Glue ventilators 68 with covers 75 on part 42 and to part 66, and place ventilators 69, 70 on part 47. Ventilators should be directed with cover to bow (assembly drawing).
- 80-87 Bunkering winches. Assemble parts 80 as tubes, glue discs 81 at both tops and glue the parts on bases 84 and 85. Assemble parts 82 as tubes and glue parts 83 at both tops. Other part 83 should be glued on base 85 (Fig 5). Assemble four parts 86 as

tubes, glue pairs of discs 87 at one side and glue the whole with other side from outside to parts 83, so that two winches 84 have that part on the right and one winch 84 on the left. Glue other four parts 86 with discs 87 to parts 54, 55 and two of them to part 62. Glue two winches 84 (left and right) on part 42 with parts 86 directed inwards). Glue other winches 84 and 85 on part 34.

88-90 Dampers of Diesel engines. Assemble parts 88 as tubes and glue from above and below discs 89. Assemble parts 90 as tubes and glue from below to discs 89. Glue ready dampers on part 36 near part 65.

91 Glue it on part 42.

92-98 Twelve big searchlights. Assemble parts 92 as tubes. In front part glue doubled discs 93 and in back part place discs 94. Assemble bases 95 as bevelled cones and glue them on discs 96. Bend parts 97, glue parts 92 inside and place on bases 95. At the top on parts 92 glue parts 98. Place ready searchlights: two of them on part 116, two on part 157, two by means of ring 163 on p 106, two on part 175 and two on part 216.

99-105 27 guns 76 mm. Assemble the barrel out of stick and wrap it with part 99 (Pattern A1). Assemble discs 100 and glue part A2 in openings of twelve discs 100. Place tubes 101 tightly rotating on part A2. Other tubes (15 pieces) should be glued on discs 100 (Fig. 6). Glue part 102 at the sides of tubes 101. Glue part 99 with barrels by means of strip 103 on part 101. Now the barrels may be elevated. Glue guns that rotate on parts A2: six of them on part 36, four on part 42 and two on part 106. Wrap strips 105 around discs 104 and glue them from below to discs 100. Place fifteen assembled guns: ten of them on turrets 237, two on part 36 and three on part 34.

106-110 Bow part of boat deck. Assemble part 106, from below glue two strips 107 parallel to longer axle and then strips 108 perpendicular to 107. Glue the strips vertically (Fig. 7). From the back glue stanchion 109 and then stanchion 110 to it. Fasten ready part to the tabs of parts 54, 55 and glue them by means of stanchions to part 36.

111 Platform for ammunition transport. Assemble big rectangles of part 111 and glue together with gangway on bulwark of part 59 and 60 in marked position.

112-119 Stern part of boat deck. Glue stanchions 112 to deck 42 and fasten them with longer horizontal part to outer edge of oblique wall of part 67. Slide parts 113, 114 through openings in parts 62 and glue them by means of their ends: part 113 to part 66 and part 114 to 67. Glue parts 115 with longer part directed to the middle between parts 112 and 113. Assemble part 116 and glue it to tabs of part 62 and to stanchion 112. Glue strips 117 inside and strips 118 outside part 116. Fig. 8 shows position of parts. Wrap stern part of 116 with railing 119.

120-124 Flag deck. Assemble parts 120, from below glue two parts 121 (parallel to longer axle). Other end of parts 120 should be glued to part 124. Glue two stanchions 122 at ends of parts 121. Glue part 123 transversal where the narrow rectangular part of 124 ends. Glue ready deck in bow part on stanchion 109 and in stern part on part 67 (Fig. 9).

125,126 Stiffening of boat deck framework. Glue three parts 125 where parts 112, 113, 114 touch parts 67, 66 and one part 125 where parts 107 and 109 touch each other. Glue parts 126 where parts 107 and 108 touch each other and move them towards part 65.

127 Gangways connect parts 106 with part 36 and are moved towards part 65.

128-150 Funnels. Bend fore funnel 128 half-round, assemble parts 129 and glue one part 129 by means of four tabs 130 from below and the second one 2 mm under upper edge of funnel. From inside glue strip 131 (even with funnel edge) and then also from inside strip 132. This strip protrudes out of funnel edge. Assemble

hood 133 and glue it in marked position above bottom edge of funnel. Assemble hood 134 and glue it in similar way on part 132. Narrow part of hood (where the part is glued) should be placed at the side of bow, opposite to the edge where the funnel is glued. Carefully cut out part 135, glue part 136 along longer axle and fasten perpendicular strips 137 on it. Bend tops of parts 136, 137 twice and glue them from inside to part 132 (Fig. 10). In similar way assemble funnel 138, inside glue parts 139, strips 140, 141, hood 142, 143, part 144 and strips 145, 146. Glue fore funnel on part 65 and after funnel on part 66. Glue bent part 147 from the bow on bottom hood of fore funnel and fasten two parts 148 on bottom hood of after funnel. Assemble trunks. Glue trunk 149 from bow side on first funnel. Place parts 150 on after funnel: one trunk from the bow and two of them from the stern.

151-154 Ladder and platform of fore funnel. Assemble ladder 151, glue platform 152 from above and glue the whole to trunk 149 on fore funnel. Glue part 153 to upper edge of hood and to trunks. Bend railing 154 and glue it at both sides.

155,156 Admiral room. Glue roof 156 from above to part 155 and glue the whole on part 124.

157-164 Admiral bridge. Assemble part 157 and wrap it with railings: from outside with railing 158, from inside at bow (where the break for gangway is) with railing 159 and at stern with railings 160. Glue railing 161 to edges of part 106 and bend tabs of its upper part inwards. Assemble parts 162, bend their ends oblique and glue to parts 106 and 124. Glue bridge 157 to parts 162 and to tabs of parts 161 and move it towards part 155. Assemble parts 163 as rings and glue them on part 106. Fasten two searchlights on them and two on parts 157. Bend parts 164 and glue at sides of parts 54, 55, to railing 161 and from below to part 157.

165,166 Gangways. Gangway 165 connects part 157 with part 124 near part 155. Gangway 166 connects part 157 with part 106.

167-174 Conning station and signal station. Wrap part 167 with strip 168, from above glue part 169 and fasten ready conning station on part 106. In similar way assemble part 170, wrap it with strip 171 and glue part 172. Place ready signal station on part 120. Cut out openings in parts 173, 174, glue them as a ladder (Fig. 11) and glue on part 169 with parts 173 perpendicular to axle.

175-186 Navigating bridge. Cut out marked opening, wrap bow part with railing 176, right side with railing 177 and left side with 178. Glue part 179 on part 175. In front part from inside glue cut out and assembled part 180 to railing 176. Wrap railings 182, 183 around compass platform 181 and glue it on part 179. Assemble stanchions 184, 185, glue part 186 from inside to stanchion 185 and fasten the stanchions from below to part 175. Glue ready bridge to parts 173, 174 and with stanchions to part 106. Place two searchlights 96 on wings.

187-189 Flag platform. Assemble two stanchions 187 and glue them horizontally on part 172 with longer edge directed upwards along marked line. Wrap disc 188 with railing 189 and glue on stanchions, so that the break for ladder is placed at the side of stern.

190-194 Ladder and gangways. Glue ladder 190 to wall of part 172 from the stern. Gangway 191 connects through the opening part 175 with railing 158 of part 157. Gangway 192 connects part 175 with part 106, gangway 193 part 181 with 174 and gangway 194 part 120 with 42.

195-208 Fore tripod mast. Assemble bottom and upper part of lower mast 195, 196 as tubes and connect them by strip 197. Glue discs 198 in fours, make an opening and glue them into opening in bottom part 195. Place part M1 in the opening and fasten lower mast in opening in part 36 driving it through opening in part 124. Assemble parts 199, 200 as tubes and connect them by strips 201. Assemble small searchlight platform 202, from above glue part 203, so that it covers partly two side openings in part 202. Wrap

railing 204 around part 202. From below glue side lower masts, so that their edge of glueing is placed inwards. Slide platform 202 on central lower mast till marked position. Slide ends of side lower masts through partial openings of part 106 and fasten to part 36. Wrap all three lower masts under part 202 with strip 205. Glue stanchion 206 from the bow to strip 205 and part 203. Assemble parts 207 and glue them from outside in marked positions to parts 195 and 199. Longer part should be glued from the bow. Assemble platforms 208 (engine room telegraphs) and glue them from inside to part 199 and with ladder to part 156.

209-213 Assemble parts 209 and glue them on parts 120 and 124. Mount crane assembly 210, glue part 211 and fasten the whole on part 124. Assemble boxes for flags 212, 213 and glue them on part 120.

214-226 Stern superstructure and after mast. Assemble superstructure base 214, cut out marked openings and glue part 215, so that the round opening is placed opposite to wall with numbers 221, 222 in part 214. Cut out openings, wrap searchlight platform 216 with railing 217 and glue on part 215, so that position of openings corresponds. Assemble lower mast 218 as a tube and glue it through openings in parts 215, 216 till they reach base of part 215. Assemble side lower masts 219 as tubes, slide them through openings in part 216 and glue in bottom part to part 34 and in upper part connect them by means of ring 220. Bend side wall of parts 221 and glue them on base 222 glueing both parts to part 214. On part 221 glue ventilators, rings 223 and then fasten covers 224 to their tabs. Glue ready superstructure and mast on part 34. Glue two stanchion 225 in marked position from below to part 226 and mount the whole to part 214 from the bow. Glue two searchlights 216 on platform 216.

227-230 Skylight of engine room. Assemble part 227, glue part 228 cut in 16 pieces and fasten the whole on part 34. Assemble part 229 as a frame, from above place cover 230 and glue the whole on part 34.

231-247 Main battery turrets 305 mm. Assemble parts 231, 232 as cones and slide them into each other with part without tab till marked level. Barrels may be also made out of stick (pattern A3). Glue discs 233 at the front of barrels. Assemble parts 234 as tubes and glue the barrels in central part. Marks on tube show position of barrel. Assemble outer walls of parts 235 and cut out openings. Bend them upwards placing the parts together with barrel tightly rotating in openings of part 234. Glue back wall. Now the gun may be elevated. Vertical walls of parts 235 should be bevelled where marked. Bend tabs of parts 236 inwards and oblique upwards and glue part 235 with barrels in front part. Cut out marked openings, bend upper parts of turrets 237, assemble side walls and slide ready parts with openings over barrels glueing to tabs of parts 236. Glue range finders 238 in the middle and range finders 239L, 239R on their left and right on part 237. Bend stanchions 240 and glue them at both sides of rectangular parts 237 in marked position. Place turrets on discs 241 and glue discs 242 from below. Cut out openings in parts 243, wrap them with strips 244. Cut out openings in parts 245, wrap them with strips 246 with central part protruding at both sides under deck. Place the turrets by means of discs 242 in parts 243, 245 and close them with discs 247. Now the turrets may rotate. Glue ready turrets with strips 244 on parts 36, 34 and turrets with strips 246 on part 35 glueing protruding side parts to parts 53.

Attention! Position of protruding parts 246 is not marked because of possibility of small moves on sides.

248-261 Steam launch 45'. Assemble hull 248 glueing tabs 249, 250 in marked positions. Cut out an opening in deck 251, glue part 252 inside and wrap it with part 253. From above place part 254. Assemble superstructure 255, glue on part 251 and place skylight 256 and narrow tube 257 (funnel) on it. Make upper part

of funnel wider. Assemble MG mount, glue discs 258 on part 251. Glue ventilators 259 on parts 255 in marked positions. Other two ventilators should be glued on cutter 262. Glue keel 269 from below to part 248 and place rudder 261 on stern.

262-278 Steam admiral's barge. Glue stern part 263 by means of tab 264 to hull 262. Glue tabs 265 and 266 in marked positions. Cut out an opening in deck 267, glue part 268 inside and wrap it with part 269. From above place part 270 and glue superstructures 271, 272 on part 267. Assemble funnel base (discs 273) and glue it on part 272. Glue tube 274 (funnel) on the base. Place skylights 275, 276 on parts 271 and 267. Fasten two ventilators 259 on part 271. Glue keel 277 under part 263 and mount rudder 278 on stern.

279-289 Sail boat 42'. Assemble hull 279 and glue tabs 280, 281 in marked position. Assemble inner part of hull 282 glueing it from inside to hull 279. Assemble seats 283, cut them out and glue to part 282 in marked position. Place stern seat 284 on stern near last seat. Glue mast step 285 in hull axle between first and fourth seat. Glue part 286 on bow and place on it MG base 287. Glue keel 288 under part 270 and place rudder 289 on stern.

290-300 Sail pinnace 36'. Assemble in similar way. Glue mast step 295 between first and third seat. Place part 297 on stern.

301-309 Two cutters 32'. Assemble in similar way.

310-315 Boat 32'. Assemble in similar way. Glue stern seat 313 on stern near last seat.

316-321 Gig 30'. Assemble in similar way.

322-327 Three whaleboats 27'. Assemble in similar way. Glue part 325 on stern bending trapezoid part downwards. Glue part 326 on bow.

328-332 Dinghy 16'. Assemble in similar way.

333-337 Stanchions and davits. Assemble boat stanchions 333 and glue two of them on ends of parts 114, two on ends of parts 117, one at starboard on ends of parts 118, one at port side on end of part 118 near bow and two on parts 121. Position of parts 333 is shown in Fig. 7. Glue admiral's barge at starboard to stanchions on parts 114, 118 and place steam launch 45' at port side. Glue second launch 45' to stanchions glued on part 117 at starboard and boat 42' at port side.

Glue pinnace 36' on this boat and then whaleboat 27' on it. Fasten boat 32' to stanchions glued to part 121 and mount whaleboat 27' on it. Assemble two stanchions 334 and glue them at both sides of part 116 where railing 119 ends. Glue whaleboat 27' (by means of strips 335) at starboard to stanchions 334 and to protruding parts 114, place gig 30' at port side and glue dinghy 16' on it. Cut out davits 336 and glue them bending rectangular tabs in central part outwards. Glue the davits to railing 158. Glue the davits with bottom part to superstructure 54 and 55. Glue two cutters 32' by means of strips 337 to davits.

338-347 Main crane. Make an opening and wrap strip 338 around stick D1. Glue outer parts of strip 339, make openings and bend sliding inside ends of part D1. This part of articulated joint makes rotation of crane in vertical axle possible (Fig. 12). Assemble parts 340, 341 as tubes and connect them by strip 342. Glue strips 343 at the tops. Assemble parts 344, make openings and glue at the sides on end of part 340 in marked position. Slide the crane with parts 344 onto part 338 and place second stick D1 in openings. This makes the rotation of crane in horizontal axle possible. Glue the crane by means of rectangular part 339 to central lower mast 195 in marked position. Cut out wheels 345, wrap them with strip 346 and glue one of them on end of crane, one on top of crane and two at the back on lower mast 196 in marked position. Glue discs 347 on end of crane.

348-366 Capstans, chains, hawse-pipes and anchors. Assemble parts 348 and glue them on part 36. Glue parts 349 and 350 to them. Assemble parts 351 as tubes, place discs 352 on them and

glue the whole on parts 348. Assemble discs 353 and glue them on parts 349, 350. Cut out openings and glue hawse-pipes 354 on part 36. Glue chains 355-357 on parts 349, 350 and on part 36. Position of chains is shown on assembly drawing. Glue parts 358 on discs 353 (assembly drawing). Assemble bow capstan 359, from below glue discs 360, ring 361 and glue the whole on base 362 and part 36. Glue stern capstan 363 on ring 364 and fasten the whole on part 34. Glue anchors 365 in bow hawse-pipes and glue anchors 366 vertically on part 171 from side of bow.

367-369 Breakwaters. Glue breakwater 367 on part 36, breakwaters 368 on part 35 and breakwater 369 with outer parts bent half-round on part 34.

370-382 Skylights and hatches. Assemble the skylights and glue them: parts 370,371 on part 36, one part 372 on part 36, the second one on part 34, part 373 on part 36, five parts 374 on part 34, four parts 374 on part 34 and two parts 375 on part 36. Assemble the hatches and glue them: five parts 376 on part 34, two on part 35, two on part 36, two parts 377 on part 34, two parts 378 on part 34, two on part 35, three on part 36, one part 379 on part 34, one on part 35, two parts 380 on part 34, two parts 381 on part 34 and two parts 382 on part 36.

383,384 Gangways. Assemble the parts (Fig. 13) and glue them on part 34, so that gangway covers 383 are bent to stern (similar as gangway cover 384 placed near bow). Gangway covers 384 placed near stern should be bent inwards.

385,386 Round ventilators. Glue assembled discs 385 on rings 386 and place ready ventilators on part 34 near stern battery.

387-390 Stern compass station. Wrap platform 387 with railing 388 and glue it on stanchion 389. Place ready station on part 34. From the bow glue gangway 390.

391 Two gangways connect part 36 with 35 near bow battery.

392-399 Open chocks and bollards. Glue open chocks 392 on parts 34, 36 and partly on side. Glue parts 393 in twos on parts 34, 35 in marked position. Assemble big bollards 394 as short tubes and glue them in pairs on strips 395. Glue disc 396 on each tube 396. In similar way assemble small bollards 397-399. Glue ready big bollards on parts 34, 35 and the small ones on part 34 and one on part 36.

400,401 Compasses. Assemble parts 400 as cones, glue discs 401 on them and place compasses on parts 175, 181, 387.

402 Table. Glue the part on part 181 in marked position.

403,404 Caboose funnel. Assemble the part as a narrow tube, cut it and bend in marked position. Glue it with bottom part to oblique wall of part 221 from the stern. From above glue discs 404.

405-412 Reels. Assemble parts 405 as tubes, wrap them with shields 406 and grips 407. In similar way wrap parts 408, 409, 410 with shields 411 and grips 412. Glue ready reels 407 on part 35 and reels 412 on part 34 in marked position.

413-417 Small searchlight of main mast. Assemble part 413 as a tube, glue discs 414 in front part and discs 415 in back part. Form part 416 as a tube, bend part 417 and glue part 413 inside. Fasten the searchlight on part 203.

418-420 Torpedo net platform. Glue parts 418-420 on parts 34 and 35. They protrude partly out of the sides.

421,422 Torpedo net spars. Glue thirteen spars on each side. Shorter spars should be glued from bow side. Position of spars is shown on assembly drawing. They may be also assembled out of sticks (pattern W1, W2). The best way to make torpedo net is to roll a strip of cellucotton and to paint it grey (Fig. 14). Glue the net on platform 418-420 after assembling the whole model.

423-439 Platforms of fore and after mast. Assemble part 423 and wrap it with railing 424. Form part 425 as a tube, glue pyramid 426 on it and place the whole on part 423. Assemble part 427 as a tube and glue it to back wall of railing 424 in marked position. Upper edge of tube should coincide with upper edge of railing. Glue parts 428 perpendicularly to railing at the sides of tube 427. Bend triangular part outwards. Glue part 429 from outside between parts 428. Place parts 430 horizontally at the height of part 423. Glue the whole on lower mast. From below glue diagonally two stanchions 431, inside place stanchion 432 and mount two stanchions 433 diagonally at the sides. In similar way assemble after mast platform. Wrap part 434 with second railing 424, glue second pyramid 426 on second tube 425 and glue tube 435 to front wall of railing. Glue parts 436 bending their triangular part outwards. Fasten parts 347 horizontally at sides at height of part 434. Glue the whole on ring of after mast 220. From below glue in front part stanchions 438 and in the back stanchions 439.

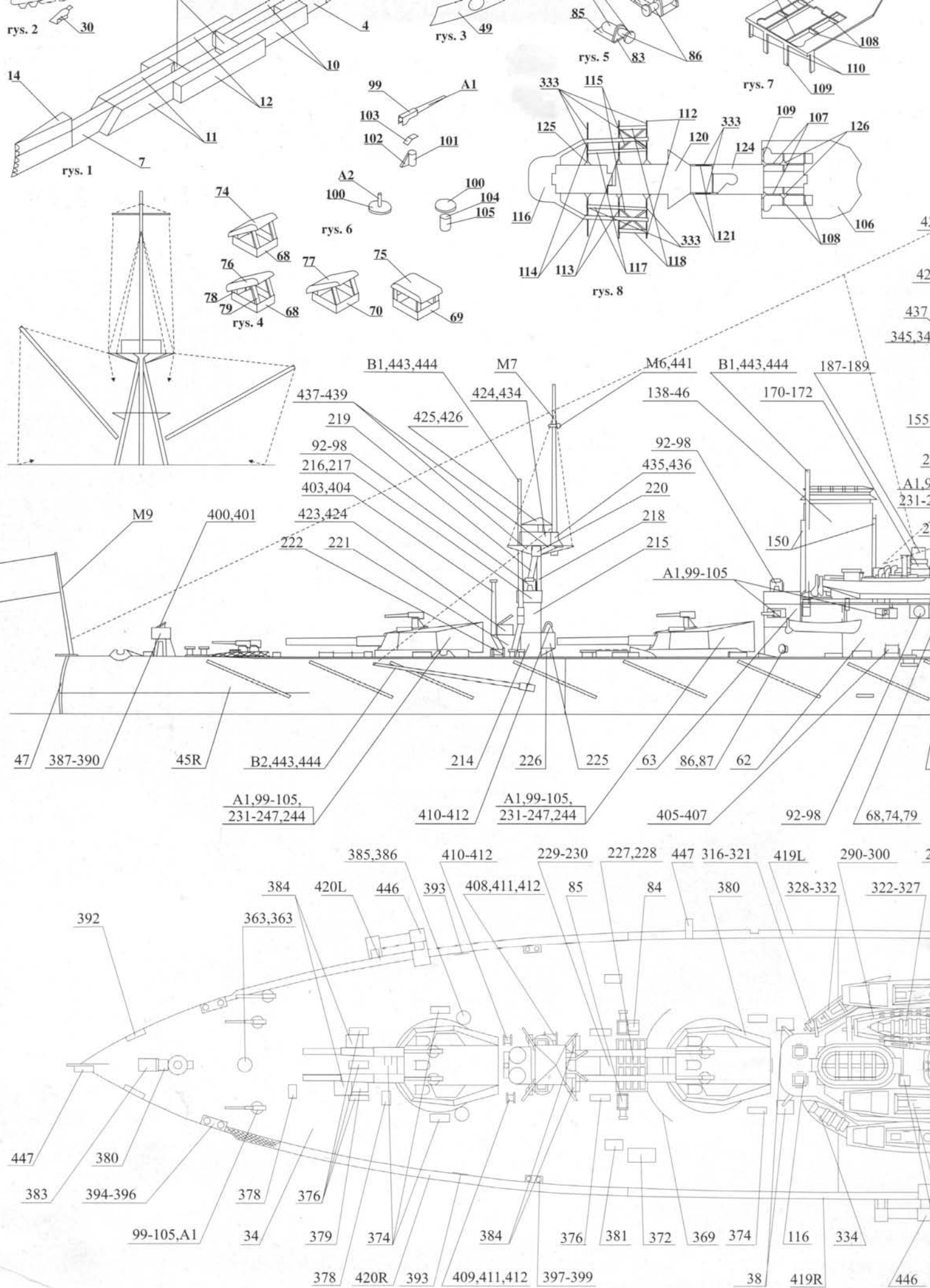
440-442 Masts and yards. Assemble fore topmast out of stick (pattern M2) and fasten yard M4 by means of part 440 on it. In upper part mount by means of strips 442 topmast M5 with yard M6 fastened by means of strip 441. Fasten yard M3 in cut out in part 428 and place mast by means of topmast M2 in tube 427. Fasten after topmast M7 with yard M5 in tube 435. Place flag-staffs M8 on bow and M9 on stern.

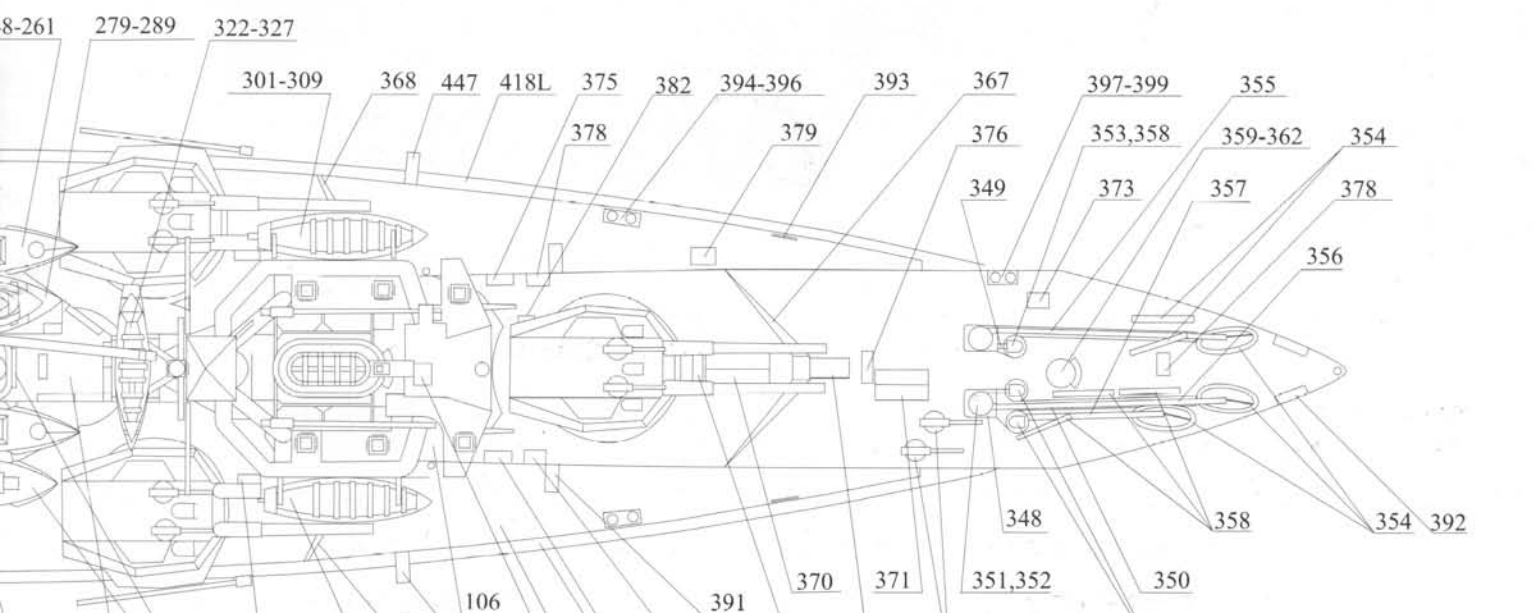
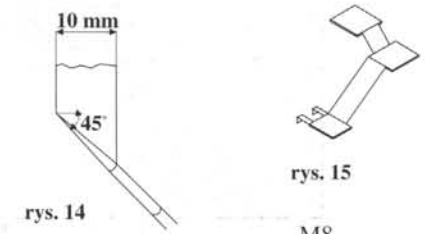
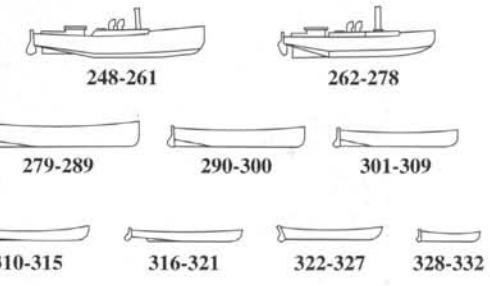
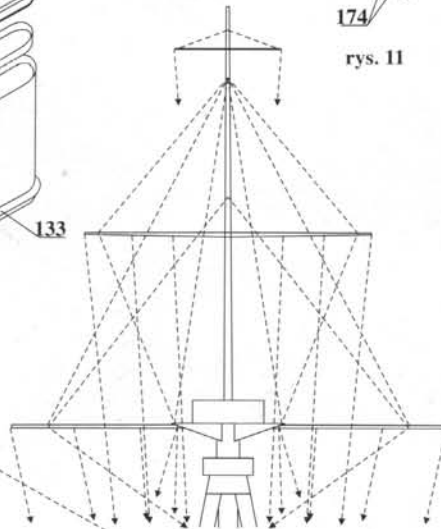
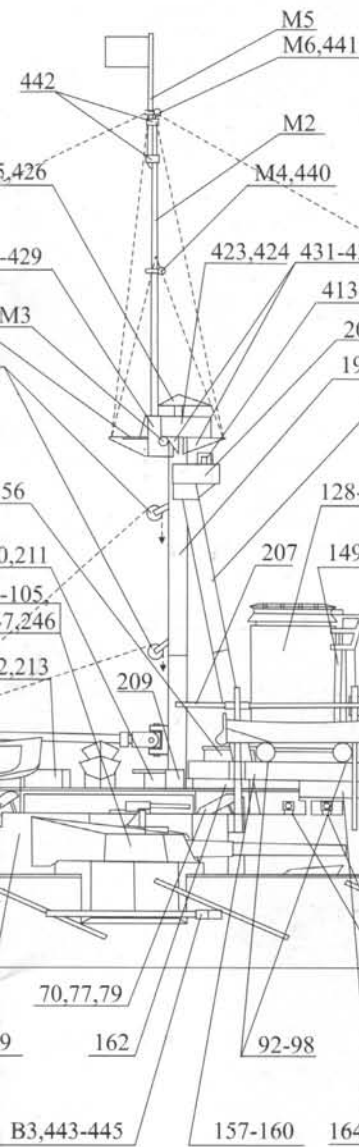
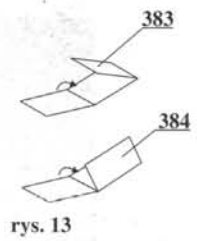
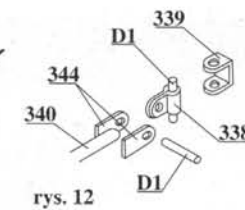
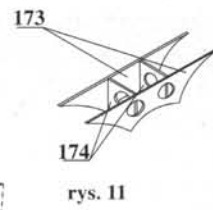
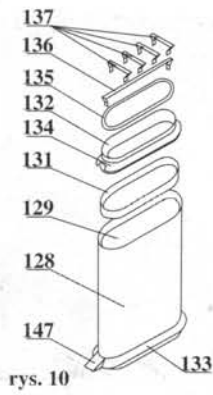
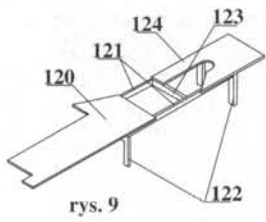
443-445 Booms. Wrap all booms with strips 443 and glue booms B1, B2, B3 by means of part 444: two booms B1 to part 219, two to part 42, two booms B2 to part 45LR, two booms B3 to part 199 and two to part 54 and 55. Glue booms B4 by means of part 444 to stanchion 445 to part 53LR. Booms can move.

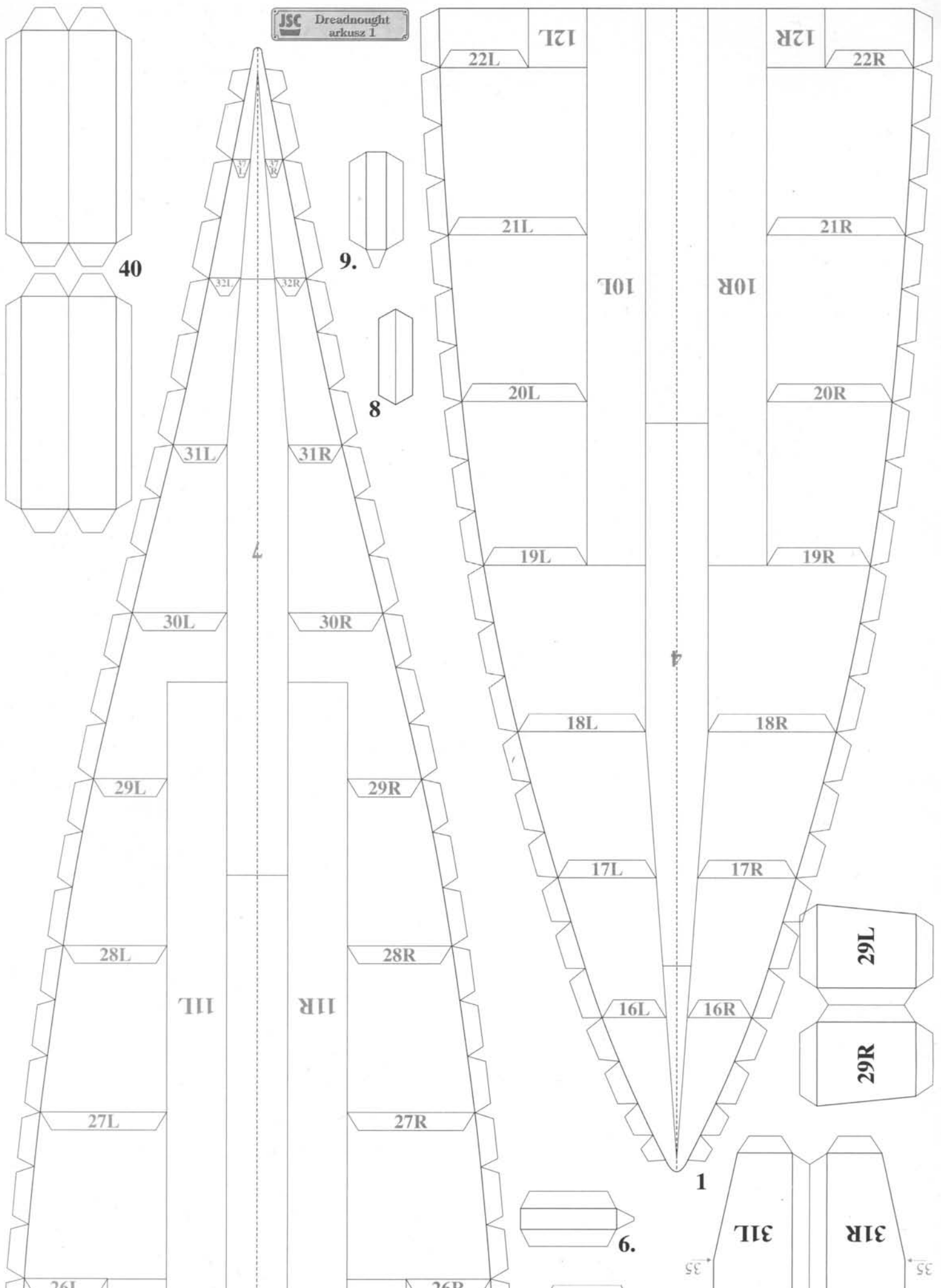
446 Main gangways. Bend outer square parts of 446 and glue them. Bend both parts of gangway and glue the parts at port side to part 420L, at starboard to part 419R and with tabs of protruding parts to the sides (Fig. 15).

447 Platforms. Glue on part 34, one on each part 418LR and one on part 419L.

Attention! You may make the rigging and hang flags to improve the model's appearance.







40

9.

8

11L

11R

10L

10R

12L

12R

22L

22R

21L

21R

20L

20R

19L

19R

18L

18R

17L

17R

16L

16R

29L

29R

1

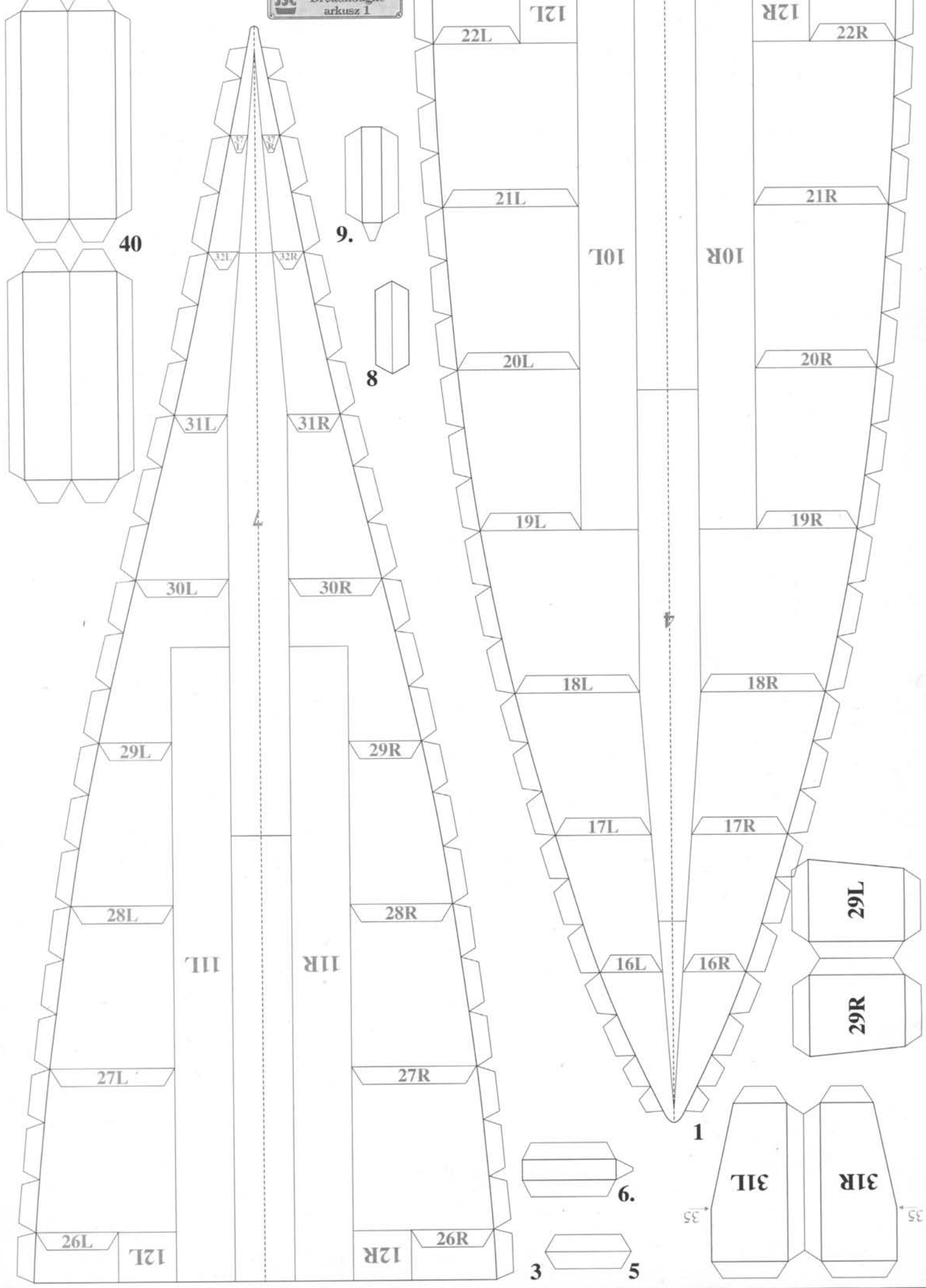
31L

31R

6.

35

35



40

9.

8

6.

1

3

6.

5

35

35

12L

12R

3

31L

31R

35

11L

11R

27L

27R

28L

28R

29L

29R

30L

30R

31L

31R

32L

32R

26R

22L

3

12L

5

21L

20L

19L

18L

17L

16L

21L

10L

20L

19L

18L

17L

16L

26R

22R

5

12R

3

21R

20R

19R

18R

17R

16R

21R

10R

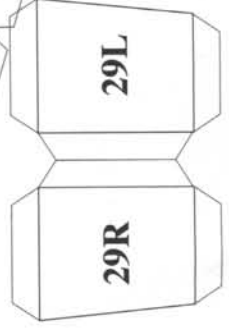
20R

19R

18R

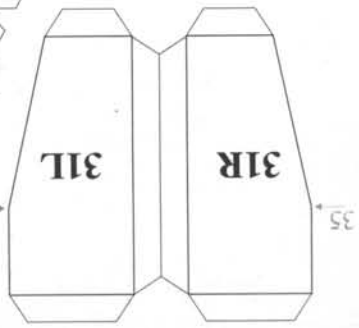
17R

16R



29L

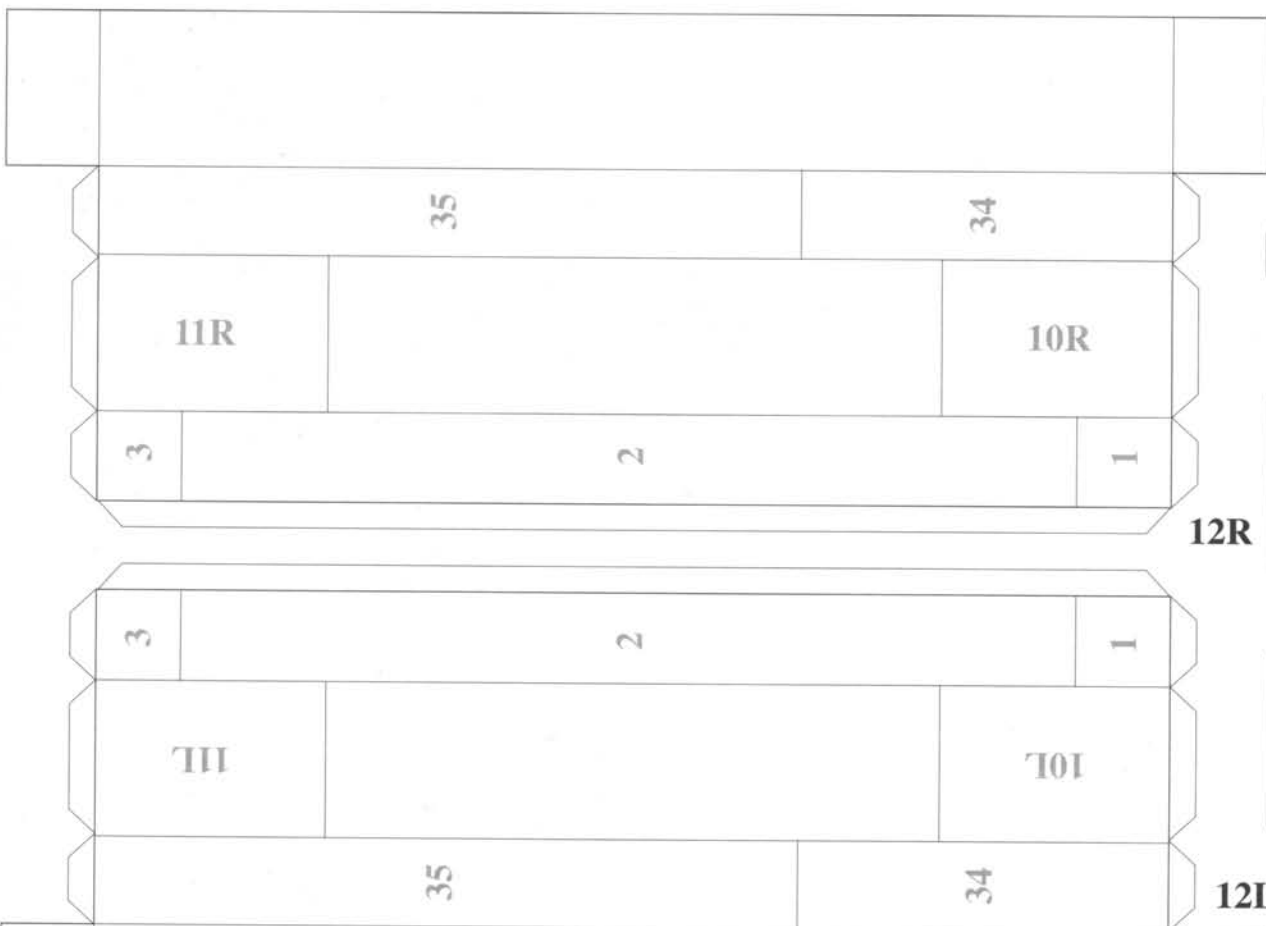
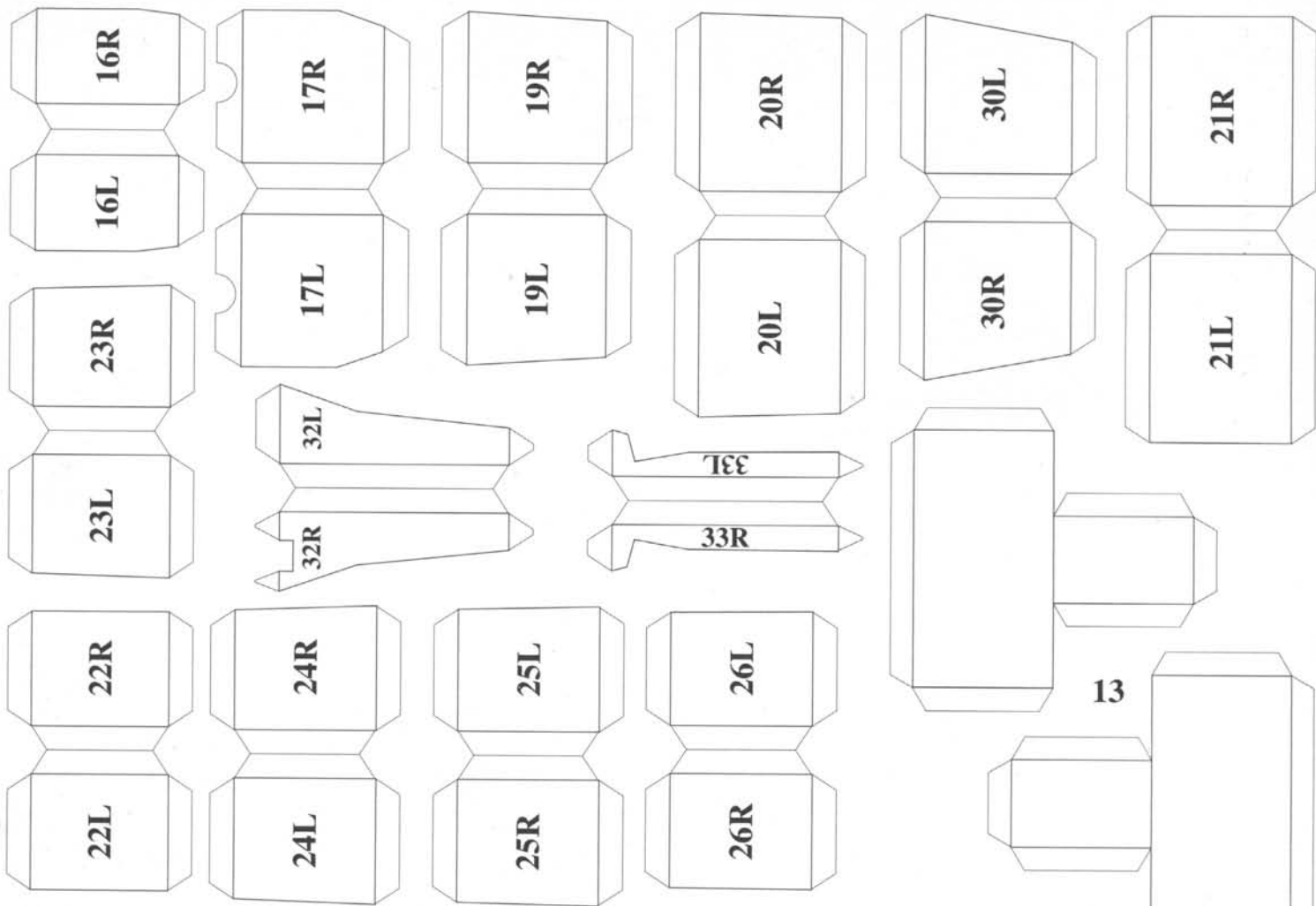
29R



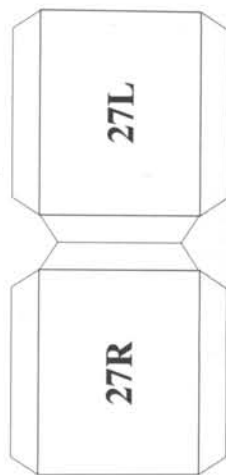
31L

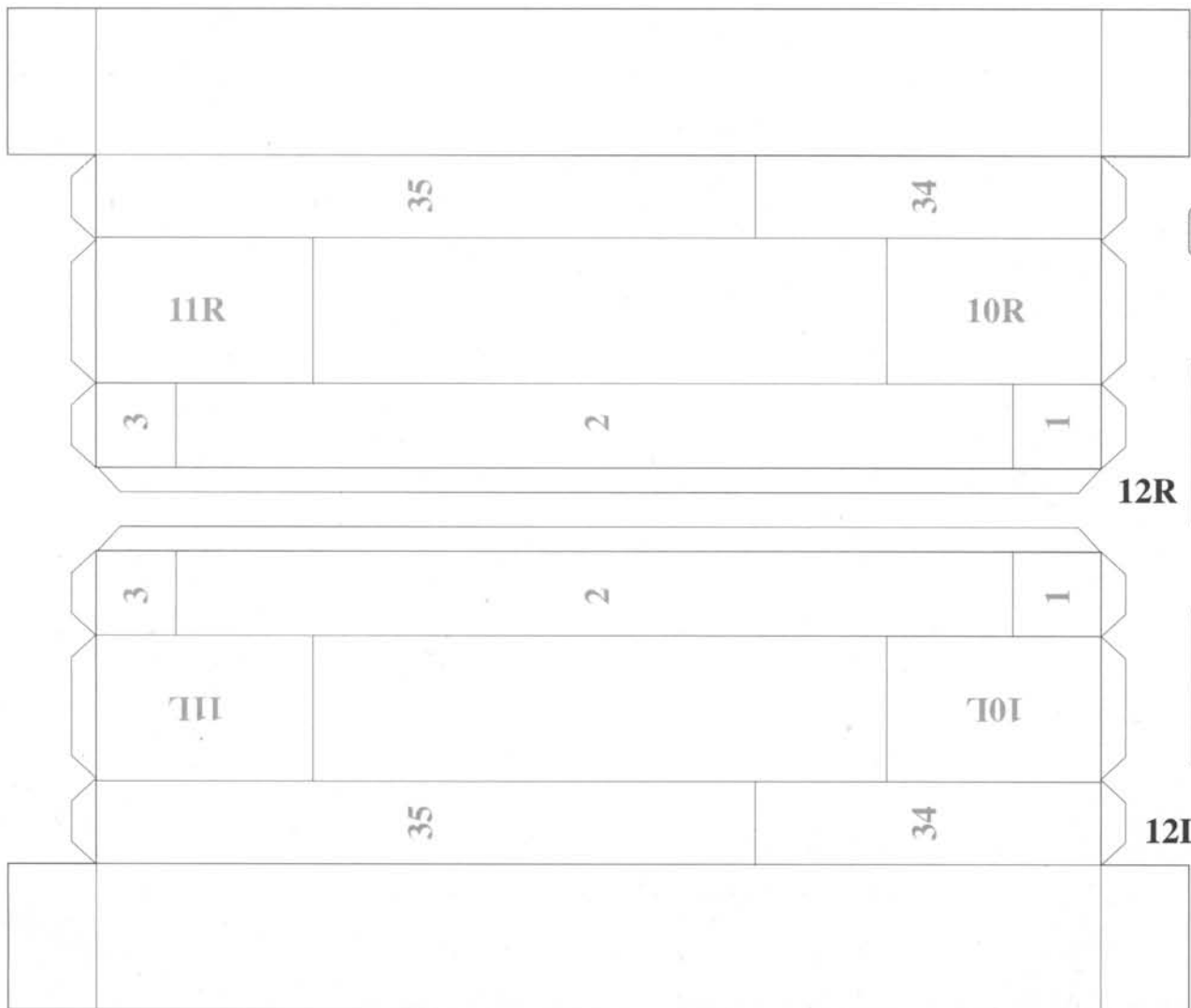
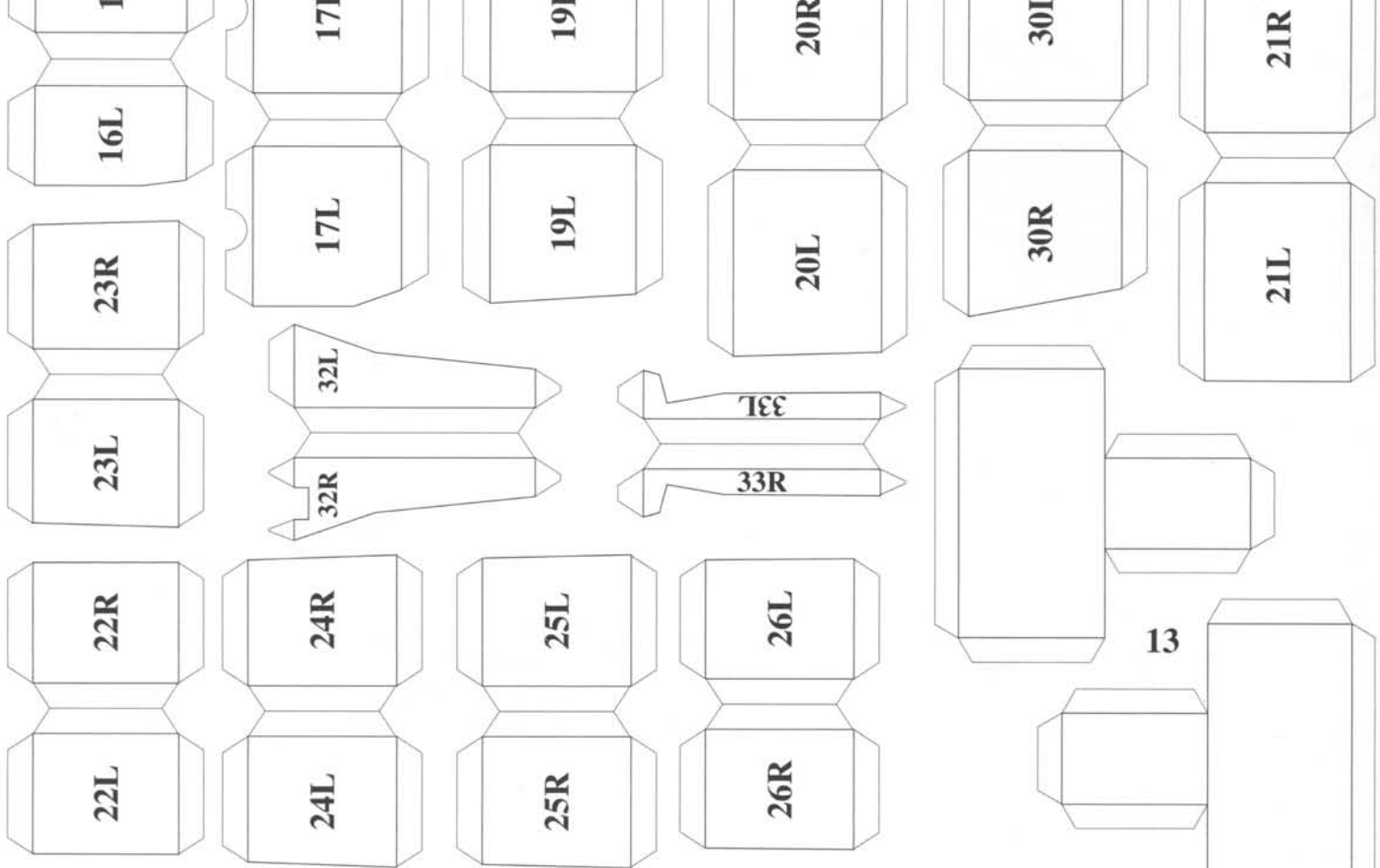
31R

35

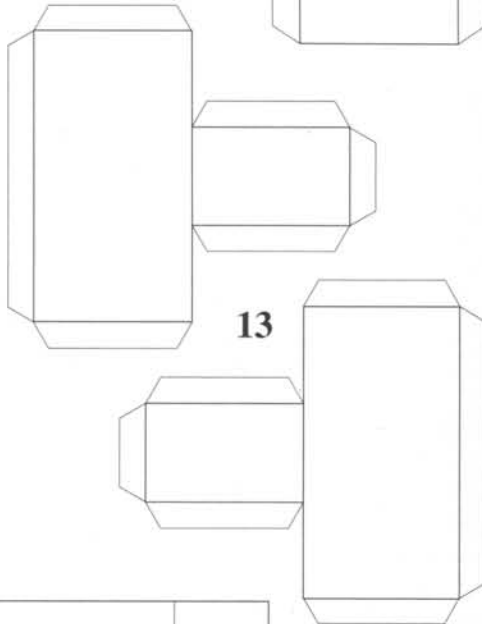
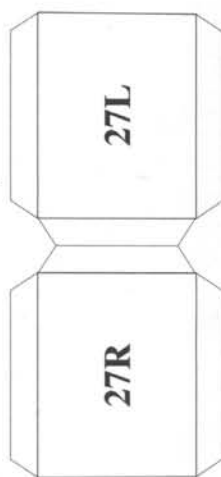


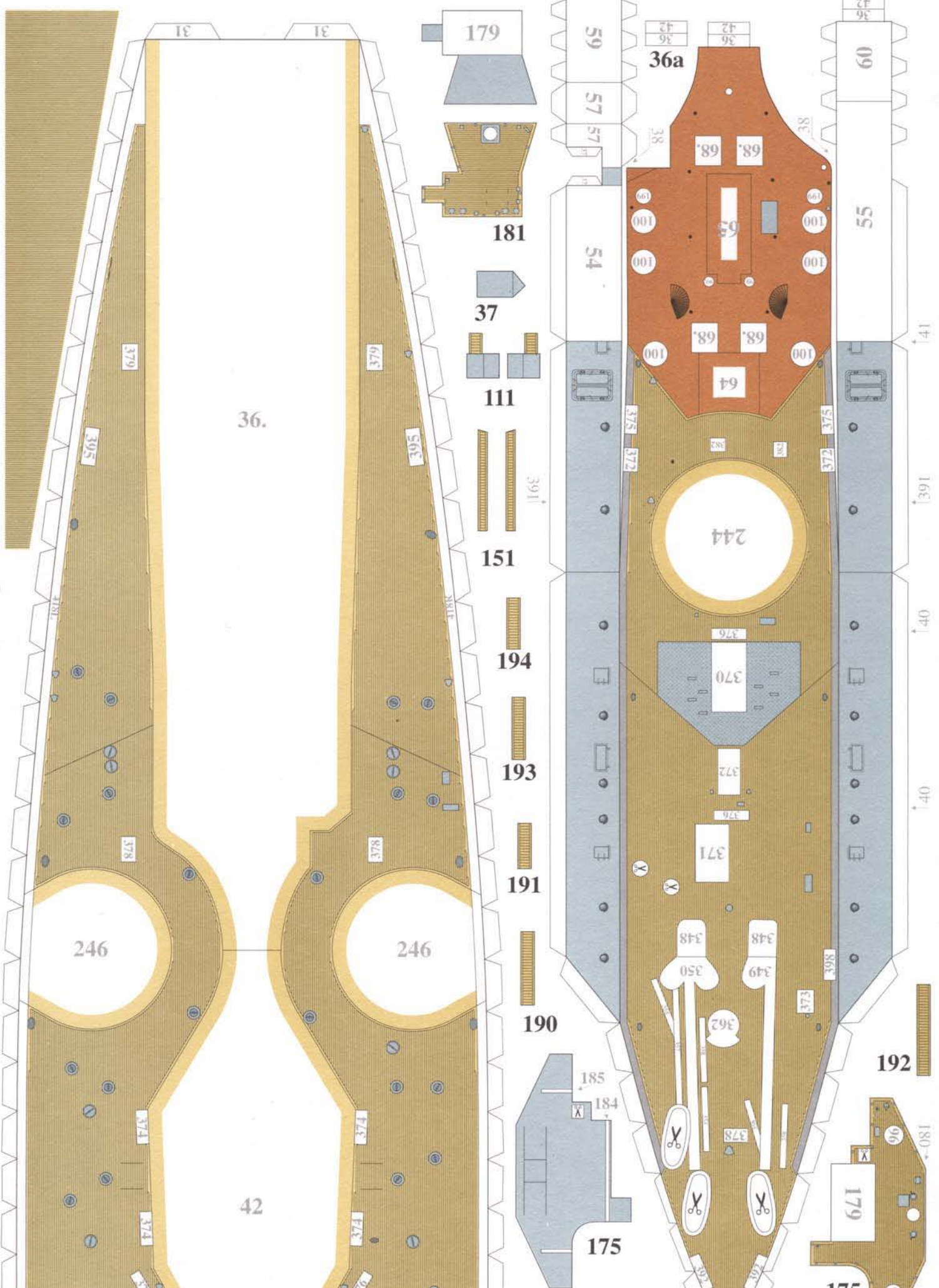
JSC Dreadnought
arkusz 2

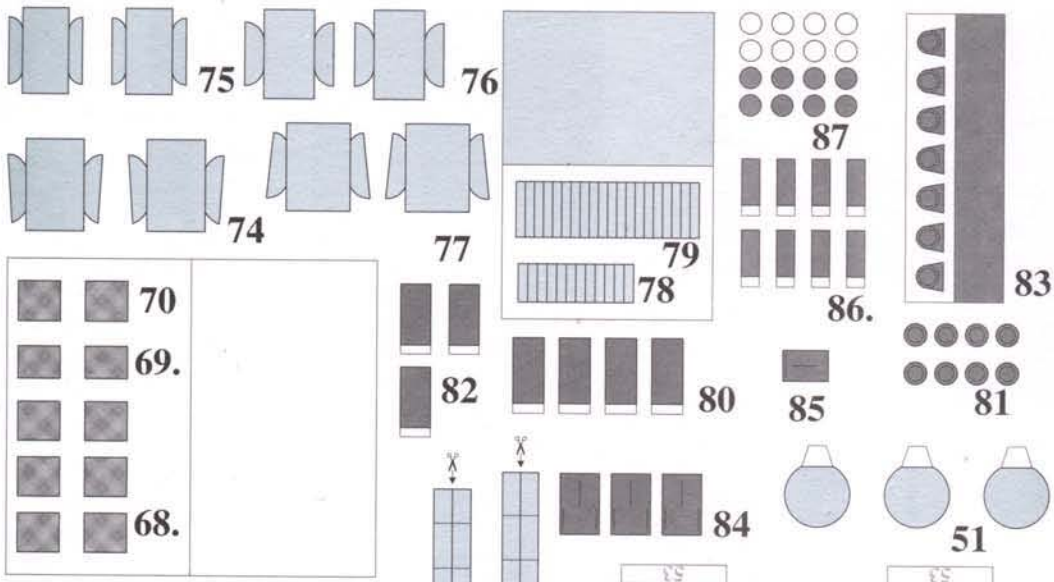




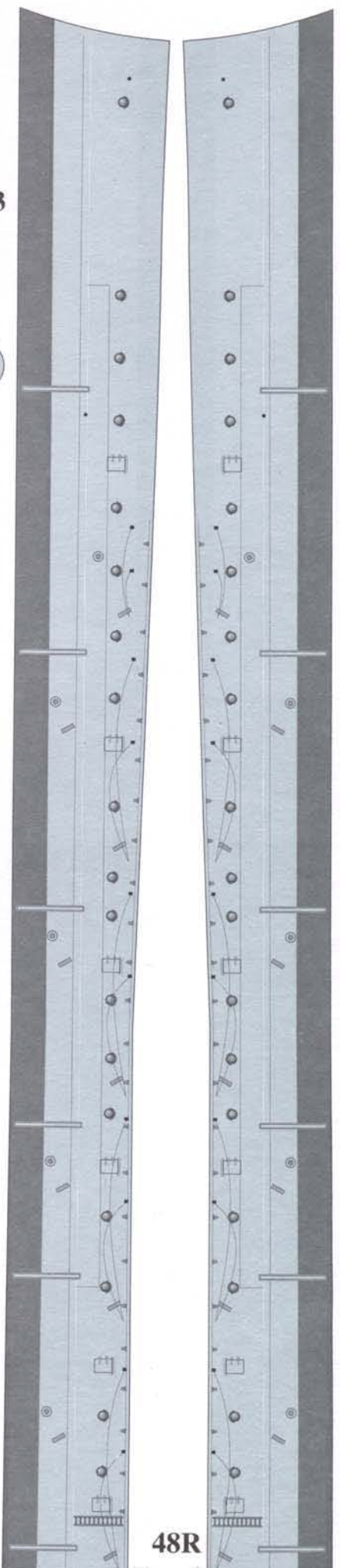
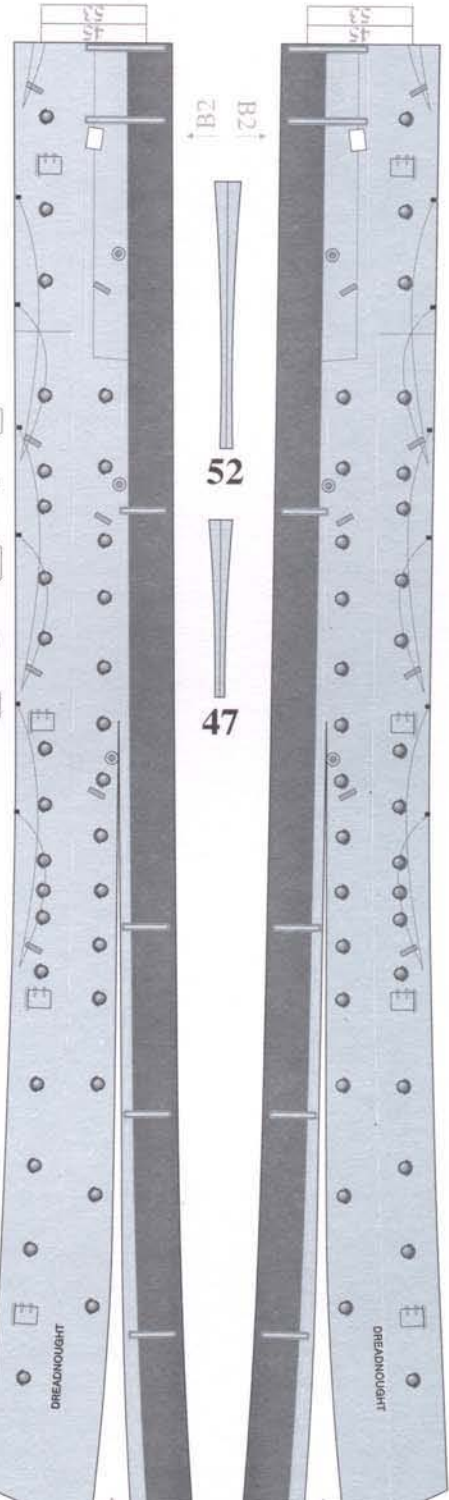
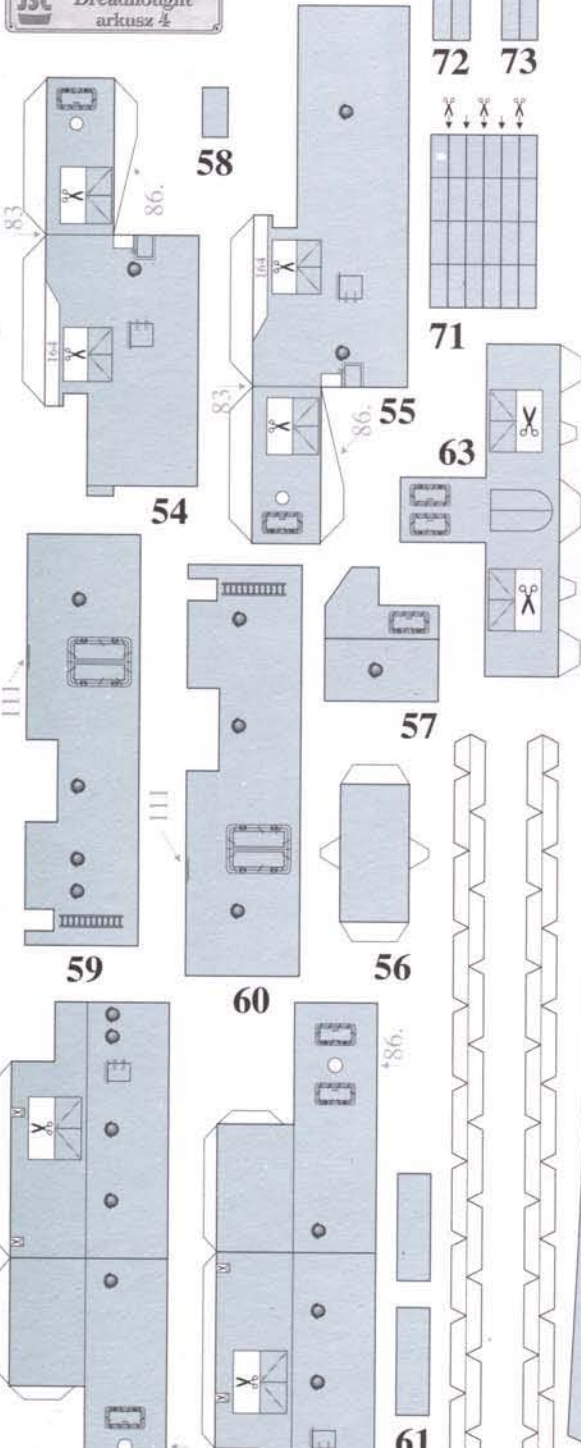
JSC Dreadnought arkusz 2

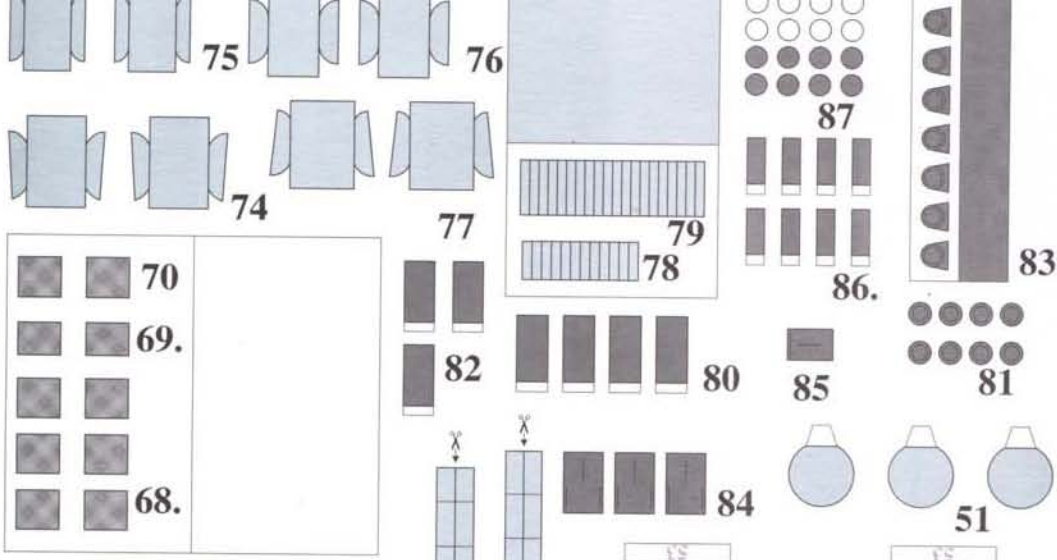




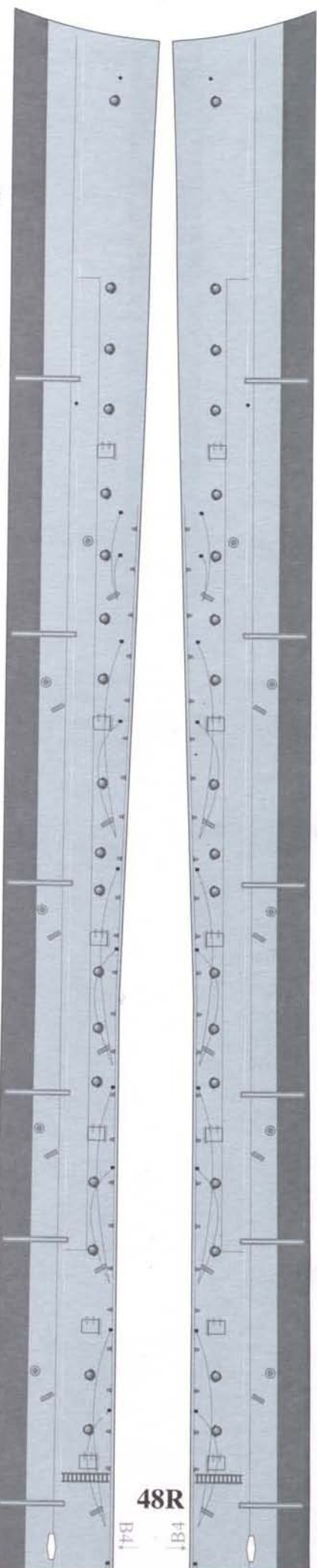
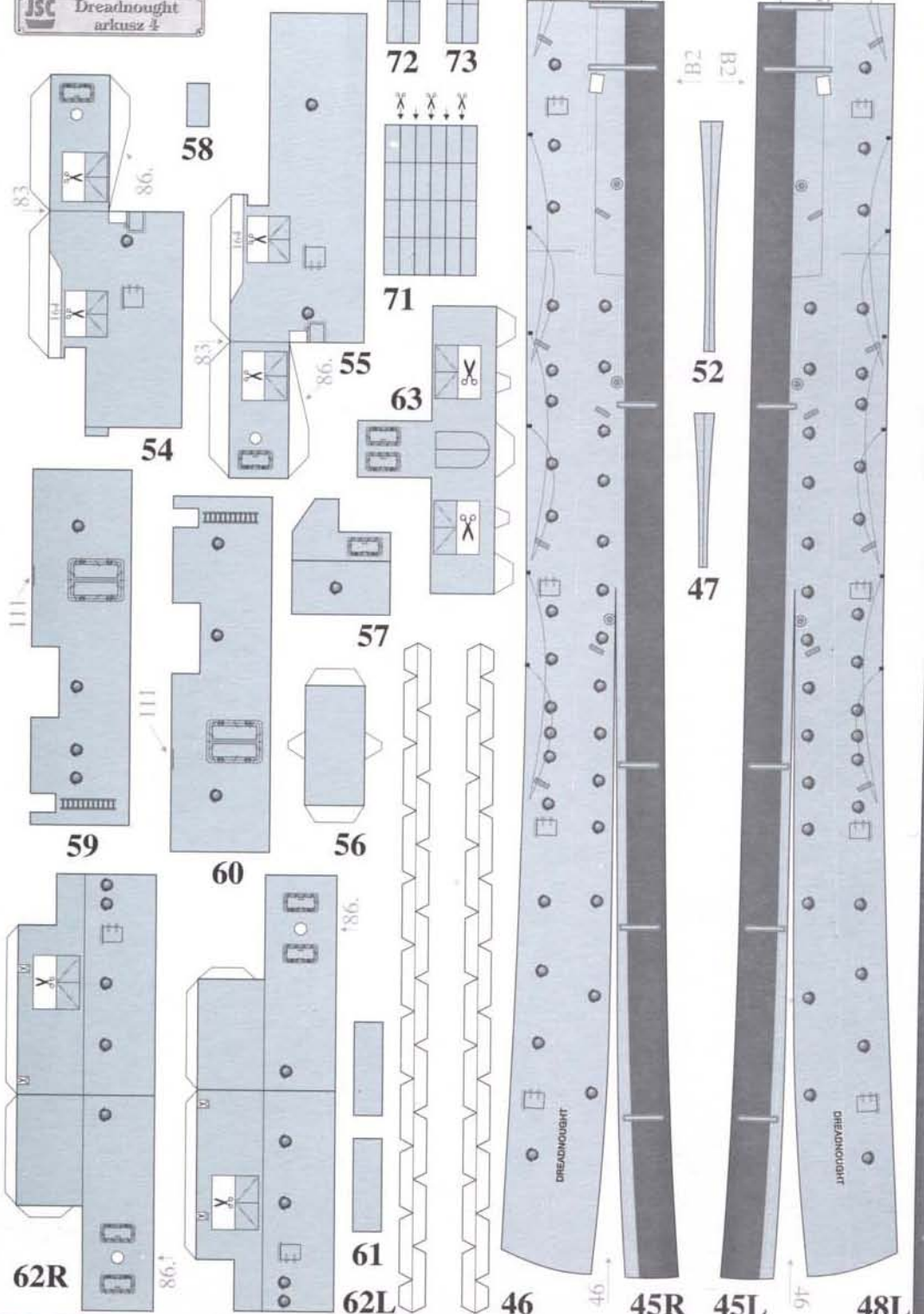


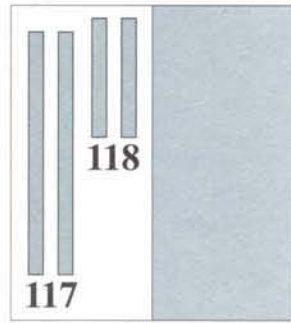
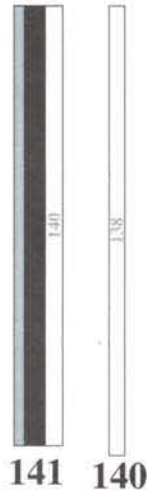
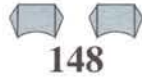
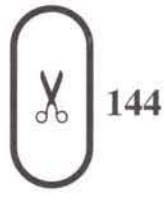
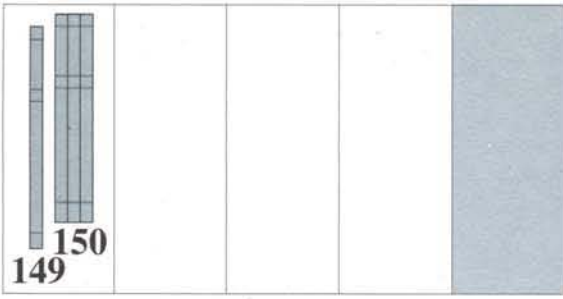
JSC Dreadnought
arkusz 4



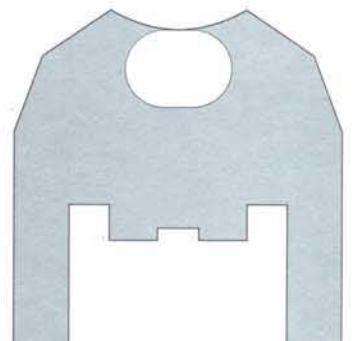
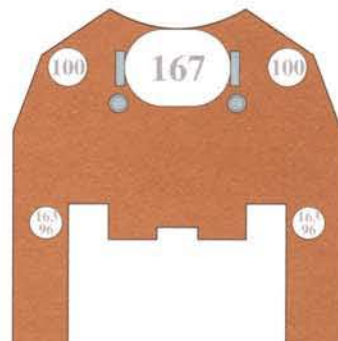
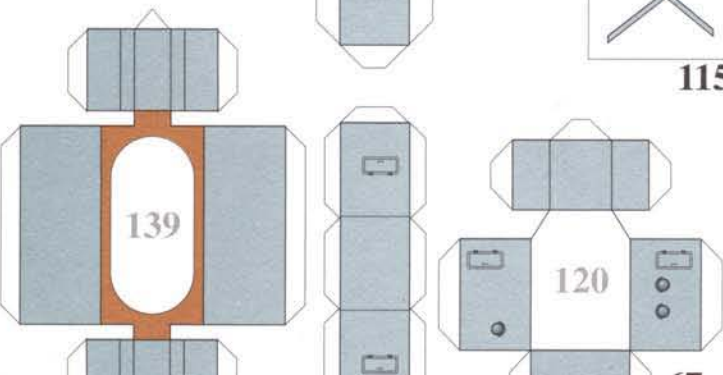
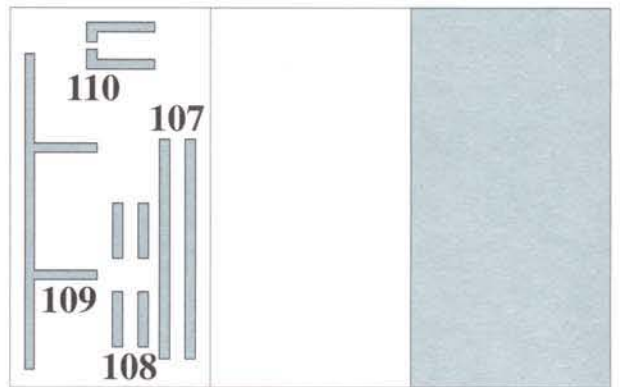
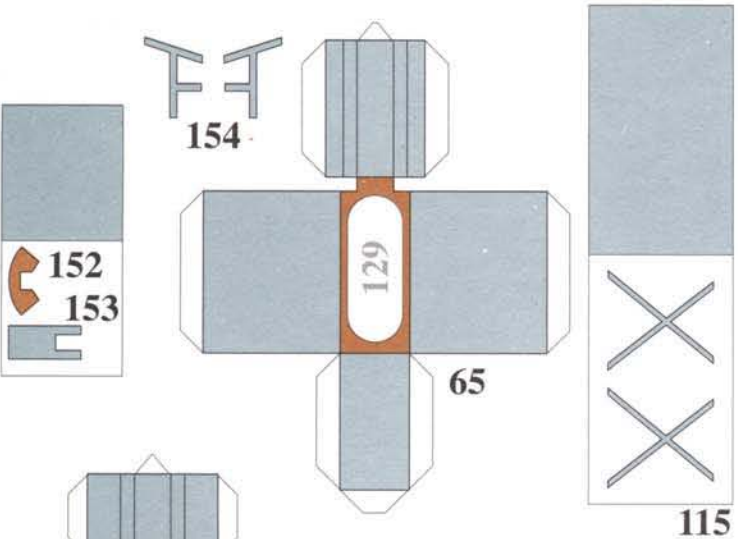
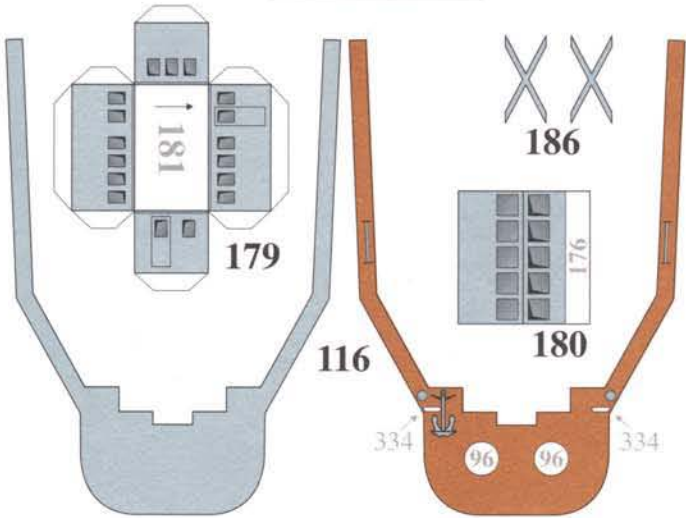
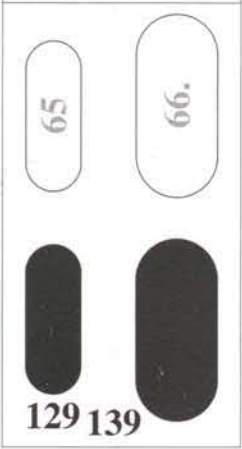


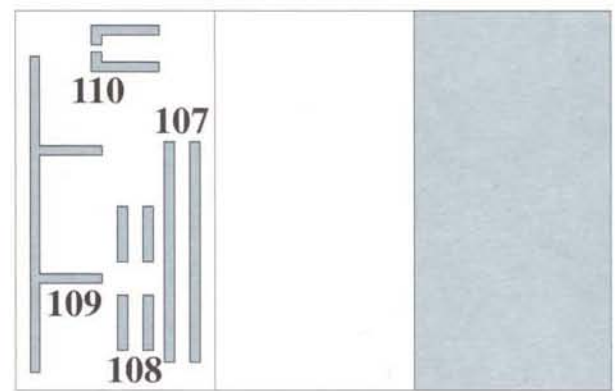
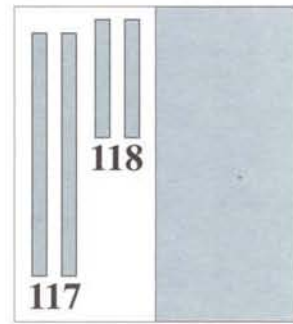
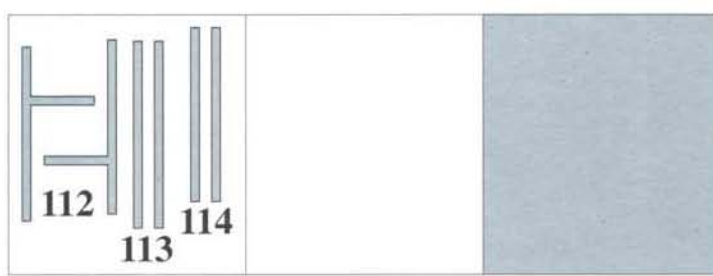
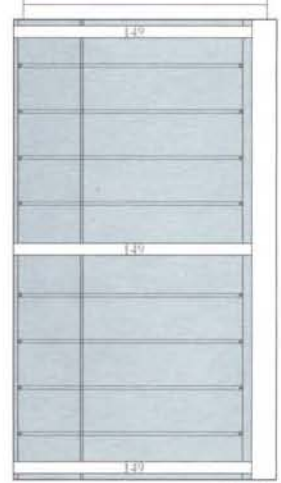
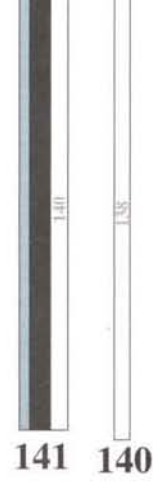
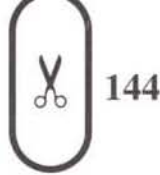
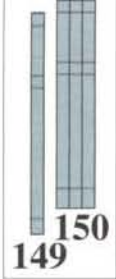
JSC Dreadnought arkusz 4



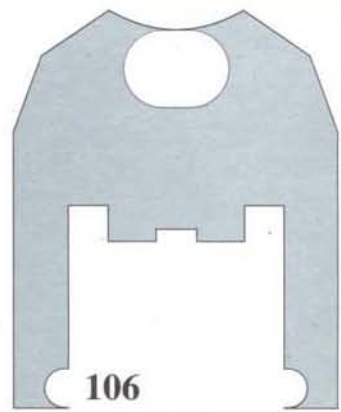
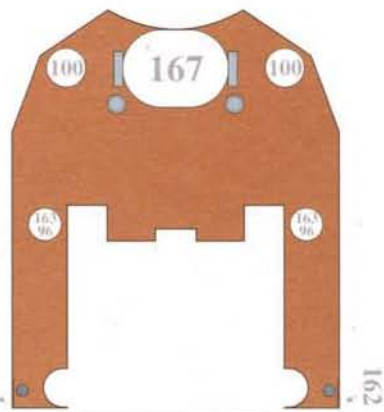
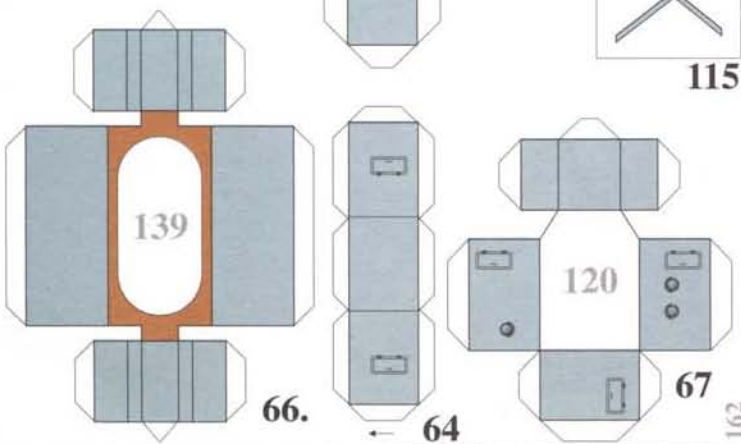
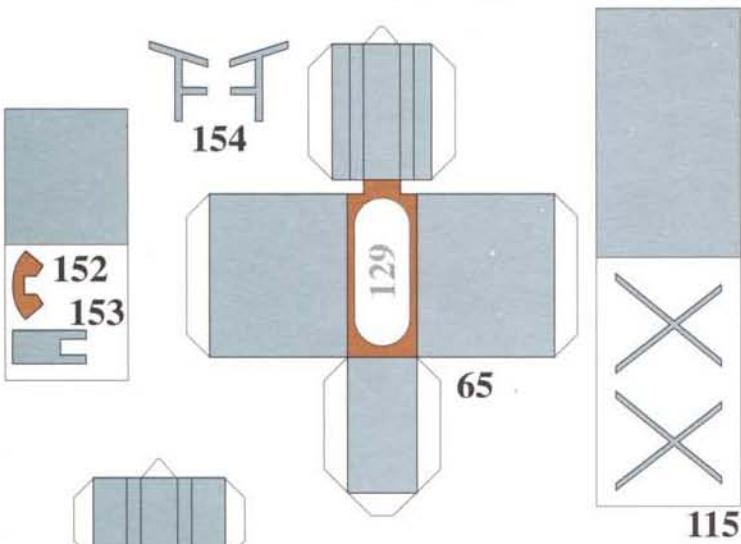
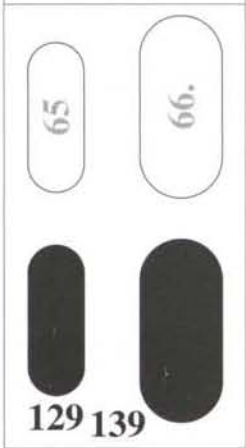
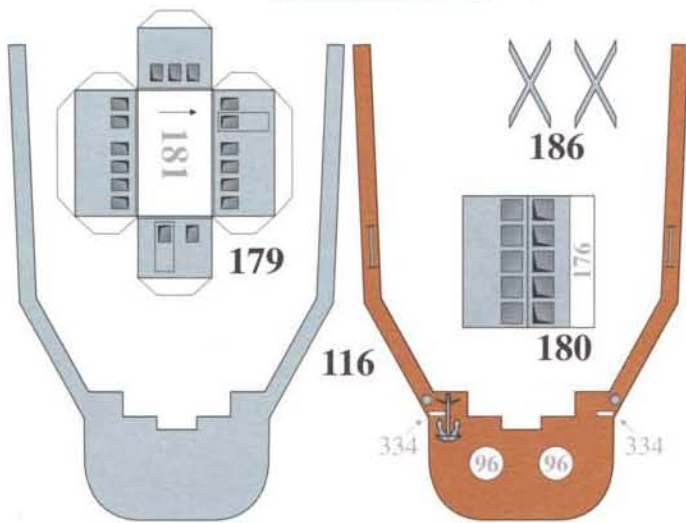


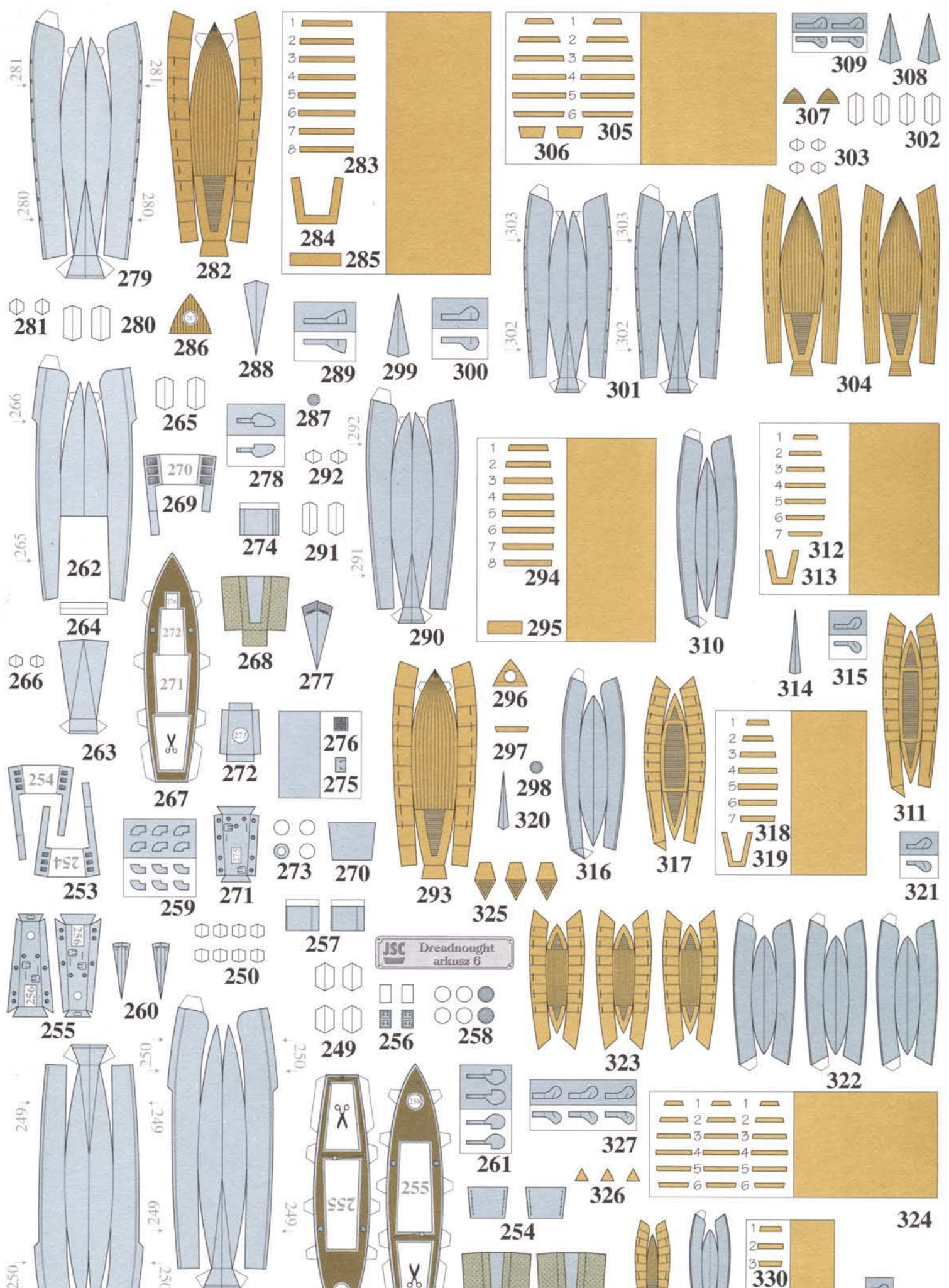
JSC Dreadnought
arkusz 5





JSC Dreadnought arkusz 5





1
2
3
4
5
6
7
8

283

284

285

1
2
3
4
5
6

305

306

309

308

307

303

302

281

280

279

282

281

280

286

288

289

299

300

266

265

262

264

266

263

254

253

255

260

249

250

265

270

269

262

264

266

263

254

253

255

260

249

250

267

272

271

267

272

271

276

275

273

270

257

250

249

250

267

272

271

276

275

273

270

257

250

249

250

267

272

271

276

275

273

270

257

250

249

250

267

272

271

276

275

273

270

257

250

249

250

286

288

289

299

300

287

278

292

291

291

290

292

291

291

290

292

291

291

290

292

291

291

290

292

291

291

290

292

291

291

290

292

291

291

290

292

291

291

290

292

291

291

290

292

291

291

290

292

291

291

290

292

291

291

290

301

302

301

302

301

302

301

302

301

302

301

302

301

302

301

302

301

302

301

302

301

302

301

302

304

304

304

304

304

304

304

304

304

304

304

304

JSC Dreadnought arkusz 6

256

258

261

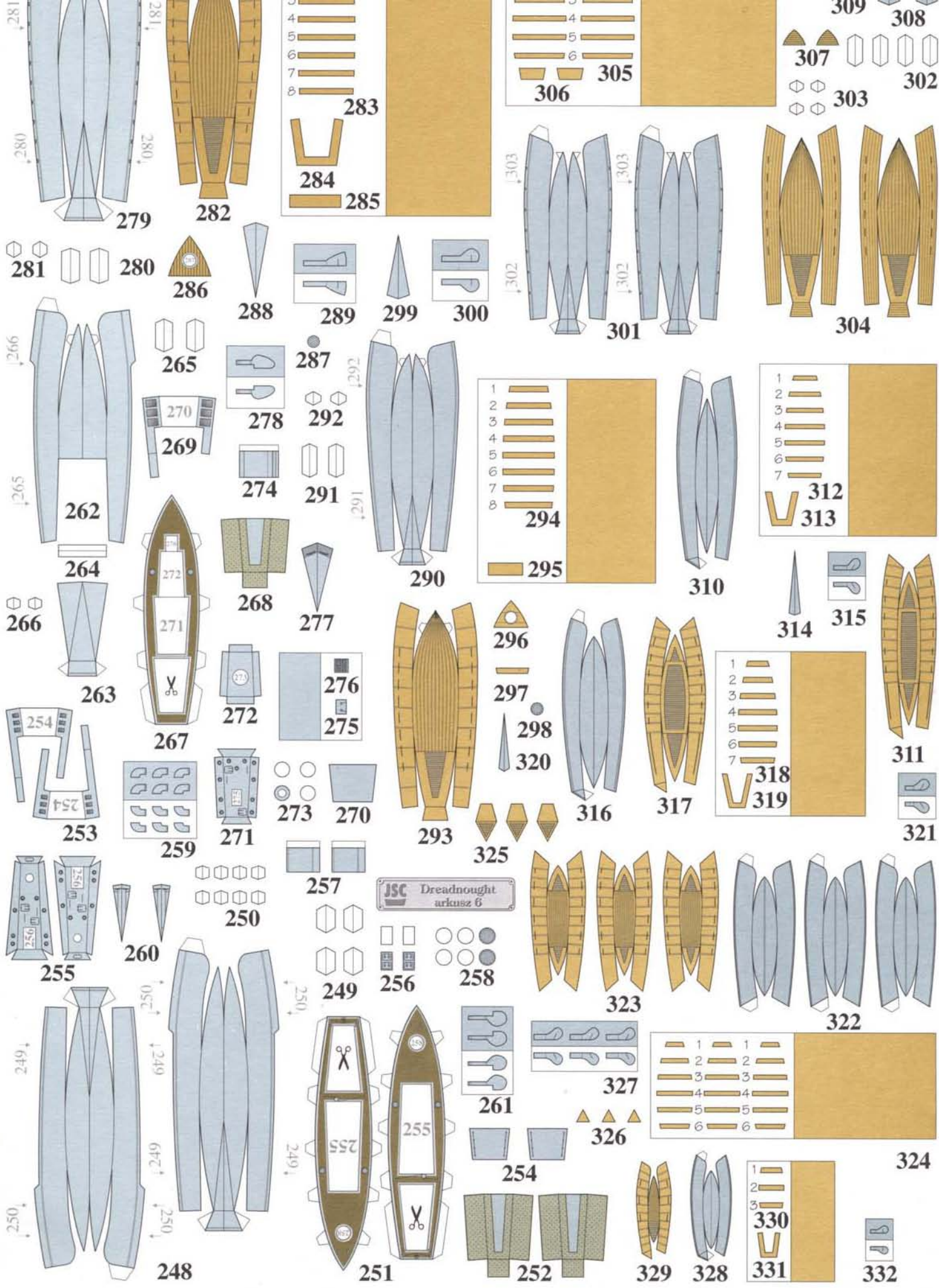
327

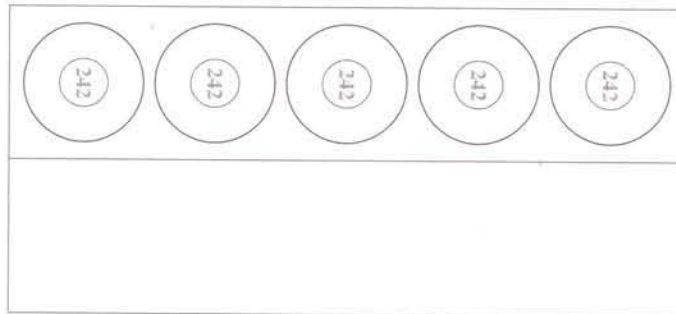
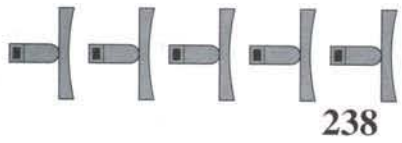
326

254

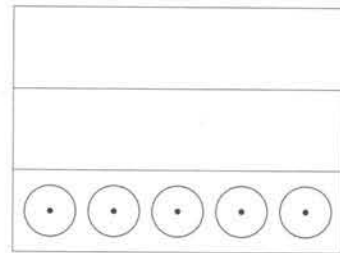
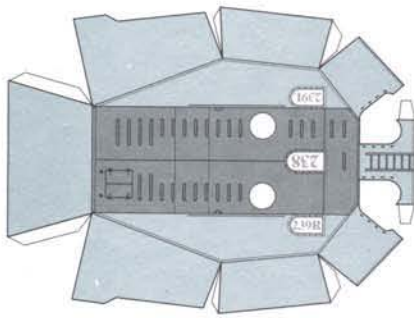
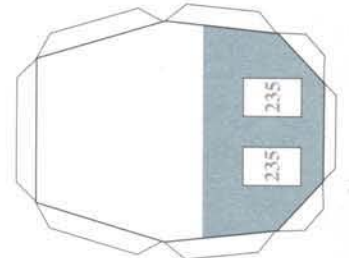
254

330

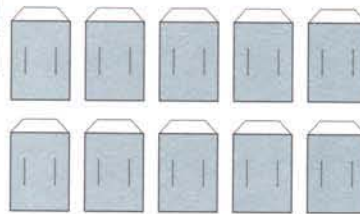
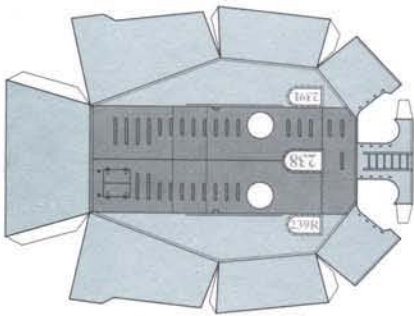
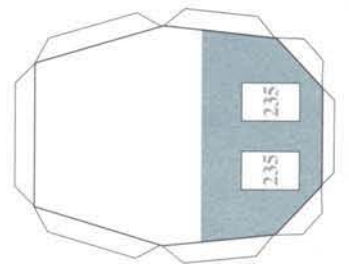
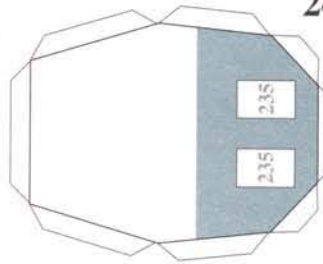




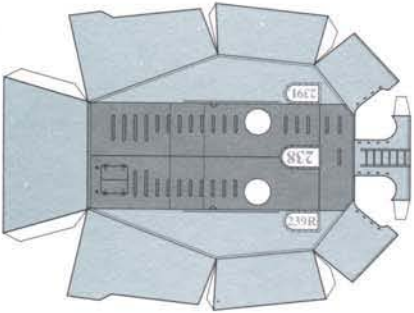
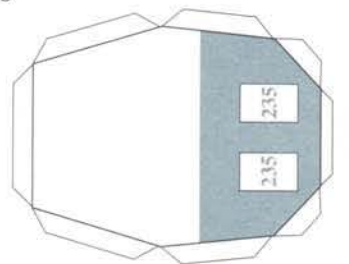
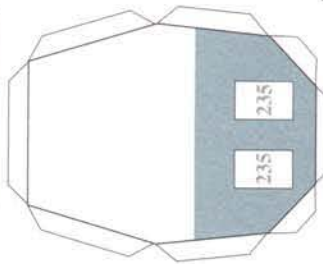
JSC Dreadnought arkusz 7



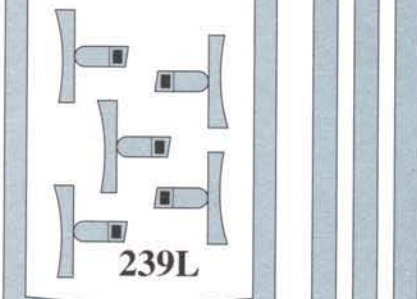
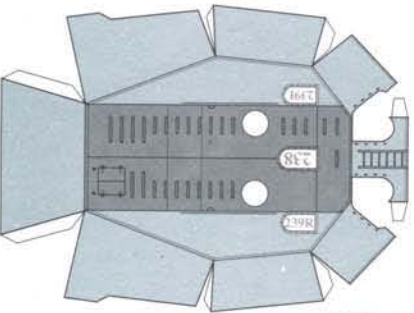
247



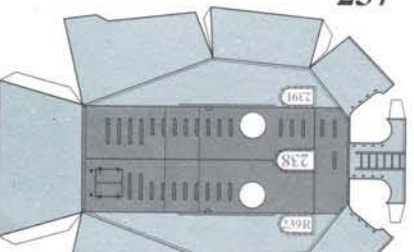
236



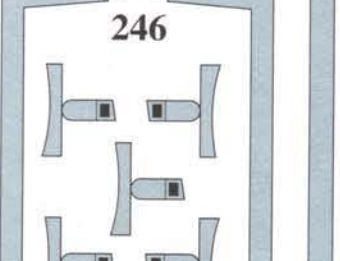
233



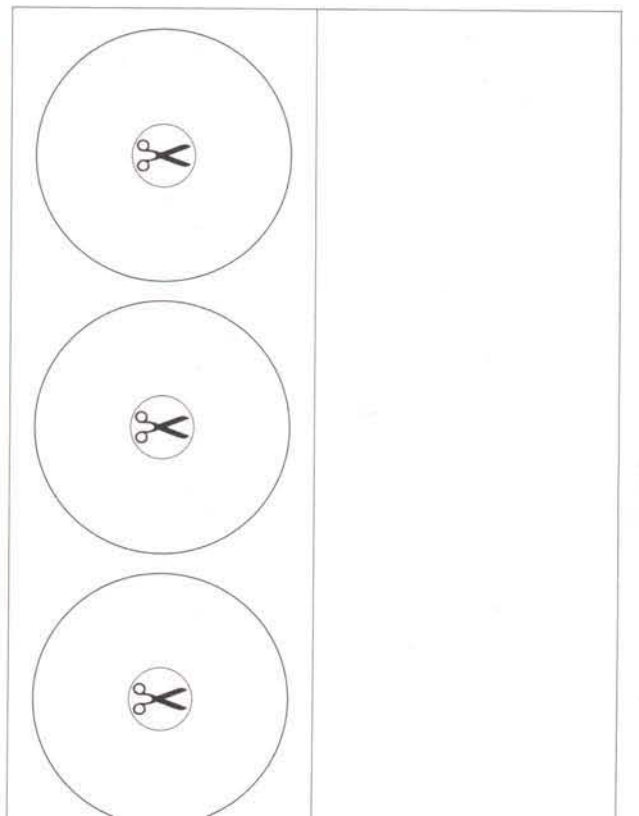
239L



237



246



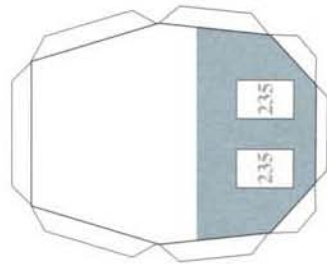
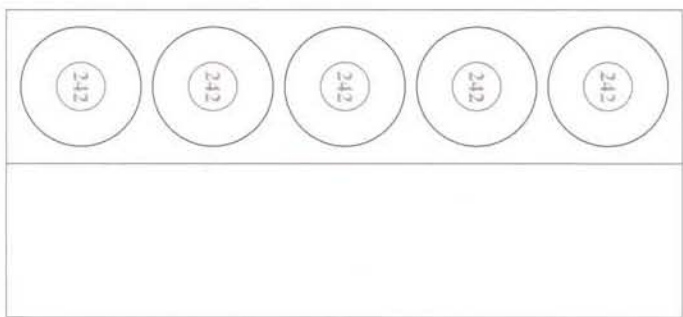


241

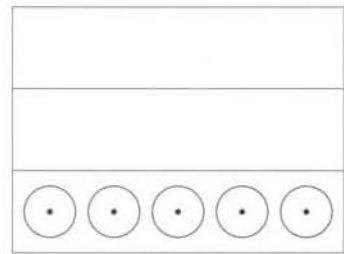
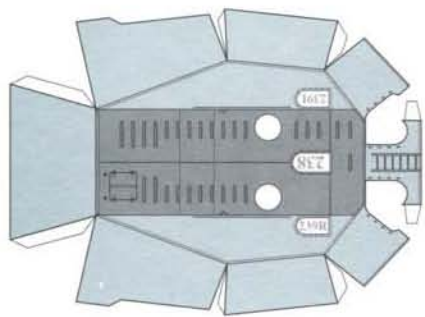
JSC Dreadnought arkusz 7



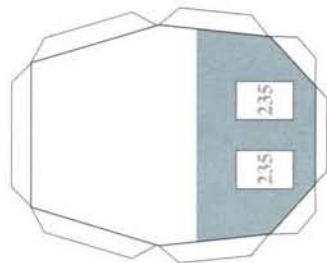
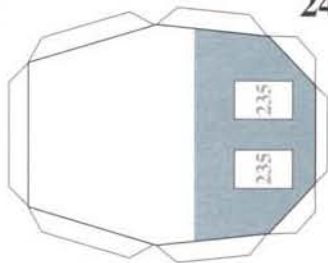
238



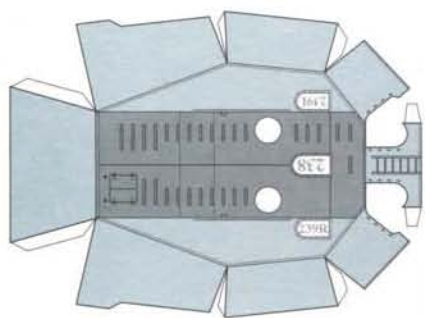
247



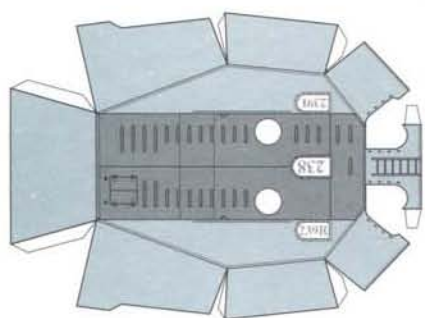
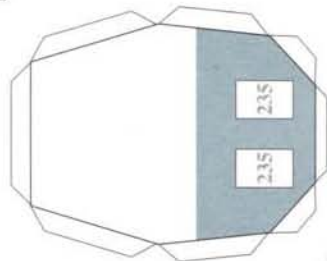
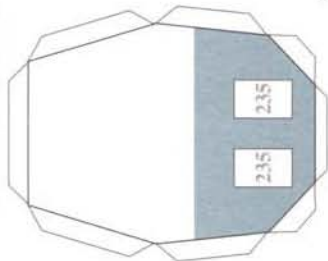
242



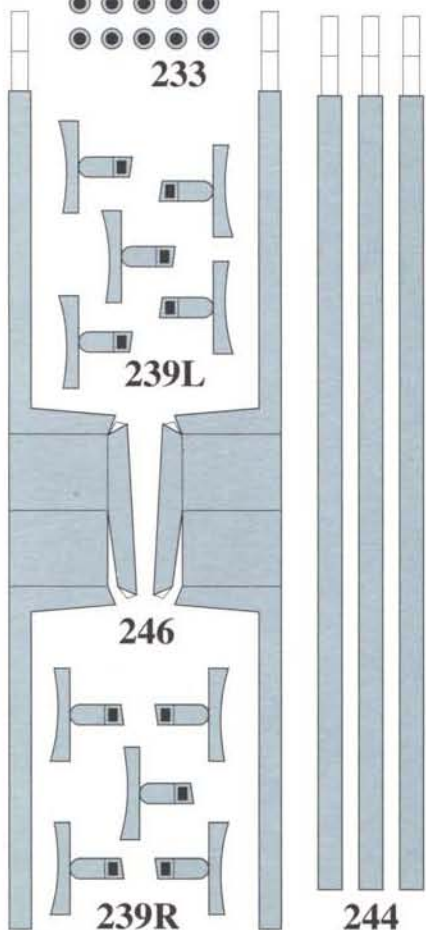
236



234



233

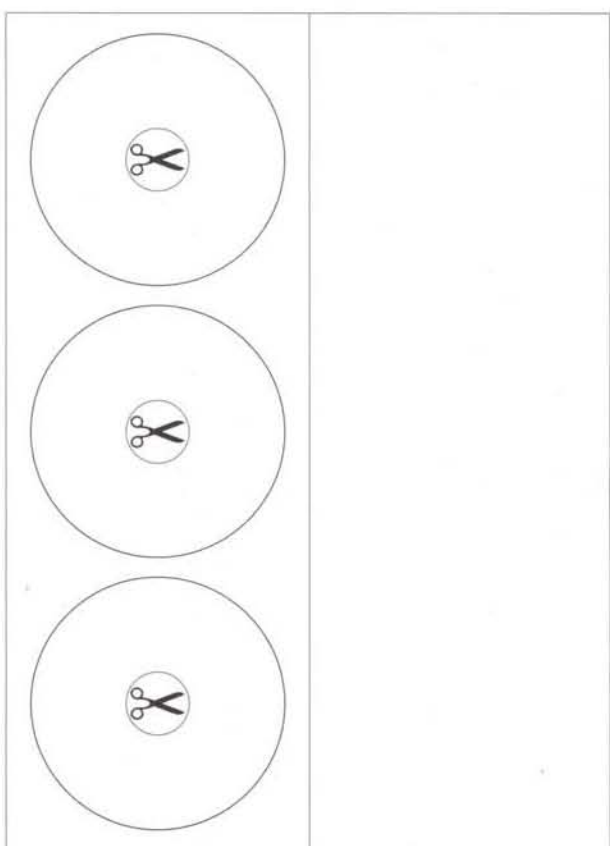


239L

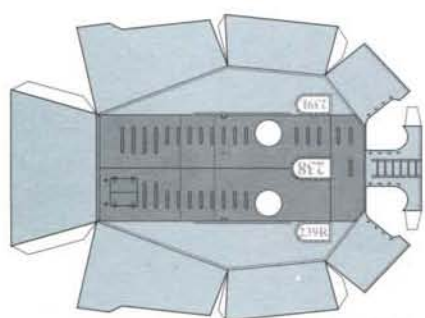
246

239R

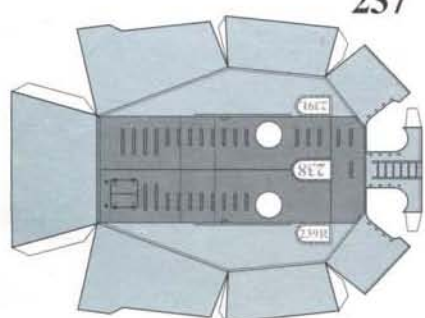
244

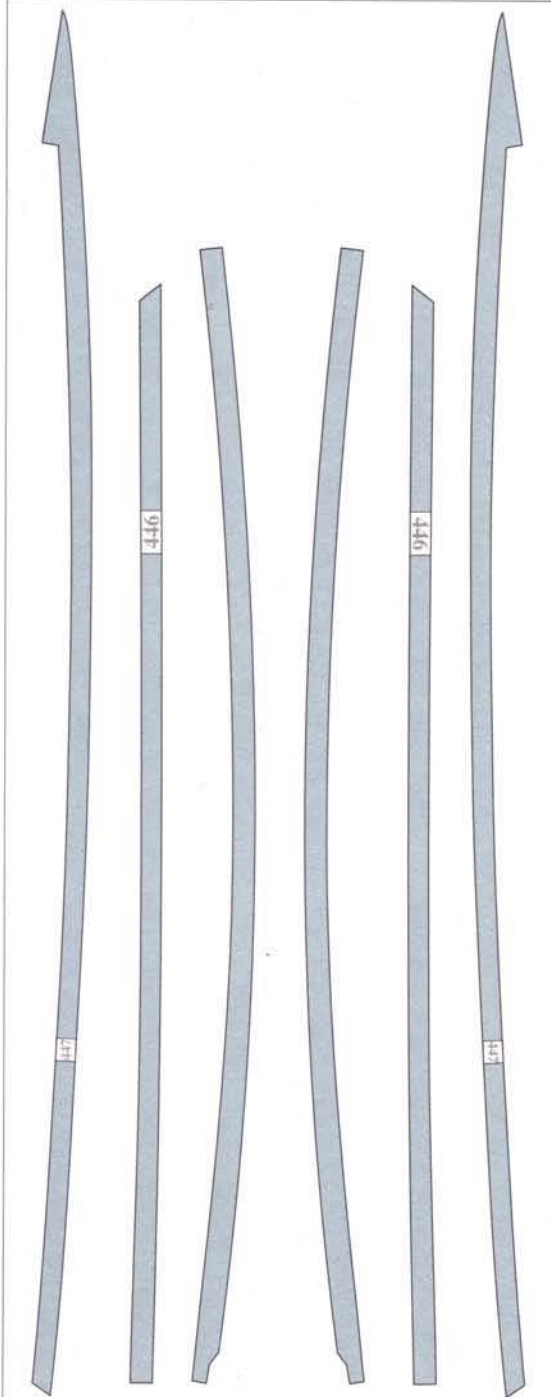
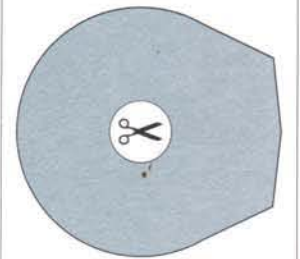
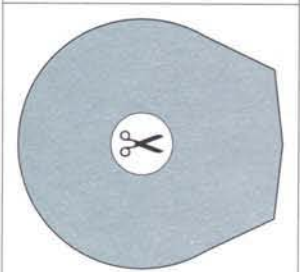


243



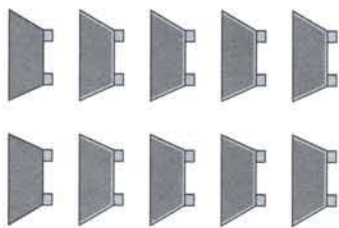
237





418R 419R 420R 420L 419L 418L

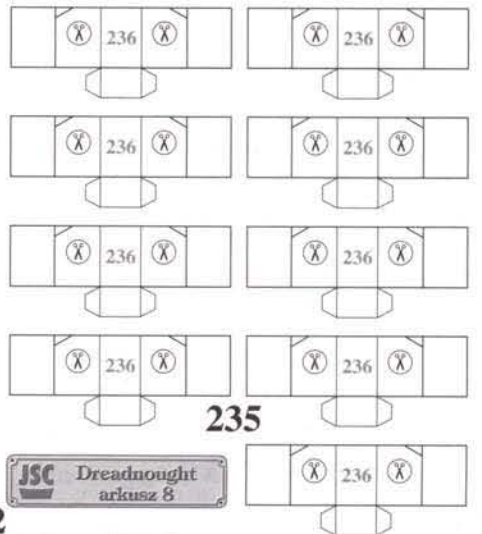
440 441 442



240L

240R

245 A3 10x

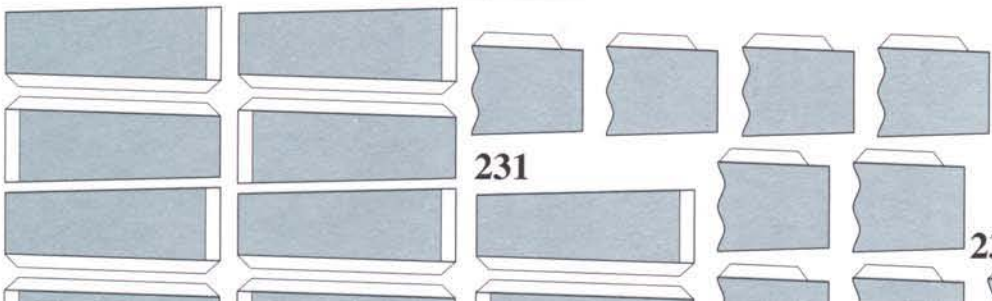


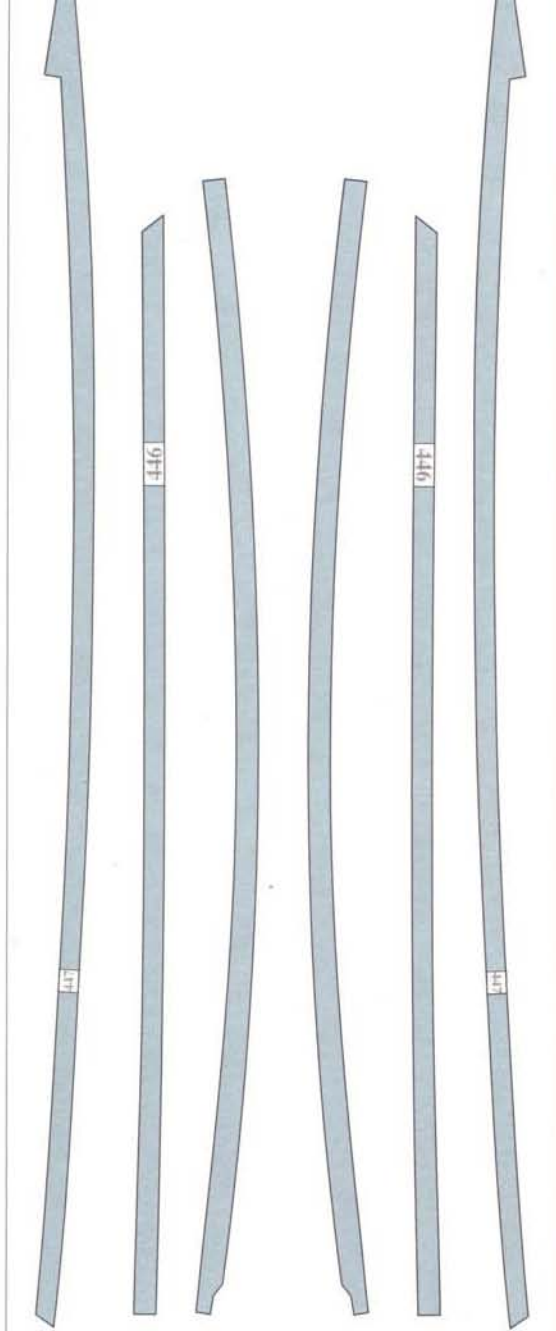
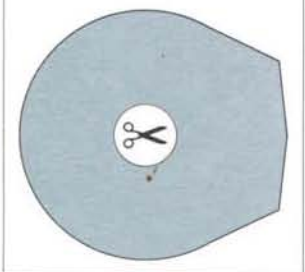
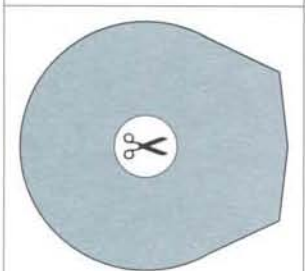
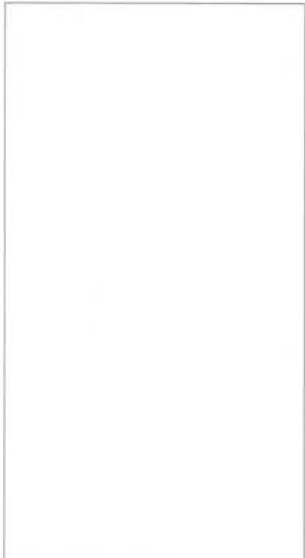
235

JSC Dreadnought arkusz 8

232

231

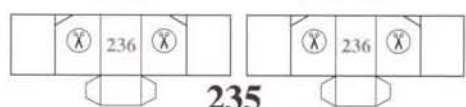
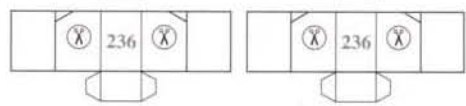
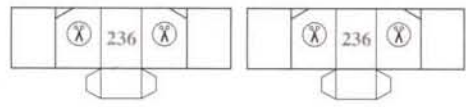
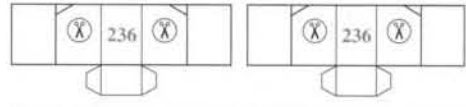




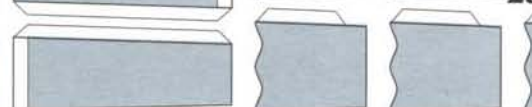
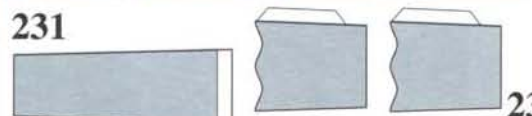
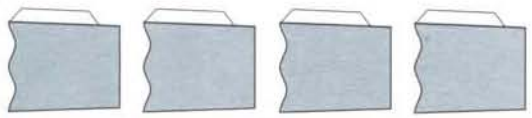
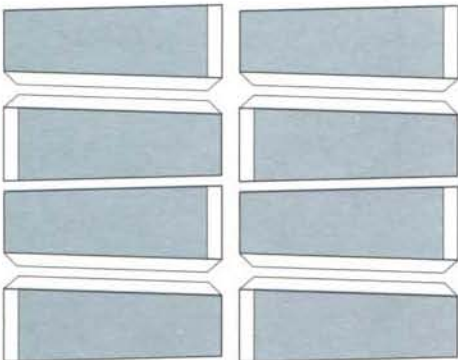
418R 419R 420R 420L 419L 418L



245 A3 10x



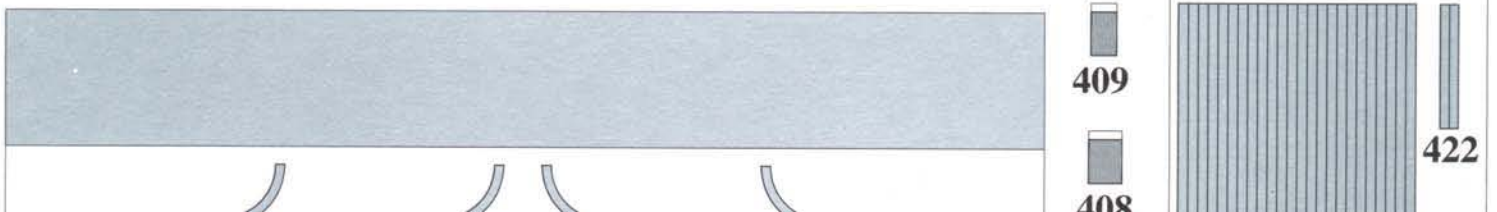
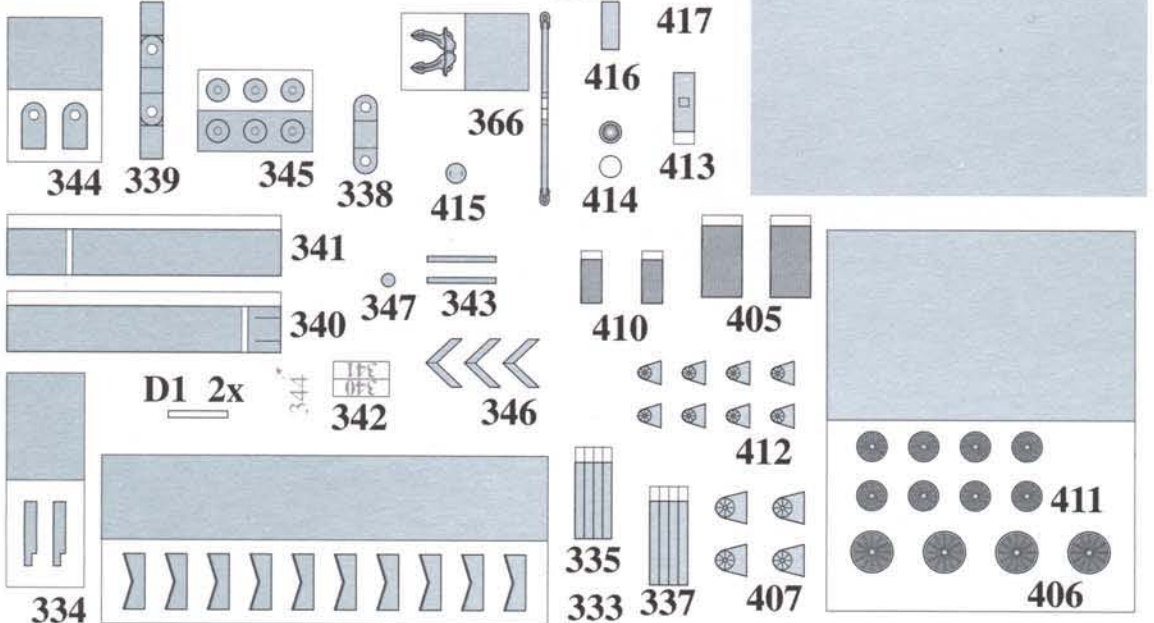
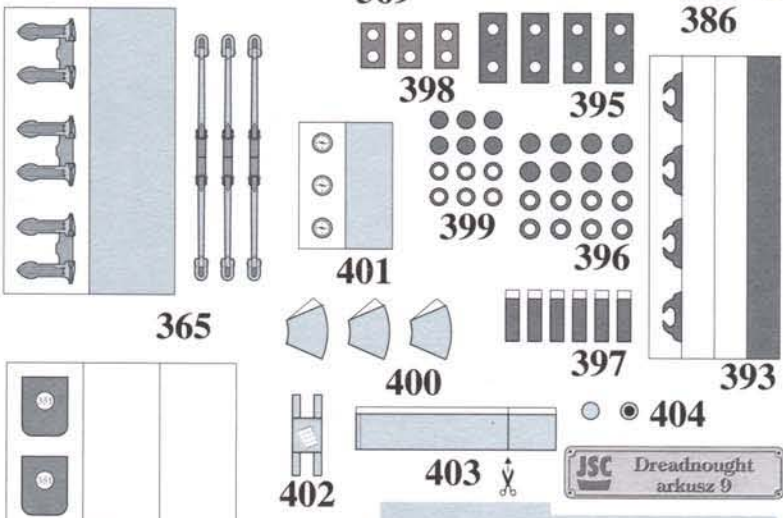
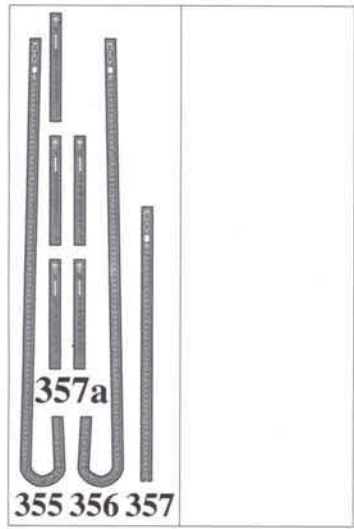
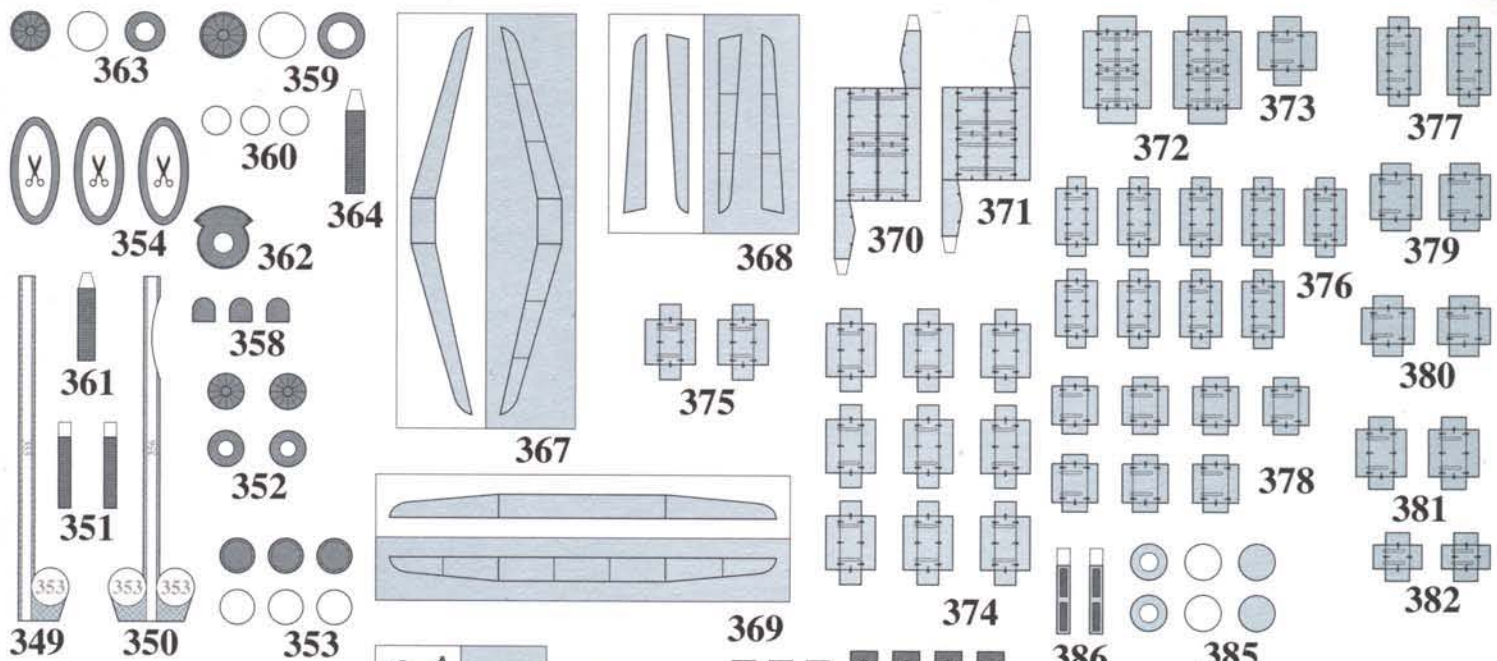
JSC Dreadnought arkusz 8

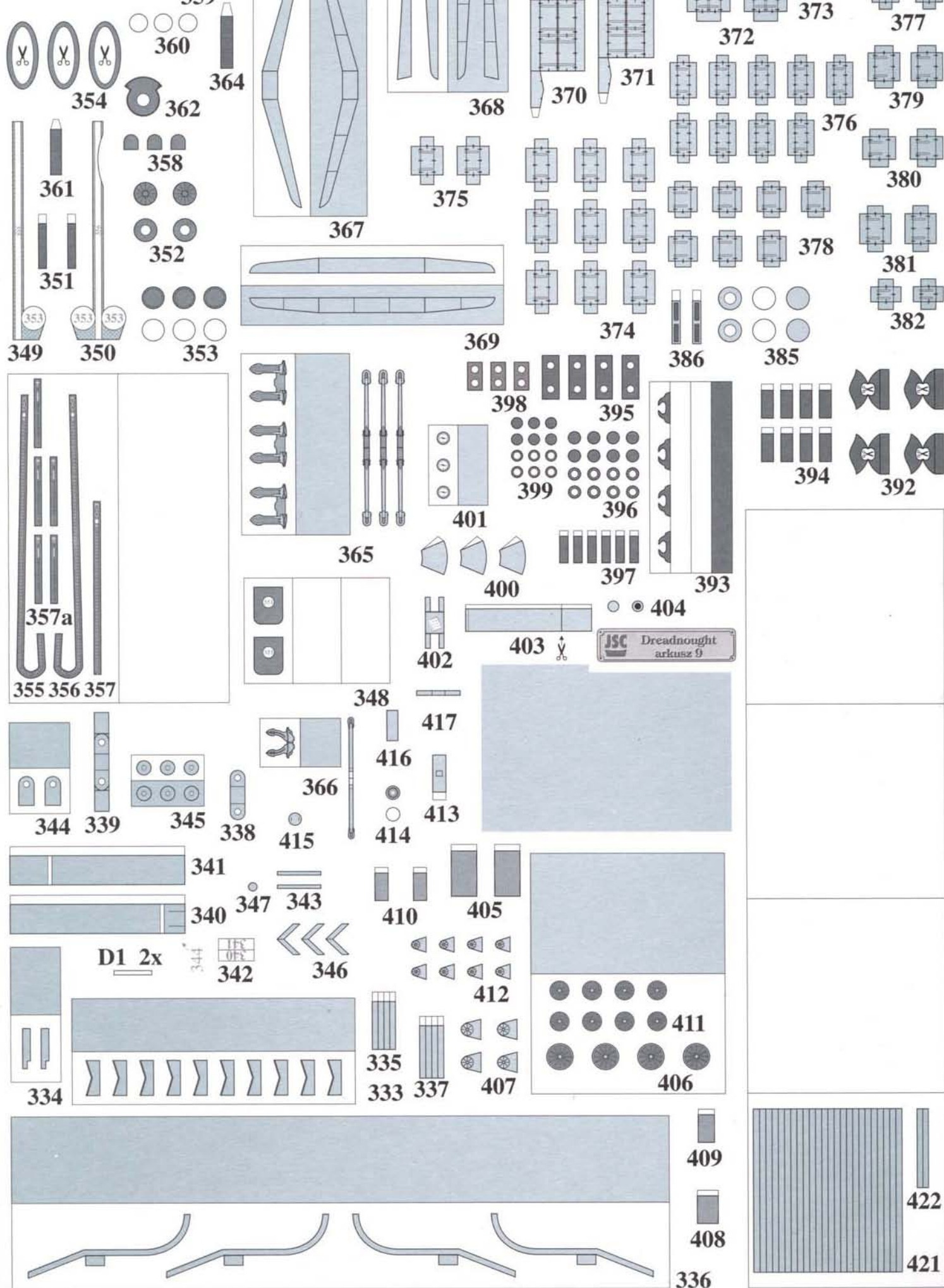


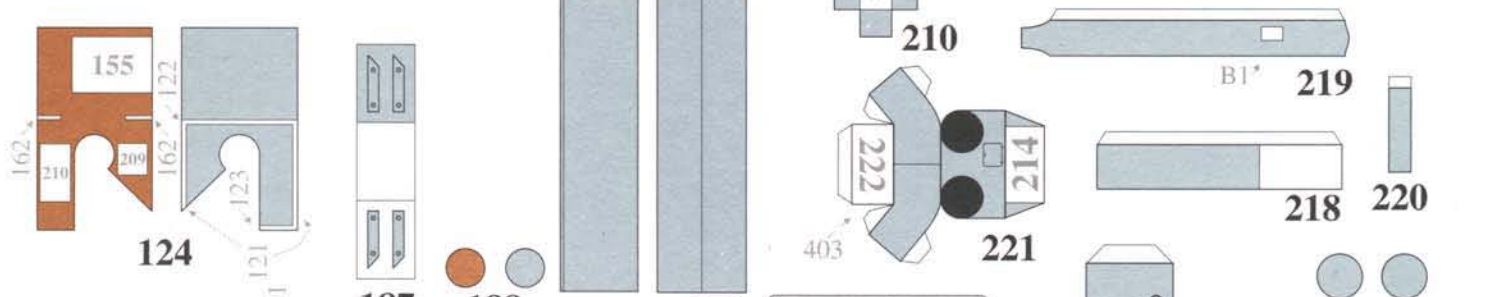
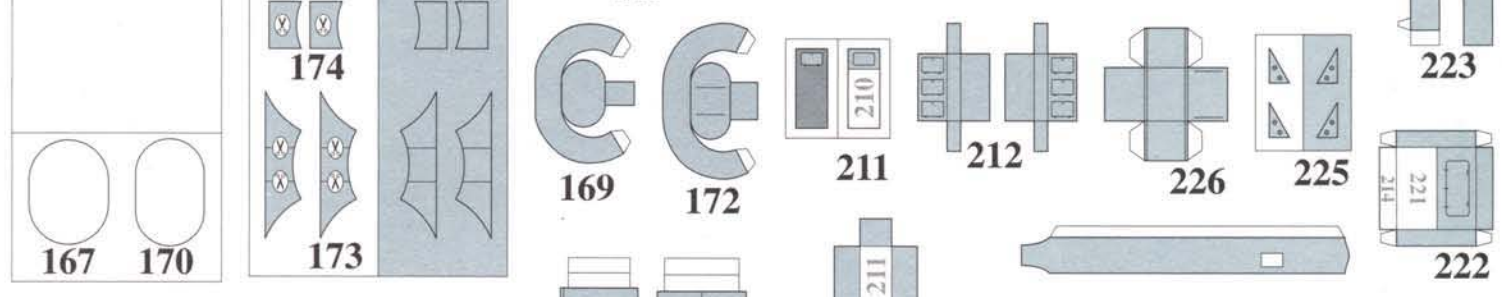
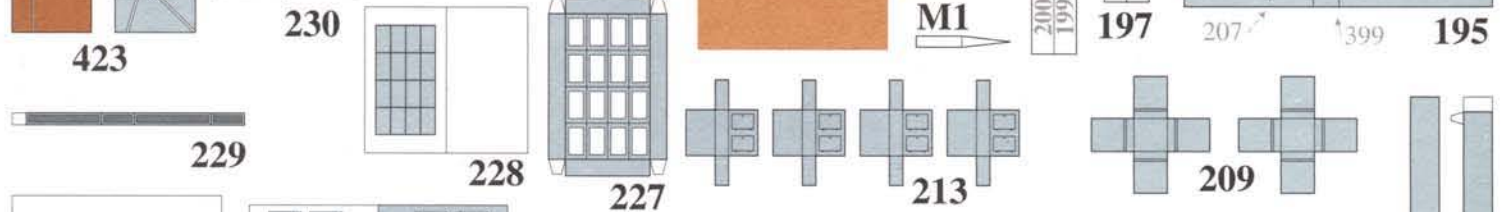
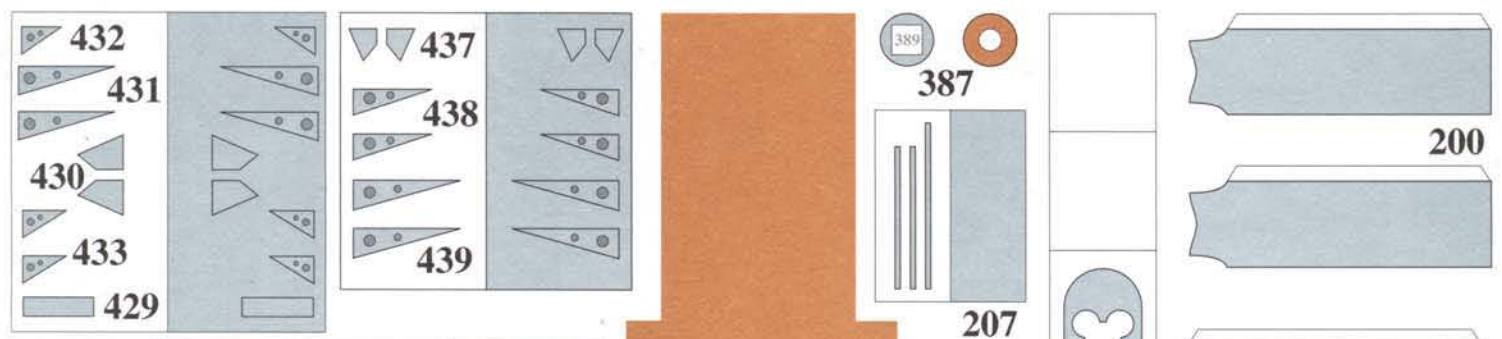
231

232

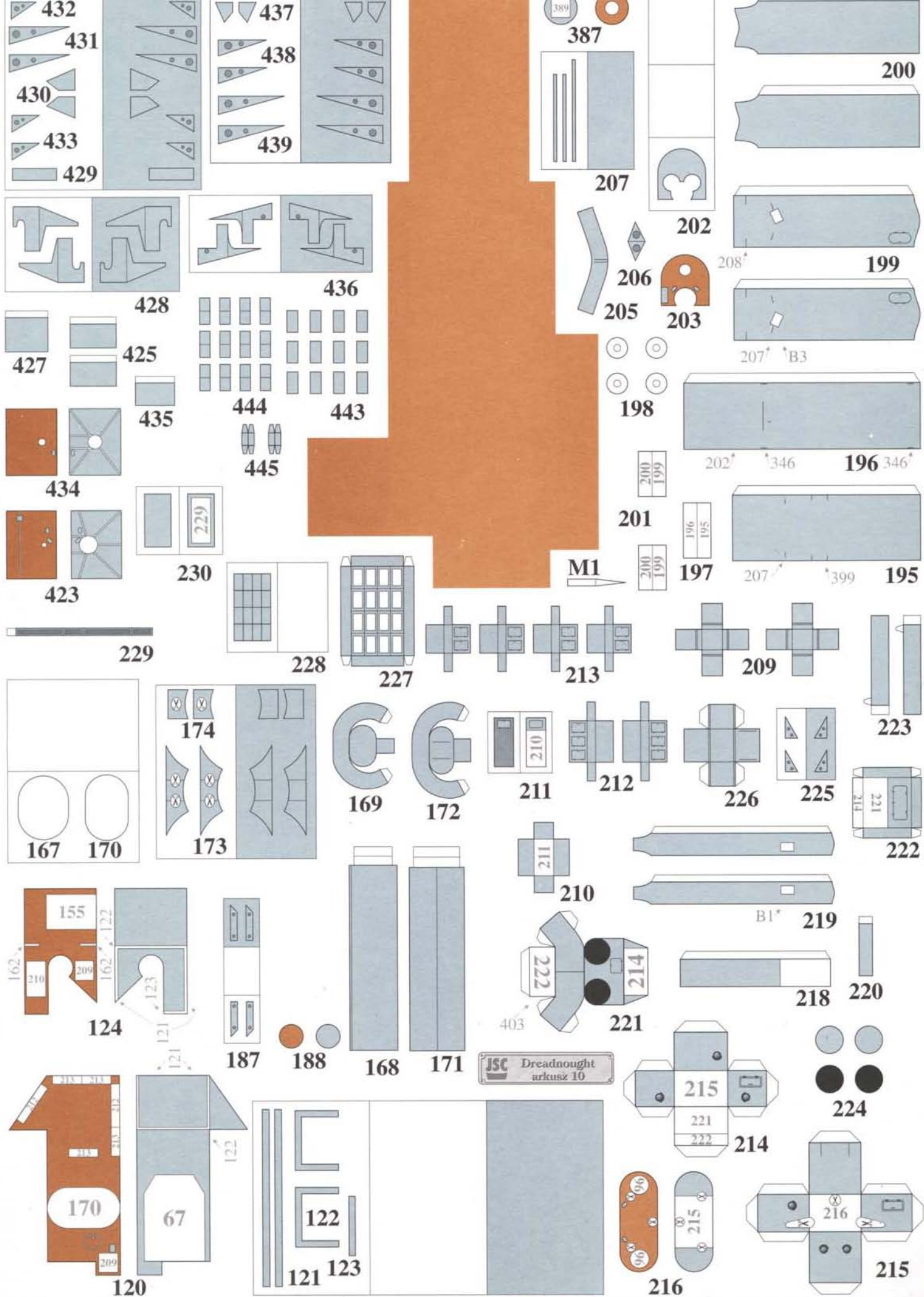
235

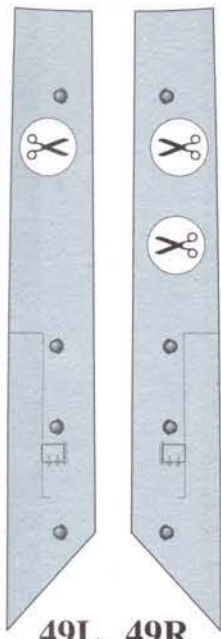




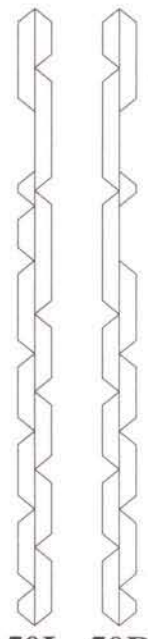


JSC Dreadnought arktusz 10





49L 49R



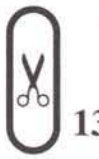
50L 50R



134



133



135



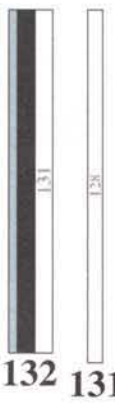
147



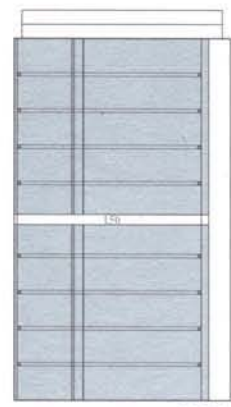
136



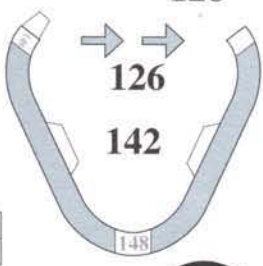
137



132 131



128



142

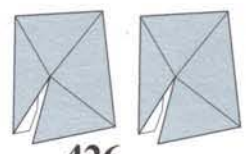
126



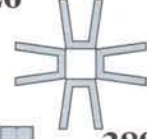
143



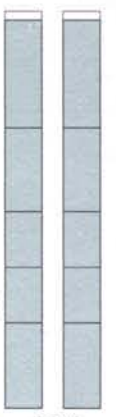
388



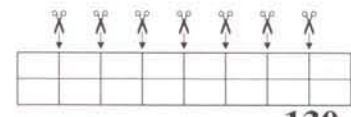
426



389



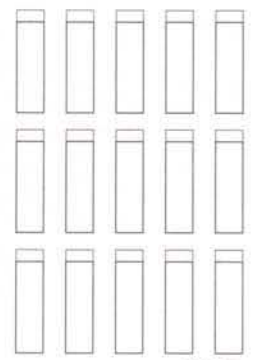
424



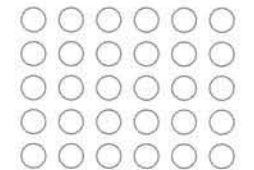
130



101



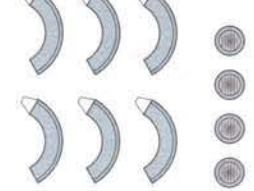
105



104



90



93



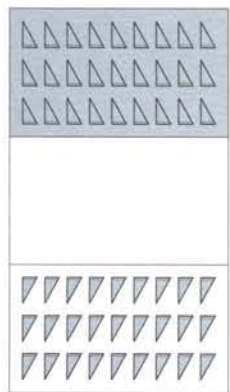
95



91



103



102

A2_x12

A1_x27



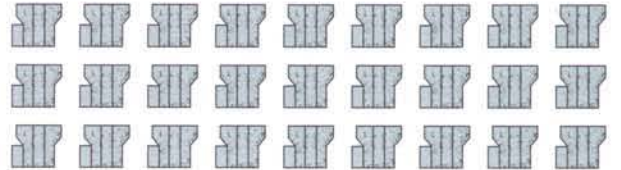
92



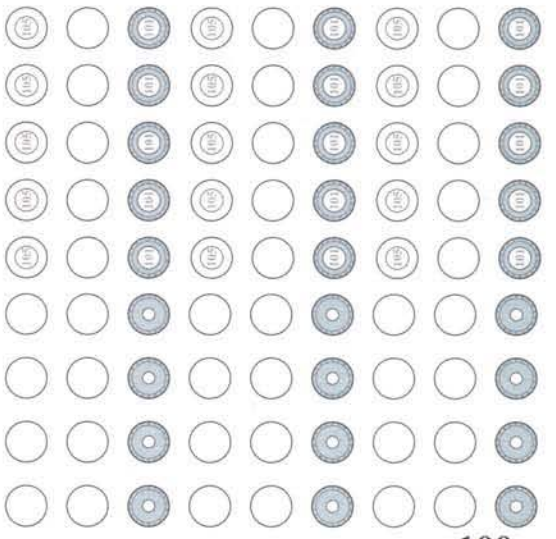
89



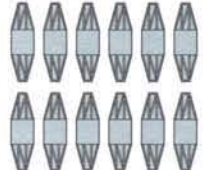
97



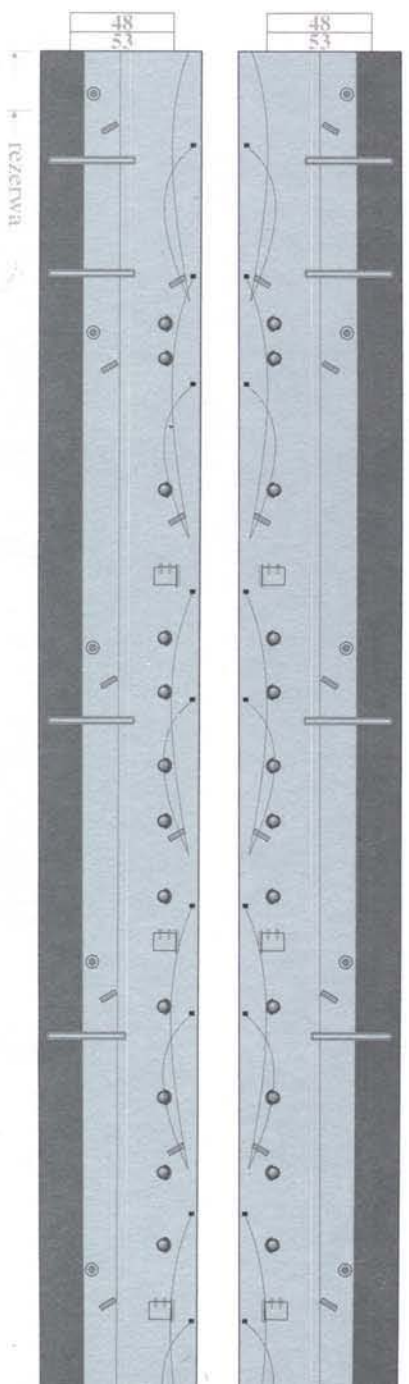
99



100

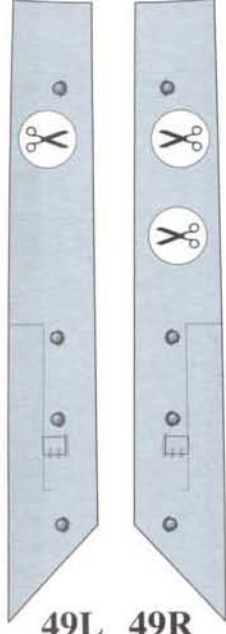


97

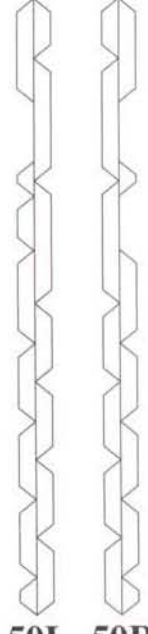


PZEFWA

PZEFWZ



49L 49R



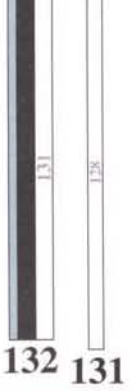
50L 50R



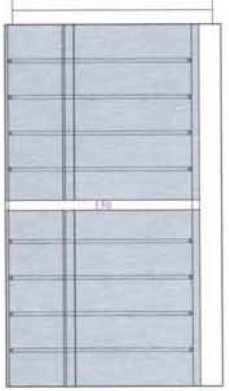
134



133



132 131



128



135



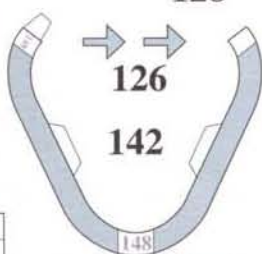
147



136



137

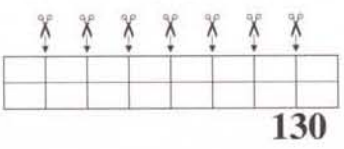


126

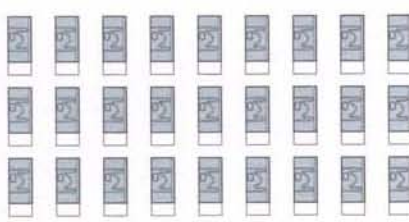
142



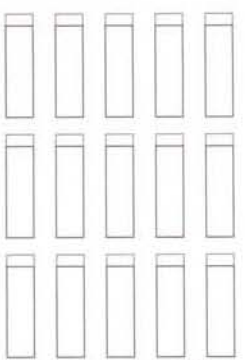
143



130

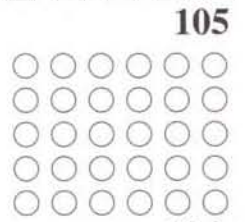


101

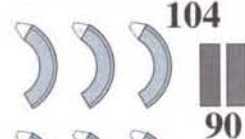


99.

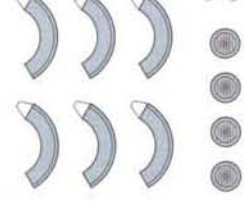
103



105

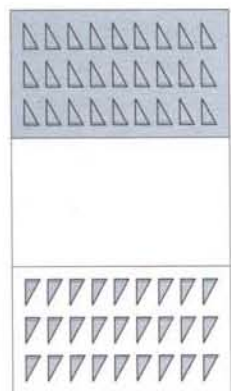


104

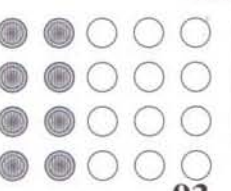


90

95



102



93



91



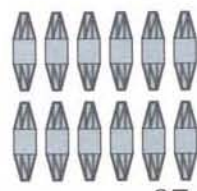
A2_x12

A1_x27



89.

92

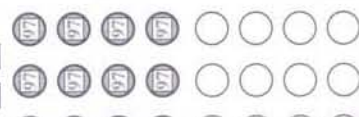


97



94

98



96.

388



182

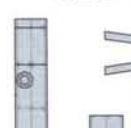
176

177

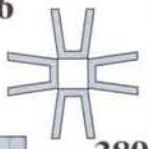


125

426



389



178



189



424



204

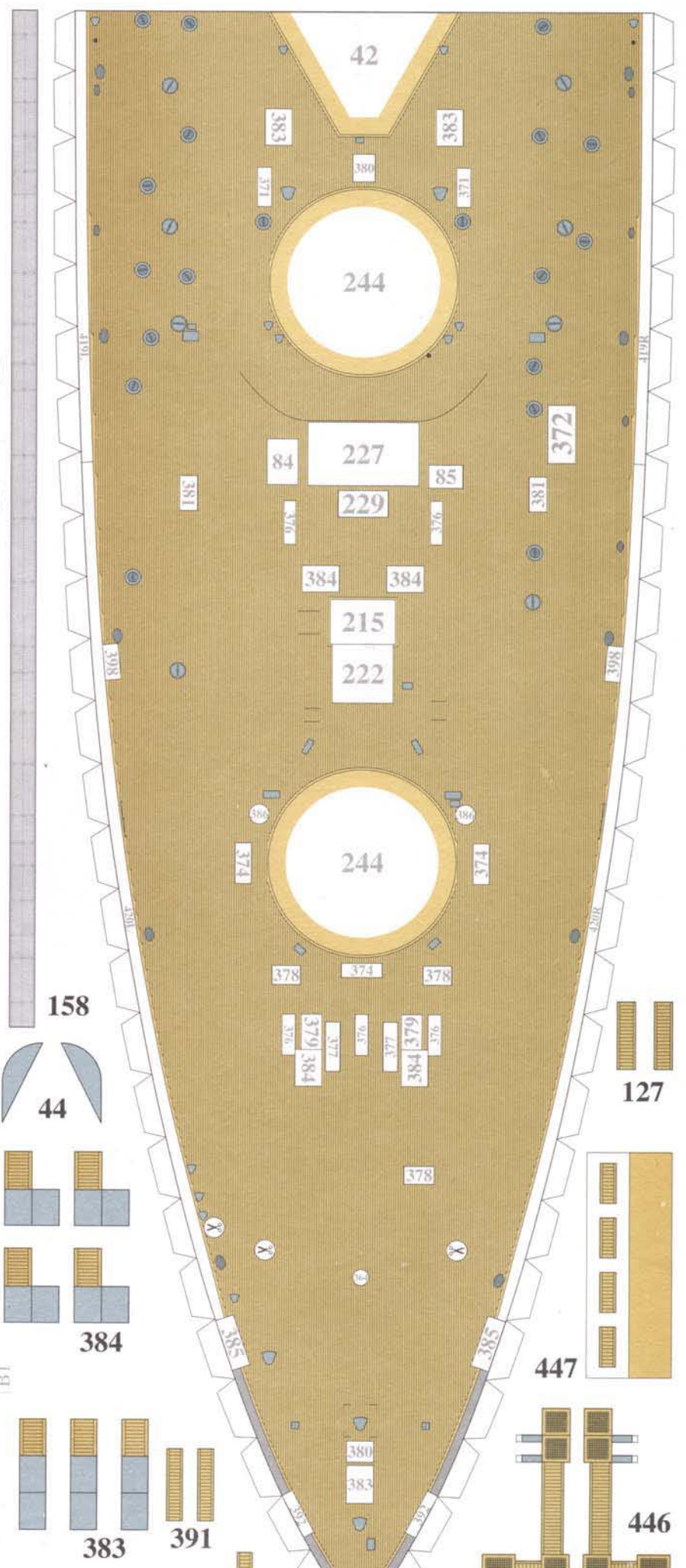
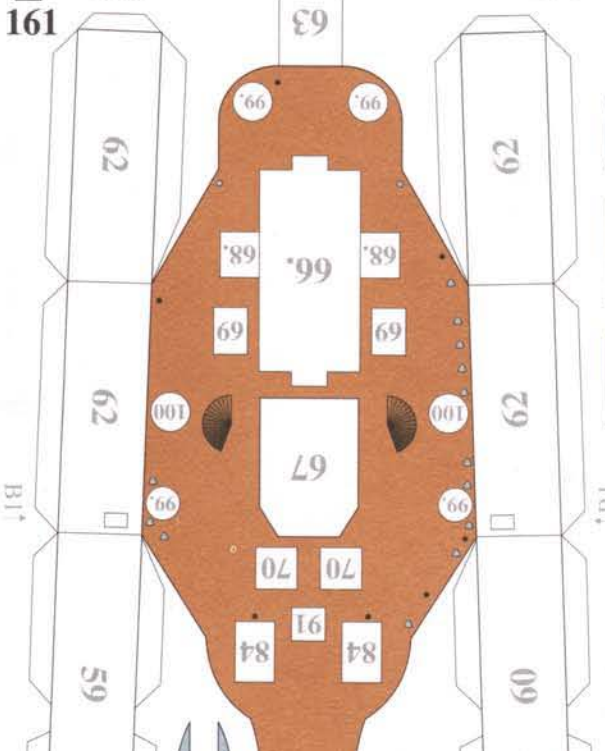
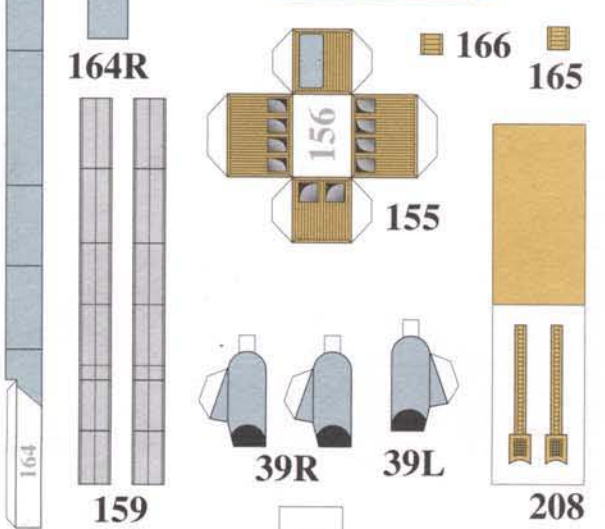
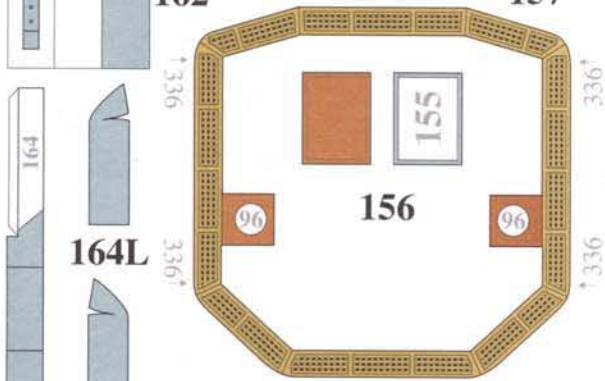
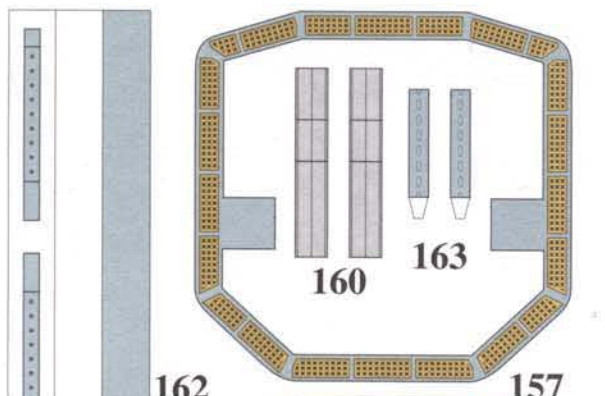
217

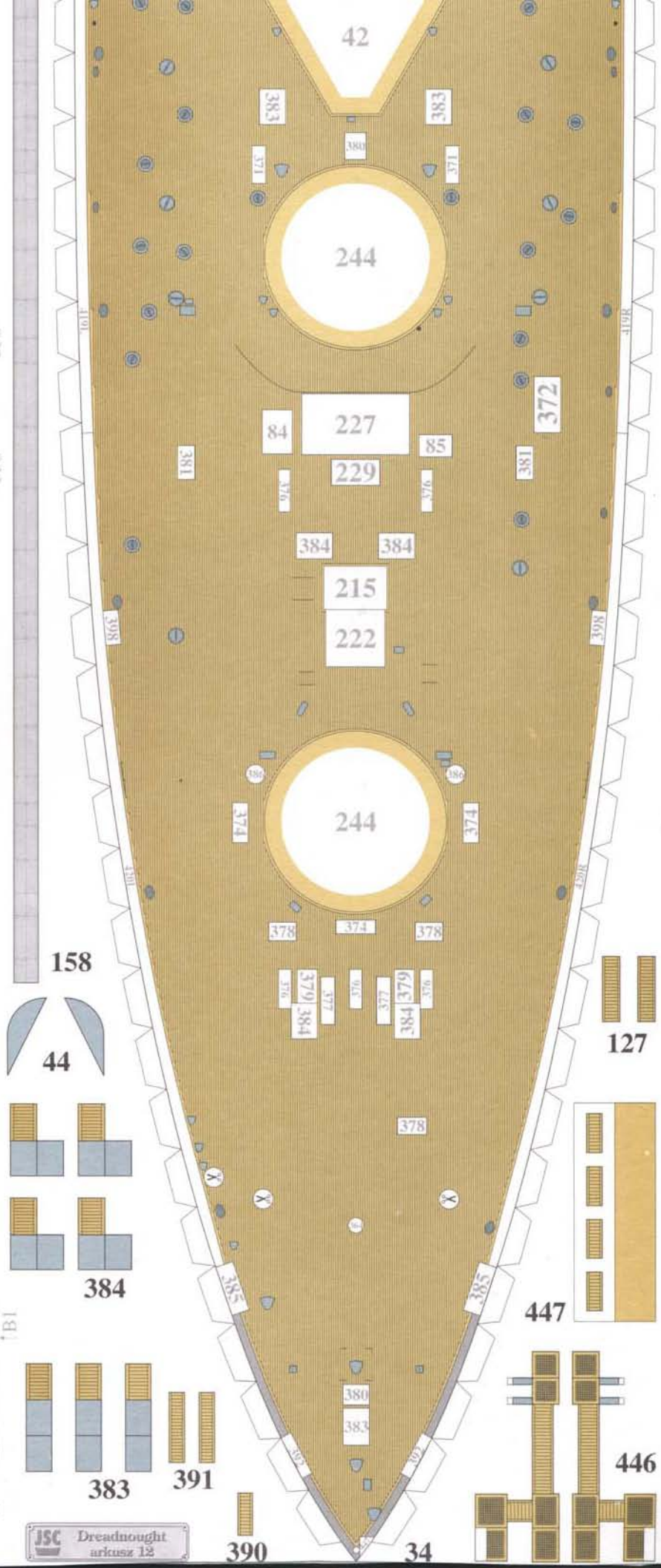
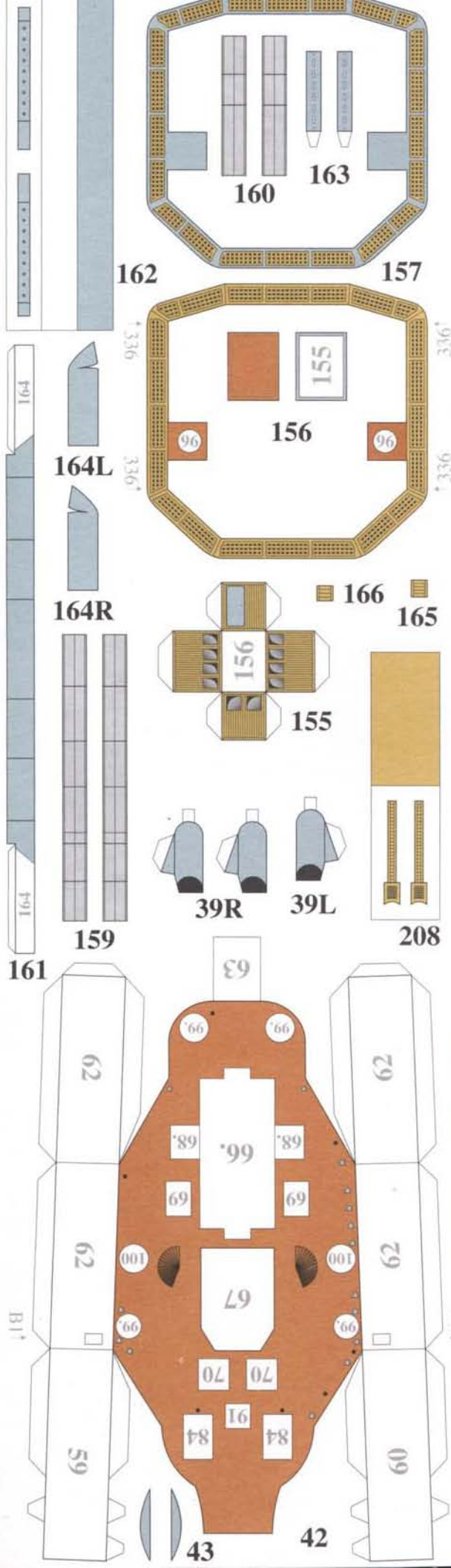


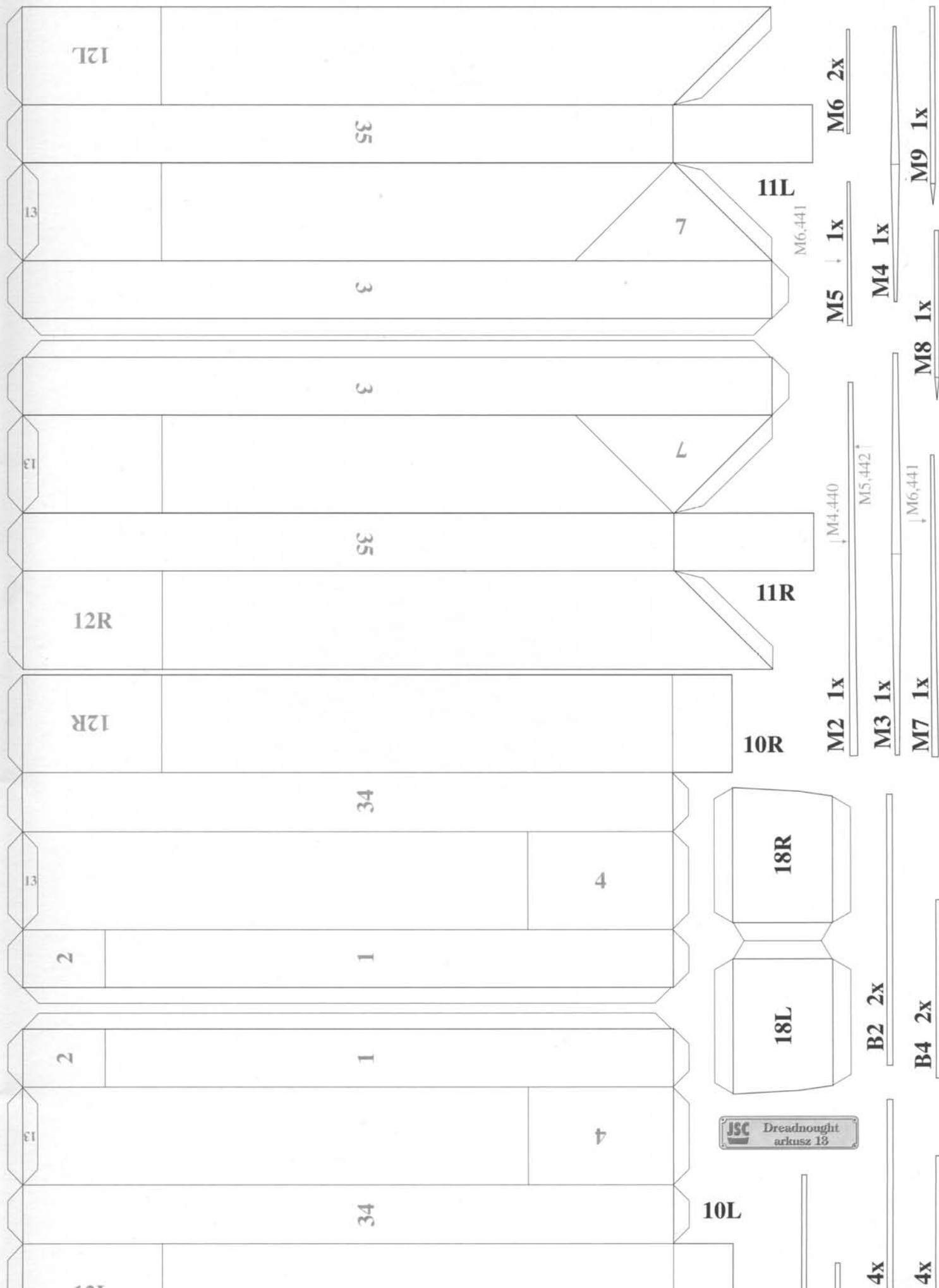
53L



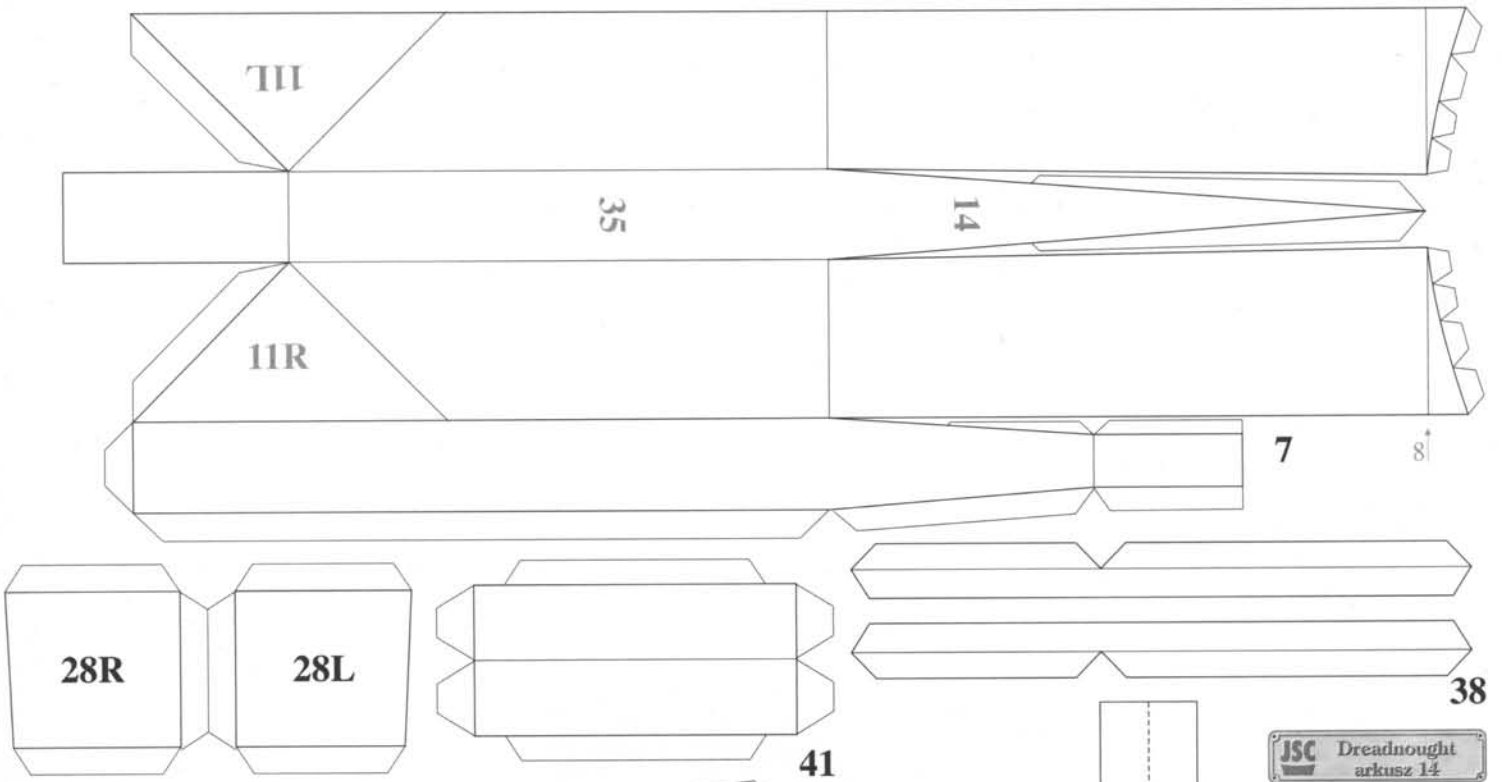
53R



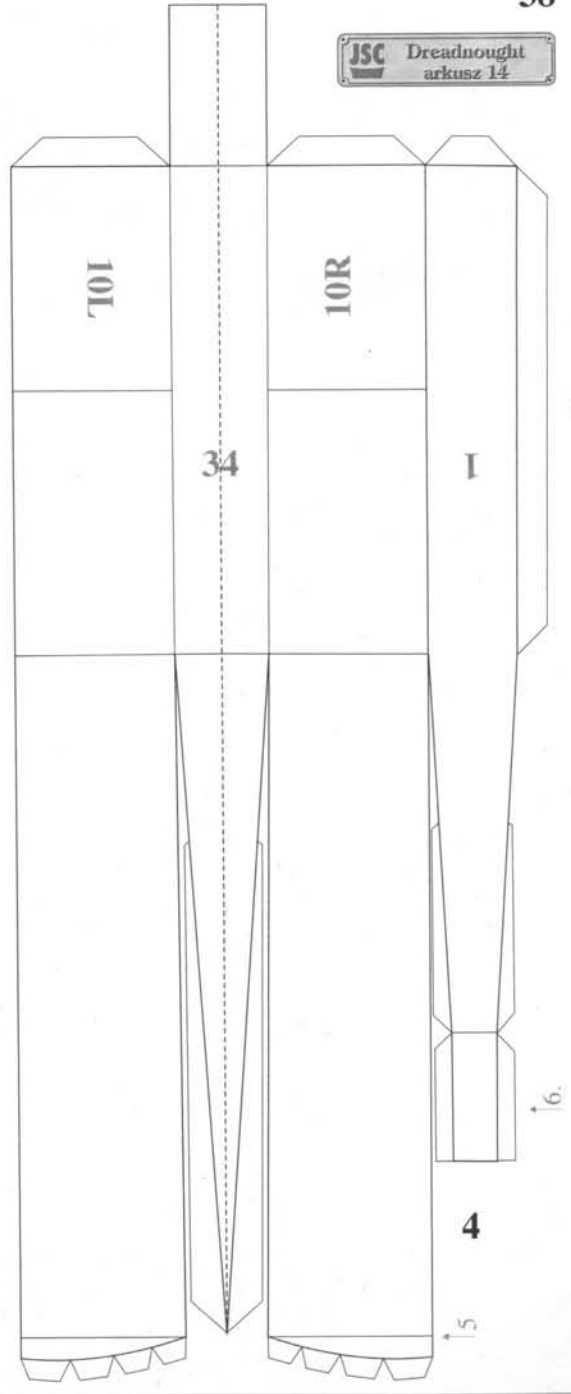
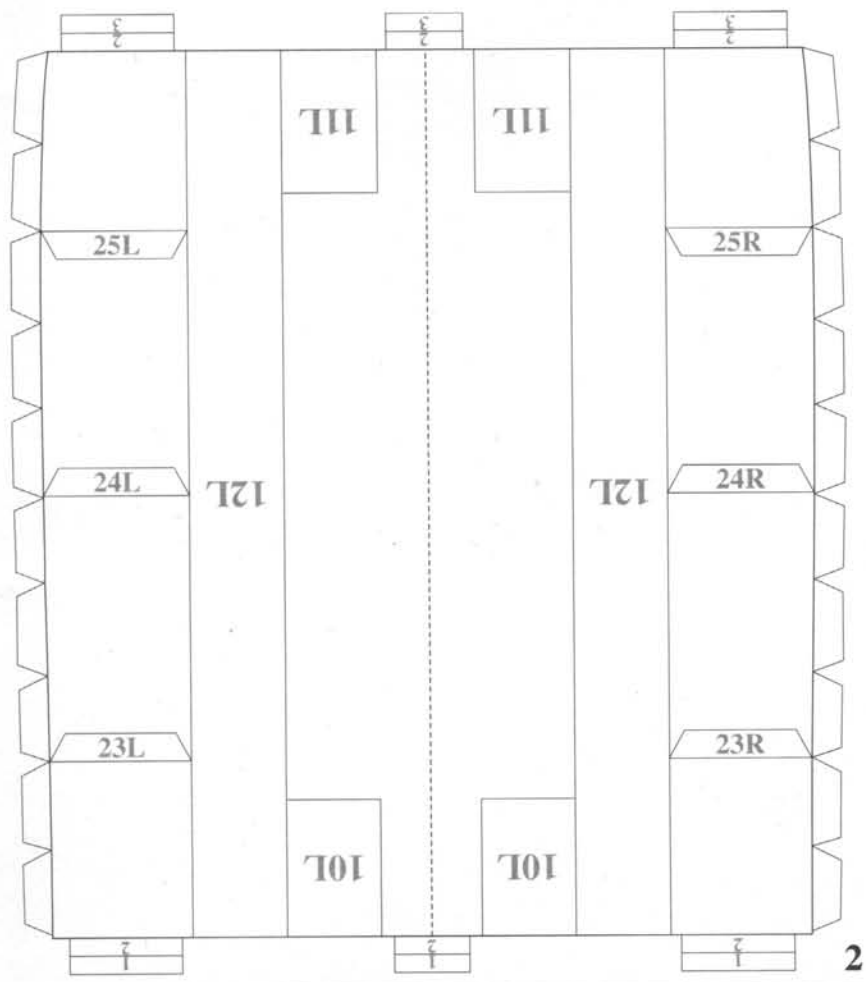
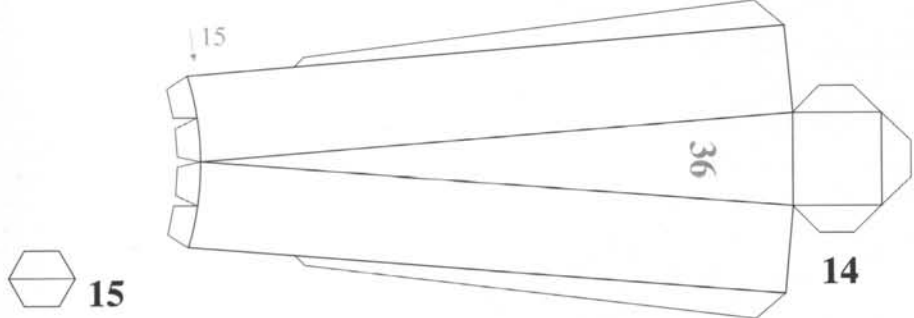




JSC Dreadnought
arkusz 13



JSC Dreadnought arkusz 14



At least since the beginning of the XXth century sailors and naval architects contemplated an idea of „all-big-gun-battleship”, armed with a considerable number of uniform, large calibre guns, instead of two or three calibres meant to open fire at different distances. The experience of the naval engagements of the Russo-Japanese War prompted Royal Navy to hasten the construction of such a ship, which already was under development as a logical step in British warship construction. Laid down in Portsmouth Dockyard in October 1905 and named DREADNOUGHT, she was built in 14 months. She was a revolution in the naval warfare, making all existing battleships obsolete. In addition to the enormous firepower (250 % increase) she was fitted with steam turbine propulsion, which enabled her to steam 3 knots faster than other battleships. Another feature, not to be seen immediately, were lower running costs compared to previous types.

Other nations were quick to follow: USA (already working on such a ships - the SOUTH CAROLINA class), Japan, then Germany and, considerably later, other nations.

The DREADNOUGHT herself was obsolete by the beginning of the First World War. Nevertheless, in 1914 she was a flagship of the 4th Battle Squadron of the Home Fleet. She participated in many operations. The DREADNOUGHT has the distinction of being the only battleship to sink a submarine, when on 18 March 1915, during a North Sea sweep she rammed and sank the U29. After 1916 refit (which drastically altered her silhouette) the DREADNOUGHT became the flagship of 3rd Battle Squadron. Since March 1918 again flagship of 4th BS, Grand Fleet. Deleted in 1919, the DREADNOUGHT was sold in 1921 and broken up a year later.

TECHNICAL DATA	
Displacement:	17,900 tons standard, 21,845 tons full load
Length overall:	160.32 m / 525.98 ft
Beam:	25 m / 82.02 ft
Draught:	8.07 m / 26.48 ft
Main armament:	10 x 305 mm / 12 in 27 x 76 mm / 3 in (1906), 24 x 76 mm (1915)
Torpedo tubes:	4 x 450 mm / 17.7 in (under waterline)
Machinery:	18 boilers Babcock & Wilcox steam turbines Parsons, 4 screws
Power:	26350 HP
Speed:	21.6 knots
Fuel:	900 tons minimum; 2,900 tons maximum
Crew:	695 - 773

written by Marek Twardowski

ASSEMBLING INSTRUCTION

- 1-3 Hull base. Connect the parts by means of tabs. Keep the centre line straight.
- 4-13 Longitudinal stiffenings of hull. Assemble parts 4, 7, 10, 11, 12 as boxes. Glue stiffenings 5, 6 into parts 4 and stiffenings 8,9 into parts 7. Stiffenings 13 connect parts 10 and 11. Glue all parts on base (Fig. 1).
- 14,15 Stiffening of hull raise. Assemble part 14, glue stiffening 15 at the front and glue the part on 7.
- 16-33 Frames. Glue the parts on base and to longitudinal stiffenings. Port side (L) and starboard (R) are marked on frames. Bend side tabs of frame 31 to bow and glue to parts 4 and 14.
- 34,35 Deck. Glue part 34 to stiffenings and frames after cutting out marked openings. Connect part 35 with 34 by means of tabs and glue it also in front part with tabs directed to the inside of frame 31.
- 36-41 Bow part of raised deck. Cut out marked openings and assemble part 36. Glue oblique part of side wall 37 at starboard. Glue tabs 38 where deck is connected with walls. Glue oblique hawse-pipes walls 39 from inside where the openings are and glue them by means of side and back tab, so that they are bent to the bow (Fig. 2). Glue stiffenings 40 and 41 in marked positions. Place ready deck on part 14, frames 31-33 and part 35.
- 42-44 Central part of raised deck. Assemble the part and glue it on part 35, 36 fastening it to tabs in stern part of 36. Glue parts 43 from below to protruding deck part in bow part of 42. From the stern place parts 44.
- 45-47 Stern part of sides. Bend part 45 half-round in stern part and connect both parts of sides by means of tab 46. Bend stern frame 47, fold it along marked line and glue in axle to tabs of parts 4. Glue parts 45 to deck and base starting from stern.
- 48-52 Bow part of sides. Glue part 49 by means of tabs 50 to part 48 after bending the part and cutting out openings. Glue oblique walls of hawse-pipes 51 in bottom part, so that they are placed diagonally and opened in upper part inwards (Fig. 3). Glue ready parts 48, 49 starting from bevel of side to deck and base. At the front glue stem 52 bent in upper part and broken in bottom

- part.
- 53 Central part of sides. Glue the parts to tabs of parts 43, 46 and to base and deck.
- 54-58 Side walls of midship superstructure in bow part. Cut out marked openings and glue parts 54, 55 at the sides of part 36. Glue their front parts to deck of 36 and connect them in central part by means of part 56 bent half-round along marked line. Glue part 57 at starboard and place on it oblique bulwark part 58.
- 59-63 Side walls of midship superstructure in stern part. Glue parts 59, 60 in half-round and oblique part of 42 and glue them to parts 57 and 55. Glue half-round bent parts 61 at both sides of break in bulwark. Cut out marked openings and glue parts 62 from stern. Cut out openings and glue part 63 in central part.
- 64-67 Assemble superstructure 64 on part 36 and glue it to part 56. Assemble funnel bases 65, 66 and glue them on parts 36 and 42. Assemble part 47 and glue it on part 42.
- 68-79 Ventilators. Cut out bases 68 and wrap them with strips 71. In similar way wrap strips 72 around parts 69 and strips 73 around parts 70. Assemble covers 74-77 and bend half-round ends of rectangular part. Assemble stanchions 78, 79 and glue them on tops of longer edges of bases strips: two stanchions 78 and two stanchions 79 on two bases 68, four stanchions 79 on two bases 68, two stanchions 78 and two 79 on bases 69, two stanchions 78 and two 79 on bases 70. Glue covers on stanchions: covers 74 with higher part directed downwards on two bases 68, covers 75 horizontally on other two bases 68, so that one longer wall overlaps side wall, covers 76 on bases 69 and covers 77 with higher part directed upwards on bases 70 (Fig. 4). Ventilators without covers should be glued on part 36 from the side of bow behind part 64. Glue ventilators 68 with covers 75 on part 42 and to part 66, and place ventilators 69, 70 on part 47. Ventilators should be directed with cover to bow (assembly drawing).
- 80-87 Bunkering winches. Assemble parts 80 as tubes, glue discs 81 at both tops and glue the parts on bases 84 and 85. Assemble parts 82 as tubes and glue parts 83 at both tops. Other part 83 should be glued on base 85 (Fig 5). Assemble four parts 86 as

tubes, glue pairs of discs 87 at one side and glue the whole with other side from outside to parts 83, so that two winches 84 have that part on the right and one winch 84 on the left. Glue other four parts 86 with discs 87 to parts 54, 55 and two of them to part 62. Glue two winches 84 (left and right) on part 42 with parts 86 directed inwards). Glue other winches 84 and 85 on part 34.

88-90 Dampers of Diesel engines. Assemble parts 88 as tubes and glue from above and below discs 89. Assemble parts 90 as tubes and glue from below to discs 89. Glue ready dampers on part 36 near part 65.

91 Glue it on part 42.

92-98 Twelve big searchlights. Assemble parts 92 as tubes. In front part glue doubled discs 93 and in back part place discs 94. Assemble bases 95 as bevelled cones and glue them on discs 96. Bend parts 97, glue parts 92 inside and place on bases 95. At the top on parts 92 glue parts 98. Place ready searchlights: two of them on part 116, two on part 157, two by means of ring 163 on p 106, two on part 175 and two on part 216.

99-105 27 guns 76 mm. Assemble the barrel out of stick and wrap it with part 99 (Pattern A1). Assemble discs 100 and glue part A2 in openings of twelve discs 100. Place tubes 101 tightly rotating on part A2. Other tubes (15 pieces) should be glued on discs 100 (Fig. 6). Glue part 102 at the sides of tubes 101. Glue part 99 with barrels by means of strip 103 on part 101. Now the barrels may be elevated. Glue guns that rotate on parts A2: six of them on part 36, four on part 42 and two on part 106. Wrap strips 105 around discs 104 and glue them from below to discs 100. Place fifteen assembled guns: ten of them on turrets 237, two on part 36 and three on part 34.

106-110 Bow part of boat deck. Assemble part 106, from below glue two strips 107 parallel to longer axle and then strips 108 perpendicular to 107. Glue the strips vertically (Fig. 7). From the back glue stanchion 109 and then stanchion 110 to it. Fasten ready part to the tabs of parts 54, 55 and glue them by means of stanchions to part 36.

111 Platform for ammunition transport. Assemble big rectangles of part 111 and glue together with gangway on bulwark of part 59 and 60 in marked position.

112-119 Stern part of boat deck. Glue stanchions 112 to deck 42 and fasten them with longer horizontal part to outer edge of oblique wall of part 67. Slide parts 113, 114 through openings in parts 62 and glue them by means of their ends: part 113 to part 66 and part 114 to 67. Glue parts 115 with longer part directed to the middle between parts 112 and 113. Assemble part 116 and glue it to tabs of part 62 and to stanchion 112. Glue strips 117 inside and strips 118 outside part 116. Fig. 8 shows position of parts. Wrap stern part of 116 with railing 119.

120-124 Flag deck. Assemble parts 120, from below glue two parts 121 (parallel to longer axle). Other end of parts 120 should be glued to part 124. Glue two stanchions 122 at ends of parts 121. Glue part 123 transversal where the narrow rectangular part of 124 ends. Glue ready deck in bow part on stanchion 109 and in stern part on part 67 (Fig. 9).

125,126 Stiffening of boat deck framework. Glue three parts 125 where parts 112, 113, 114 touch parts 67, 66 and one part 125 where parts 107 and 109 touch each other. Glue parts 126 where parts 107 and 108 touch each other and move them towards part 65.

127 Gangways connect parts 106 with part 36 and are moved towards part 65.

128-150 Funnels. Bend fore funnel 128 half-round, assemble parts 129 and glue one part 129 by means of four tabs 130 from below and the second one 2 mm under upper edge of funnel. From inside glue strip 131 (even with funnel edge) and then also from inside strip 132. This strip protrudes out of funnel edge. Assemble

hood 133 and glue it in marked position above bottom edge of funnel. Assemble hood 134 and glue it in similar way on part 132. Narrow part of hood (where the part is glued) should be placed at the side of bow, opposite to the edge where the funnel is glued. Carefully cut out part 135, glue part 136 along longer axle and fasten perpendicular strips 137 on it. Bend tops of parts 136, 137 twice and glue them from inside to part 132 (Fig. 10). In similar way assemble funnel 138, inside glue parts 139, strips 140, 141, hood 142, 143, part 144 and strips 145, 146. Glue fore funnel on part 65 and after funnel on part 66. Glue bent part 147 from the bow on bottom hood of fore funnel and fasten two parts 148 on bottom hood of after funnel. Assemble trunks. Glue trunk 149 from bow side on first funnel. Place parts 150 on after funnel: one trunk from the bow and two of them from the stern.

151-154 Ladder and platform of fore funnel. Assemble ladder 151, glue platform 152 from above and glue the whole to trunk 149 on fore funnel. Glue part 153 to upper edge of hood and to trunks. Bend railing 154 and glue it at both sides.

155,156 Admiral room. Glue roof 156 from above to part 155 and glue the whole on part 124.

157-164 Admiral bridge. Assemble part 157 and wrap it with railings: from outside with railing 158, from inside at bow (where the break for gangway is) with railing 159 and at stern with railings 160. Glue railing 161 to edges of part 106 and bend tabs of its upper part inwards. Assemble parts 162, bend their ends oblique and glue to parts 106 and 124. Glue bridge 157 to parts 162 and to tabs of parts 161 and move it towards part 155. Assemble parts 163 as rings and glue them on part 106. Fasten two searchlights on them and two on parts 157. Bend parts 164 and glue at sides of parts 54, 55, to railing 161 and from below to part 157.

165,166 Gangways. Gangway 165 connects part 157 with part 124 near part 155. Gangway 166 connects part 157 with part 106.

167-174 Conning station and signal station. Wrap part 167 with strip 168, from above glue part 169 and fasten ready conning station on part 106. In similar way assemble part 170, wrap it with strip 171 and glue part 172. Place ready signal station on part 120. Cut out openings in parts 173, 174, glue them as a ladder (Fig. 11) and glue on part 169 with parts 173 perpendicular to axle.

175-186 Navigating bridge. Cut out marked opening, wrap bow part with railing 176, right side with railing 177 and left side with 178. Glue part 179 on part 175. In front part from inside glue cut out and assembled part 180 to railing 176. Wrap railings 182, 183 around compass platform 181 and glue it on part 179. Assemble stanchions 184, 185, glue part 186 from inside to stanchion 185 and fasten the stanchions from below to part 175. Glue ready bridge to parts 173, 174 and with stanchions to part 106. Place two searchlights 96 on wings.

187-189 Flag platform. Assemble two stanchions 187 and glue them horizontally on part 172 with longer edge directed upwards along marked line. Wrap disc 188 with railing 189 and glue on stanchions, so that the break for ladder is placed at the side of stern.

190-194 Ladder and gangways. Glue ladder 190 to wall of part 172 from the stern. Gangway 191 connects through the opening part 175 with railing 158 of part 157. Gangway 192 connects part 175 with part 106, gangway 193 part 181 with 174 and gangway 194 part 120 with 42.

195-208 Fore tripod mast. Assemble bottom and upper part of lower mast 195, 196 as tubes and connect them by strip 197. Glue discs 198 in fours, make an opening and glue them into opening in bottom part 195. Place part M1 in the opening and fasten lower mast in opening in part 36 driving it through opening in part 124. Assemble parts 199, 200 as tubes and connect them by strips 201. Assemble small searchlight platform 202, from above glue part 203, so that it covers partly two side openings in part 202. Wrap

railing 204 around part 202. From below glue side lower masts, so that their edge of glueing is placed inwards. Slide platform 202 on central lower mast till marked position. Slide ends of side lower masts through partial openings of part 106 and fasten to part 36. Wrap all three lower masts under part 202 with strip 205. Glue stanchion 206 from the bow to strip 205 and part 203. Assemble parts 207 and glue them from outside in marked positions to parts 195 and 199. Longer part should be glued from the bow. Assemble platforms 208 (engine room telegraphs) and glue them from inside to part 199 and with ladder to part 156.

209-213 Assemble parts 209 and glue them on parts 120 and 124. Mount crane assembly 210, glue part 211 and fasten the whole on part 124. Assemble boxes for flags 212, 213 and glue them on part 120.

214-226 Stern superstructure and after mast. Assemble superstructure base 214, cut out marked openings and glue part 215, so that the round opening is placed opposite to wall with numbers 221, 222 in part 214. Cut out openings, wrap searchlight platform 216 with railing 217 and glue on part 215, so that position of openings corresponds. Assemble lower mast 218 as a tube and glue it through openings in parts 215, 216 till they reach base of part 215. Assemble side lower masts 219 as tubes, slide them through openings in part 216 and glue in bottom part to part 34 and in upper part connect them by means of ring 220. Bend side wall of parts 221 and glue them on base 222 glueing both parts to part 214. On part 221 glue ventilators, rings 223 and then fasten covers 224 to their tabs. Glue ready superstructure and mast on part 34. Glue two stanchion 225 in marked position from below to part 226 and mount the whole to part 214 from the bow. Glue two searchlights 216 on platform 216.

227-230 Skylight of engine room. Assemble part 227, glue part 228 cut in 16 pieces and fasten the whole on part 34. Assemble part 229 as a frame, from above place cover 230 and glue the whole on part 34.

231-247 Main battery turrets 305 mm. Assemble parts 231, 232 as cones and slide them into each other with part without tab till marked level. Barrels may be also made out of stick (pattern A3). Glue discs 233 at the front of barrels. Assemble parts 234 as tubes and glue the barrels in central part. Marks on tube show position of barrel. Assemble outer walls of parts 235 and cut out openings. Bend them upwards placing the parts together with barrel tightly rotating in openings of part 234. Glue back wall. Now the gun may be elevated. Vertical walls of parts 235 should be bevelled where marked. Bend tabs of parts 236 inwards and oblique upwards and glue part 235 with barrels in front part. Cut out marked openings, bend upper parts of turrets 237, assemble side walls and slide ready parts with openings over barrels glueing to tabs of parts 236. Glue range finders 238 in the middle and range finders 239L, 239R on their left and right on part 237. Bend stanchions 240 and glue them at both sides of rectangular parts 237 in marked position. Place turrets on discs 241 and glue discs 242 from below. Cut out openings in parts 243, wrap them with strips 244. Cut out openings in parts 245, wrap them with strips 246 with central part protruding at both sides under deck. Place the turrets by means of discs 242 in parts 243, 245 and close them with discs 247. Now the turrets may rotate. Glue ready turrets with strips 244 on parts 36, 34 and turrets with strips 246 on part 35 glueing protruding side parts to parts 53.

Attention! Position of protruding parts 246 is not marked because of possibility of small moves on sides.

248-261 Steam launch 45'. Assemble hull 248 glueing tabs 249, 250 in marked positions. Cut out an opening in deck 251, glue part 252 inside and wrap it with part 253. From above place part 254. Assemble superstructure 255, glue on part 251 and place skylight 256 and narrow tube 257 (funnel) on it. Make upper part

of funnel wider. Assemble MG mount, glue discs 258 on part 251. Glue ventilators 259 on parts 255 in marked positions. Other two ventilators should be glued on cutter 262. Glue keel 269 from below to part 248 and place rudder 261 on stern.

262-278 Steam admiral's barge. Glue stern part 263 by means of tab 264 to hull 262. Glue tabs 265 and 266 in marked positions. Cut out an opening in deck 267, glue part 268 inside and wrap it with part 269. From above place part 270 and glue superstructures 271, 272 on part 267. Assemble funnel base (discs 273) and glue it on part 272. Glue tube 274 (funnel) on the base. Place skylights 275, 276 on parts 271 and 267. Fasten two ventilators 259 on part 271. Glue keel 277 under part 263 and mount rudder 278 on stern.

279-289 Sail boat 42'. Assemble hull 279 and glue tabs 280, 281 in marked position. Assemble inner part of hull 282 glueing it from inside to hull 279. Assemble seats 283, cut them out and glue to part 282 in marked position. Place stern seat 284 on stern near last seat. Glue mast step 285 in hull axle between first and fourth seat. Glue part 286 on bow and place on it MG base 287. Glue keel 288 under part 270 and place rudder 289 on stern.

290-300 Sail pinnace 36'. Assemble in similar way. Glue mast step 295 between first and third seat. Place part 297 on stern.

301-309 Two cutters 32'. Assemble in similar way.

310-315 Boat 32'. Assemble in similar way. Glue stern seat 313 on stern near last seat.

316-321 Gig 30'. Assemble in similar way.

322-327 Three whaleboats 27'. Assemble in similar way. Glue part 325 on stern bending trapezoid part downwards. Glue part 326 on bow.

328-332 Dinghy 16'. Assemble in similar way.

333-337 Stanchions and davits. Assemble boat stanchions 333 and glue two of them on ends of parts 114, two on ends of parts 117, one at starboard on ends of parts 118, one at port side on end of part 118 near bow and two on parts 121. Position of parts 333 is shown in Fig. 7. Glue admiral's barge at starboard to stanchions on parts 114, 118 and place steam launch 45' at port side. Glue second launch 45' to stanchions glued on part 117 at starboard and boat 42' at port side.

Glue pinnace 36' on this boat and then whaleboat 27' on it. Fasten boat 32' to stanchions glued to part 121 and mount whaleboat 27' on it. Assemble two stanchions 334 and glue them at both sides of part 116 where railing 119 ends. Glue whaleboat 27' (by means of strips 335) at starboard to stanchions 334 and to protruding parts 114, place gig 30' at port side and glue dinghy 16' on it. Cut out davits 336 and glue them bending rectangular tabs in central part outwards. Glue the davits to railing 158. Glue the davits with bottom part to superstructure 54 and 55. Glue two cutters 32' by means of strips 337 to davits.

338-347 Main crane. Make an opening and wrap strip 338 around stick D1. Glue outer parts of strip 339, make openings and bend sliding inside ends of part D1. This part of articulated joint makes rotation of crane in vertical axle possible (Fig. 12). Assemble parts 340, 341 as tubes and connect them by strip 342. Glue strips 343 at the tops. Assemble parts 344, make openings and glue at the sides on end of part 340 in marked position. Slide the crane with parts 344 onto part 338 and place second stick D1 in openings. This makes the rotation of crane in horizontal axle possible. Glue the crane by means of rectangular part 339 to central lower mast 195 in marked position. Cut out wheels 345, wrap them with strip 346 and glue one of them on end of crane, one on top of crane and two at the back on lower mast 196 in marked position. Glue discs 347 on end of crane.

348-366 Capstans, chains, hawse-pipes and anchors. Assemble parts 348 and glue them on part 36. Glue parts 349 and 350 to them. Assemble parts 351 as tubes, place discs 352 on them and

glue the whole on parts 348. Assemble discs 353 and glue them on parts 349, 350. Cut out openings and glue hawse-pipes 354 on part 36. Glue chains 355-357 on parts 349, 350 and on part 36. Position of chains is shown on assembly drawing. Glue parts 358 on discs 353 (assembly drawing). Assemble bow capstan 359, from below glue discs 360, ring 361 and glue the whole on base 362 and part 36. Glue stern capstan 363 on ring 364 and fasten the whole on part 34. Glue anchors 365 in bow hawse-pipes and glue anchors 366 vertically on part 171 from side of bow.

367-369 Breakwaters. Glue breakwater 367 on part 36, breakwaters 368 on part 35 and breakwater 369 with outer parts bent half-round on part 34.

370-382 Skylights and hatches. Assemble the skylights and glue them: parts 370,371 on part 36, one part 372 on part 36, the second one on part 34, part 373 on part 36, five parts 374 on part 34, four parts 374 on part 34 and two parts 375 on part 36. Assemble the hatches and glue them: five parts 376 on part 34, two on part 35, two on part 36, two parts 377 on part 34, two parts 378 on part 34, two on part 35, three on part 36, one part 379 on part 34, one on part 35, two parts 380 on part 34, two parts 381 on part 34 and two parts 382 on part 36.

383,384 Gangways. Assemble the parts (Fig. 13) and glue them on part 34, so that gangway covers 383 are bent to stern (similar as gangway cover 384 placed near bow). Gangway covers 384 placed near stern should be bent inwards.

385,386 Round ventilators. Glue assembled discs 385 on rings 386 and place ready ventilators on part 34 near stern battery.

387-390 Stern compass station. Wrap platform 387 with railing 388 and glue it on stanchion 389. Place ready station on part 34. From the bow glue gangway 390.

391 Two gangways connect part 36 with 35 near bow battery.

392-399 Open chocks and bollards. Glue open chocks 392 on parts 34, 36 and partly on side. Glue parts 393 in twos on parts 34, 35 in marked position. Assemble big bollards 394 as short tubes and glue them in pairs on strips 395. Glue disc 396 on each tube 396. In similar way assemble small bollards 397-399. Glue ready big bollards on parts 34, 35 and the small ones on part 34 and one on part 36.

400,401 Compasses. Assemble parts 400 as cones, glue discs 401 on them and place compasses on parts 175, 181, 387.

402 Table. Glue the part on part 181 in marked position.

403,404 Caboose funnel. Assemble the part as a narrow tube, cut it and bend in marked position. Glue it with bottom part to oblique wall of part 221 from the stern. From above glue discs 404.

405-412 Reels. Assemble parts 405 as tubes, wrap them with shields 406 and grips 407. In similar way wrap parts 408, 409, 410 with shields 411 and grips 412. Glue ready reels 407 on part 35 and reels 412 on part 34 in marked position.

413-417 Small searchlight of main mast. Assemble part 413 as a tube, glue discs 414 in front part and discs 415 in back part. Form part 416 as a tube, bend part 417 and glue part 413 inside. Fasten the searchlight on part 203.

418-420 Torpedo net platform. Glue parts 418-420 on parts 34 and 35. They protrude partly out of the sides.

421,422 Torpedo net spars. Glue thirteen spars on each side. Shorter spars should be glued from bow side. Position of spars is shown on assembly drawing. They may be also assembled out of sticks (pattern W1, W2). The best way to make torpedo net is to roll a strip of cellucotton and to paint it grey (Fig. 14). Glue the net on platform 418-420 after assembling the whole model.

423-439 Platforms of fore and after mast. Assemble part 423 and wrap it with railing 424. Form part 425 as a tube, glue pyramid 426 on it and place the whole on part 423. Assemble part 427 as a tube and glue it to back wall of railing 424 in marked position. Upper edge of tube should coincide with upper edge of railing. Glue parts 428 perpendicularly to railing at the sides of tube 427. Bend triangular part outwards. Glue part 429 from outside between parts 428. Place parts 430 horizontally at the height of part 423. Glue the whole on lower mast. From below glue diagonally two stanchions 431, inside place stanchion 432 and mount two stanchions 433 diagonally at the sides. In similar way assemble after mast platform. Wrap part 434 with second railing 424, glue second pyramid 426 on second tube 425 and glue tube 435 to front wall of railing. Glue parts 436 bending their triangular part outwards. Fasten parts 347 horizontally at sides at height of part 434. Glue the whole on ring of after mast 220. From below glue in front part stanchions 438 and in the back stanchions 439.

440-442 Masts and yards. Assemble fore topmast out of stick (pattern M2) and fasten yard M4 by means of part 440 on it. In upper part mount by means of strips 442 topmast M5 with yard M6 fastened by means of strip 441. Fasten yard M3 in cut out in part 428 and place mast by means of topmast M2 in tube 427. Fasten after topmast M7 with yard M5 in tube 435. Place flag-staffs M8 on bow and M9 on stern.

443-445 Booms. Wrap all booms with strips 443 and glue booms B1, B2, B3 by means of part 444: two booms B1 to part 219, two to part 42, two booms B2 to part 45LR, two booms B3 to part 199 and two to part 54 and 55. Glue booms B4 by means of part 444 to stanchion 445 to part 53LR. Booms can move.

446 Main gangways. Bend outer square parts of 446 and glue them. Bend both parts of gangway and glue the parts at port side to part 420L, at starboard to part 419R and with tabs of protruding parts to the sides (Fig. 15).

447 Platforms. Glue on part 34, one on each part 418LR and one on part 419L.

Attention! You may make the rigging and hang flags to improve the model's appearance.