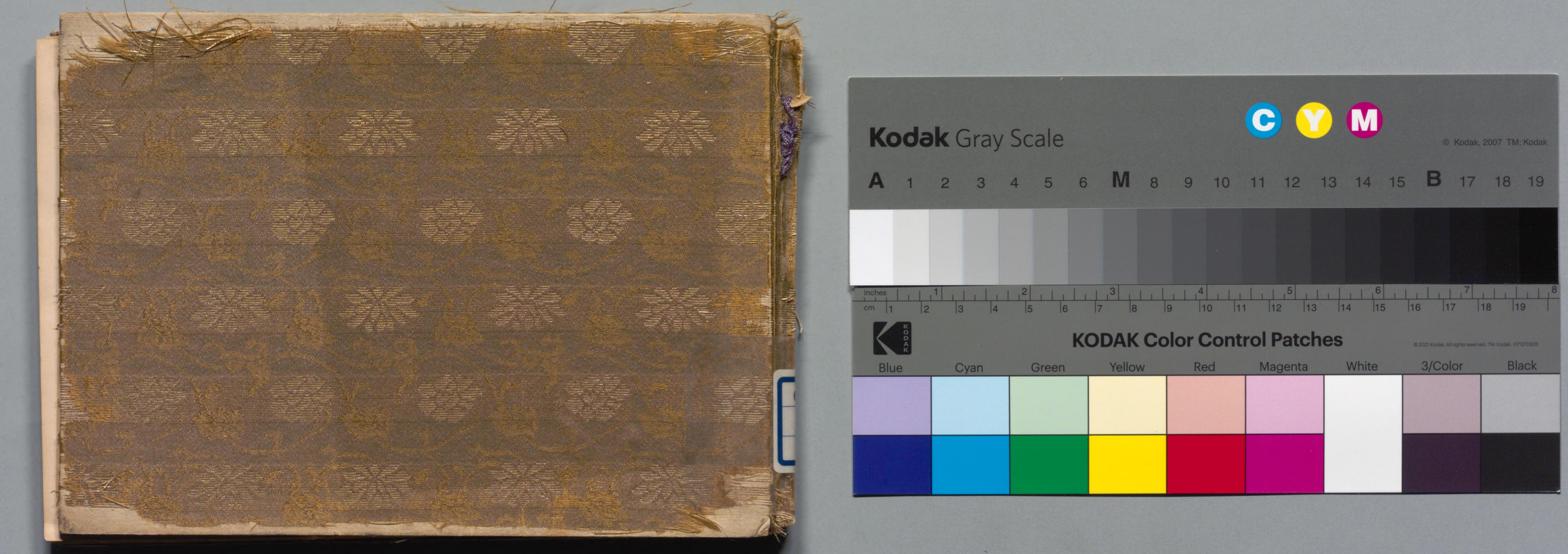
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日本海運圖史

逓信省管船局

明治四十二年十一月

明治四十二年十一月廿五日印刷
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第一　大寶ノ刳舟

本船ハ常陸國大寶八幡宮ニ保存スル所ニ係ル往時恐クハ同國大寶沼ニ用井ラレシモノナラン材質ハ檜又ハ杉ノ類ニシテ長二十尺幅一尺九寸深六寸五分厚一寸五分首尾兩端ノ高各一尺三寸及一尺五寸ニシテ底部扁平ナル獨木舟ナリ本船ニ關シテハ記錄又ハ口碑ノ傳フルモノナシト雖モ頗ル古色ヲ帶ヒ全部殆ト腐朽シ其構造亦極メテ粗ナルカ故ニ古代ノモノニ屬スルハ明カナリ該八幡宮ハ大寶年間(西曆七百一年乃至七百三年)ニ創立セラレ足利ノ初メ(西曆千三百五十年ノ頃)兵燹ニ罹リシカ故本船モ或ハ其後ノモノナランカ按スルニ此地方ハ人文進歩ノ程度西國地方ヨリ遲クシテ比較的後年迄獨木舟ノ使用セラレシモノナランカ

第二　諸手舟

本船ハ出雲國美保關事代神社ニ保存スル所ニ係ル凡長二十六尺幅五尺五寸深二尺五寸ノ獨木舟ニシテ練櫂(舵ノ用ヲナス櫂)一挺櫂八挺ヲ備ヘ兩側ニハ神紋ヲ彫リ丹ヲ以テ彩色セリ社傳ニ據レハ大巳貴神ノ命ヲ奉シ稻背脛命カ當時美保關ニ在住ノ事代主神ニ使セシトキ乘リタル諸手舟ニ象リ造リシモノニシテ先代ノ船腐蝕セハ其形ヲ摸シテ改造シ今日迄傳來セシモノナレハ其形狀ハ往古ト異ナルコトナシ但近古迄ハ楠ヲ川井テ造リシモ其材ノ乏シキヲ以テ現今ハ樅ヲ以テ之ニ代ヘ又往古ハ赤埴土ヲ塗リテ裝飾セリト云フ蓋シ美保關ハ素盞嗚尊ノ古跡ニシテ本船ハ往古埴土ヲ以テ裝飾セラレシヲ推察セハ尊ノ所謂埴土ヲ以テ造ラレシ船ハ卽チ埴土ヲ塗リタル船ナラン本船ヲ諸手舟ト稱スルハ左右ニ多クノ櫂アリテ恰モ多クノ手ヲ有スルカ如キ觀アルニ因ルナラン

第三　大阪ノ丸木舟

本船ハ大阪博物場ニ保存スル所ニ係ル明治十一年(西曆千八百七十八年)攝津國難波村鯰川開鑿ノ際該鑿線ト同村櫻井德兵衛所有地トノ間ニ跨ル土中ヨリ掘出セシ丸木舟ニシテ材質ハ楠ナリ本船所々破損腐蝕セシト雖モ尙ホ大體ヲ存シ長三十八尺幅四尺八寸深一尺八寸中央ニ於テ二材ヲ嵌接ス嵌接ノ長五尺七寸嵌接ノ兩端ヨリ船ノ首尾兩端ニ至ル距離ハ一方ハ十一尺他ハ二十一尺三寸ニシテ短キ方ハ其一端ニ於テ之ヲ切斷セルカ如キ痕跡アリ若シ嵌接ノ前後同長ナリシモノト假定セハ本船ノ總長ハ凡五十尺ニ近カリシナラン又釘ヲ使用セシ痕跡ナキヲ以テ見レハ本船ハ往古未タ釘無キ時ニ於テ製造セラレシモノナランカ其千年以上ノモノタルハ論ナ

キナリ蓋シ其釘ヲ用ヰスシテ二材ヲ嵌接セル技術ニ至リテハ頗ル妙ナリト謂フヘシ卽ヶ嵌接ノ部ニ於テ底部ニ一箇ノ縦材ヲ置キ其上ニ四箇ノ横材ヲ以テ之ヲ壓シ內中央ノ二材ハ左右兩端共横七寸竪四寸ノ孔ヲ穿ケテ船側ニ貫通シ前後ノ二材ハ船側ヲ貫カスシテ其一端ハ船側內部ノ凹處ニ嵌入シ他端ハ船側ヲ切リ缺キテ各其前後ヨリ楔打シ以テ固著セルモノナリ但前後ノ二横材ハ現存セス

第四　菅公ノ乘船

原圖ハ相摸國鎌倉繪柄天神社ヨリ出テタル額面ニシテ東京帝室博物館ノ所藏ニ係レリ其果シテ菅原道眞カ大宰府ニ左遷セラレシトキ(西暦九百一年)座乘セシモノナルヤ否ヤ究メ難シト雖モ原圖ノ鎌倉時代(西暦千二百年代)ニ成リシハ明カナルニヨリ亦以テ當時ニ於ケル船

舶ノ一斑ヲ知リ得ヘシ卽ヶ船形ハ後代ノモノト其趣ヲ異ニシ艚手ノ爲メニ特ニ兩側ニ船棚ヲ設ケ燈火ニ篝ヲ用フルヲ見ルヘシ

第五　平氏ノ御座舟

原圖ハ長門國下關赤間宮ノ寶物タル土佐光信ノ畫ニシテ全ク唐船ノ構造ナリ檣ハ二本ニシテ帆ハ蓆ヲ以テ之ヲ製シ(西暦千百八十五年)舵ハ船尾材ニ付著セリ口碑ノ傳フル所ニ據レハ平家ニ於テ唐船ヲ摸擬シテ製造シ其援兵ノ來リシ如ク裝ヒ以テ源軍ノ膽ヲ奪ハントス謀リタルモノナリト但寸法ハ詳ナラス

第六　壇浦ノ海戰

本圖ハ前記土佐光信ノ原圖摩損ノ爲メ之ヲ摸寫セシモノニシテ同シク赤間宮ニアリ其年代ハ詳ナラスト雖モ亦多ク年所ヲ經タルモノナリト云フ(壇浦ノ海

戰ハ西暦千百八十五年)見ルヘシ唐船ハ雞群ノ一鶴ノ如ク特ニ他船ニ抽テ積量ノ大ナルヲ而シテ其他ノ舟ハ垣、楯、幕等ヲ以テ矢ヲ防ケル無檣ノ小舟ノミナリシヲ知ルヘシ

第七　元寇ノ海戰

原圖ハ元寇當時(西暦千二百八十一年)ノ人姉小路長隆父子ノ著ニ係ル東京帝室博物館所藏ノ蒙古襲來繪詞ニ挿入セルモノニシテ畫工ハ藤原信實ナリト云フ以テ當時船舶ノ一斑ヲ知ルヘク其船形並ニ漕手ノ棚ハ菅公ノ乘船ニ均シク碇ハ木製ニシテ當時尚ホ端艇ニ丸木舟ヲ用ヰシヲ知ルヘシ

第八　鎌倉時代ノ船舶

原圖ハ東京帝室博物館所藏ノ一遍上人繪卷物ニ挿入セルモノナリ本圖ハ鎌倉時代ニ成リシモノニシテ當時ノ船舶ノ大略ヲ窺フニ足ル一ハ正應年間(西暦千二百九十年ノ頃)一遍上人ノ伊豫國三島神社ヘ參詣ノ時ノ乘合船他ハ兵庫ニ於ケル船舶ノ圖ナリ

第九　遣明船

原圖ハ京都妙智院ノ所藏ニシテ天文十六年(西暦千五百四十七年策彦和尚ノ入明セシ時彼地ノ畫工野泉ノ筆ニ成リ天文十九年(西暦千五百五十年)慈水ノ葉寅齊序ヲ書キテ彼地ヨリ贈リ來リシモノナリ本圖ニ顯ハス所ハ策彦カ足利時代ノ入明船ニ附屬シタル類船ニ乘リテ本國ニ歸朝スル有樣ナリ

第十　中古ノ軍艦

原圖ハ海軍文庫ノ所藏ニ係ル中央ニ矢倉ヲ築キ木製ノ楯及幕ヲ以テ防禦シ櫓ヲ以テ操縱スル軍艦ナリ

第十一　武田信玄ノ軍艦

西暦千五百年代ノ船舶ニシテ其一ハ竹楯ヲ以テ舷側ヲ防禦シ首尾兩端ハ木製ノ楯ヲ付シ舷墻ハ其下端ニ蝶番ヲ付シ外方ニ向ケテ倒シ得ヘク之ヲ立ツレハ楯トナルノ構造ナリ且之ニ銃眼ヲ穿テリ其二ハ舷墻舷側共木製ノ楯ヲ付シ何レモ蝶番ヲ以テ其下端ヲ取付ケ外方ニ向ケ開放シ得ヘク舷側ノモノハ之ヲ倒セハ更ニ二重ノ蝶番ニテ長ク外方ニ延ヒ敵船ニ乘込ムトキノ足場トナル首尾兩端モ亦蝶番ニテ上方ニ卷揚ケ得ヘキモノニシテ檣一本ヲ有シ且井樓ヲ備ヘ其周圍及船ノ首尾並ニ兩側ニハ銃眼ヲ穿テリ小早川秀秋ノ軍艦ニ酷似スルヲ以テ其圖ハ之ヲ省ク

第十二　日本丸

本船ハ天正十九年(西暦千五百九十一年)九鬼嘉隆太閤ノ命ヲ受ケ製造セシモノニシテ征韓ノ役終ルヤ志摩國鳥羽ニ繫留セリ最初櫓百挺立乘組人員百八十人ナリシカ後ニ至リ内藤伊賀守之ヲ改造シテ五百石積櫓六十挺立ト爲シ且其名稱ヲ大龍丸ト改タリ本船ハ漸ク年ヲ經テ腐朽ニ垂ントセシヲ以テ安政三年(西暦千八百五十六年)ノ頃解撤セシト云フ

第十三　雛形丸

本圖ハ伊勢國宇治山田徵古館ニ現存セル摸型ヨリ撮影シタルモノナリ卽チ鳥羽藩ニ傳來セシモノニシテ嘉永七年(西暦千八百五十四年)中村傳六ナル者藩命ニヨリ征韓ノ役ニ從ヒタル同形船ノ鳥羽港ニ繫留サレシモノニ就キ摸造セシモノナリト云フ

第十四　小早川秀秋ノ軍艦

第十五　同　上

第十六　同上構造圖

前記三圖ハ武藏國八王子町信松寺ニ現存セル摸型ヨリ撮影シタルモノナリ周圍ニ木製ノ楯ヲ付シ楯ノ外面ニハ竹ヲ付シテ防禦トス此楯ハ總テ銃眼ヲ備ヘ蝶番ヲ以テ開放シ得ヘク甲板ハ厚板ヲ以テ防禦シ檣ハ一本ニシテ主トシテ櫓ヲ以テ漕航ス蓋シ本船ハ太閤征韓ノ役ニ使用セシ所ノモノナリ

第十七　安宅船
第十八　圍楯船
第十九　幕楯船

前記三圖ニ示ス船舶ハ安宅作リ或ハ關船ト云ヒ矢倉ヲ備ヘ其周圍ニ楯ヲ有スルモノハ圍楯船ノ稱アリ二千石以上ノ船艦ニ在リテハ四方ノ楯ハ二寸板ヲ以テ之ヲ造リ總テ取外シ自在ナリ中央ニハ四方楯三層ヨリ成ル二間四方ニシテ高サ矢倉以上二間半ノ樓閣即チ天守臺ヲ設ケ艫ノ口ハ鎖網ヲ以テ之ヲ張リ舳ノ口ハ車楯ト稱シテ自在ニ運轉開閉スルコトヲ得ルノ構造ナリ百挺立ノモノハ亦圍楯ニシテ楯ノ厚二寸中央ニ一間半四方ニシテ高サ矢倉以上十尺ノ二層ノ天守臺ヲ設ケ艫ノ「ロビク」先兩脇共鎖網ヲ以テ之ヲ張リ舳ノ口ハ車楯ノ構造トス八十挺立以下ノモノニハ天守臺ヲ備ヘス楯ノ厚モ漸次薄クシ五十挺立ノモノニハ厚ヲ一寸ニ減セリ四十挺立ノモノハ前面及前部兩側七八尺ノ間ノミ楯厚一寸二分ノモノヲ設ケ其他ハ總テ幕ヲ以テ楯ニ代用ス故ニ之ヲ幕楯船ト稱ス本船ハ舵手ノ前面ニ鎖網ヲ張リ以テ箭彈ヲ防ク蓋シ此種ノ船舶ハ太閤征韓當時ノ主戰艦ナリシナラン

第二十　井樓船

本船ハ三百石以上四百石内外ノ船艦ニシテ前面及兩舷ニ楯ヲ設ク中央ノ井樓ハ船ノ大小ニヨリ差アレトモ均シク敵

船ヲ狙撃スルカ爲メナリ蓋シ本船ハ猶ホ今日ニ於ケル砲艦ノ如キモノニシテ太閤征韓ノ役ニ用ヰシ所ナリト云フ

第二十一　戰ヒ舟

本船ハ百五十石内外ノ船艦ニシテ總テ楠材ヲ以テ龜甲形ニ構造シ銅板ヲ以テ之ヲ包ム故ニ又一名龜甲船トモ稱ス龜甲板ノ中央全體ニ跳ネ揚窓ヲ設ケ其艫一方ニ備ヘタル物見ノ窓ハ鎖網ヲ以テ之ヲ張リ又周圍ニ多クノ矢狹間ヲ設ケ火箭鐵砲ノ發射ニ備フ但本船ハ櫓櫂ヲ用ヰス進退スルモノニシテ圖ノ如キ付火箭ヲ備ヘタルハ敵船ト接戰スルニ臨ミ之ヲ燒討スルノ仕掛ナリ蓋シ今日ノ水雷艇ノ如キ用ヲ爲セシモノナラン本船モ亦太閤征韓ノ役ニ用ヰシ所ノモノナリ

第二十二　打櫂船

本船ハ二百石以上ノ船艦ニシテ其用材及構造等概ネ戰ヒ舟ニ同シ其異ナル所ハ打櫂ヲ以テ輕快ニ進退スルニアルノミ蓋シ今日ノ巡洋艦ノ如キ用ヲ爲セシモノナランカ本船モ亦太閤征韓ノ役ニ用ヰシ所ノモノナリ

第二十三　早舟

本船ハ今日ノ報知艦トモ云フヘキモノニシテ其構造ハ小早造リト稱スル小形ノ快走船ナリ上部ニ楯ヲ張ル固ヨリ駛走輕快ヲ要スルカ故ニ常ニ打櫂ヲ以テ進退ス若シ櫓ヲ用フル場合ニハ上部ノ楯ヲ跳ネ揚ケテ兩側ノ楯ト爲スノ裝置ナリトス

第二十四　馬船

本船ハ太閤征韓ノ役ニ用ヰシ所ノ運輸船中ノ一種ニシテ特ニ軍馬輸送ノ爲メニ備ヘシモノナリ前部ハ竹垣ヲ以テ防

禦ス

第二十五　荒木御朱印船

本圖ハ長崎清水寺ノ額面ヨリ撮影シタルモノニシテ荒木宗太郎ノ船ナリ檣ハ大小三竿アリテ前方ノ二檣ニハ莚製「ラツグセール」及木綿製彌帆各一枚宛ヲ備ヘ其頂上ニ號帶ヲ有ス又後檣及斜檣ニハ横帆一枚宛ヲ備ヘ支那形ト西洋形トヲ折衷セシモノヽ如シ船體ハ較ヤ純然タル西洋形ニシテ舵ヲ船尾材ニ取附ケ船首及船尾ニ「ガラリー」ヲ備フ原圖ニ元和八年(西暦千六百二十二年)十一月四日ト記載アリテ日本ヨリ交趾國ニ至ル船ナルコトヲ付記セリ

第二十六　末次御朱印船

本圖モ亦長崎清水寺ノ額面ヨリ撮影シタルモノナリ艫ノ方ハ樓作リニシテ欄干アリ檣ハ大小三竿アリ前方ノ二檣ニ

號帶ヲ掲ケ艫ノ方ニハ朱丸ノ内ニ「平」ノ字ノ大ナル幟ヲ樹ツ額面船形ノ側ニ「奉納寛永十一年(西暦千六百三十四年)甲戌七月吉日石本庄左衛門八代石本幸四郎興長男庄五郎興道」ト記載アリ當時免許ノ御朱印船長崎ニ五艘アリシト云ヘハ此額恐クハ末次平藏茂房ノ船ナラン此構造設備ハ荒木宗太郎ノ船ニ同シ

第二十七　末吉御朱印船

本圖ハ京都清水寺ノ額面ヨリ撮影シタルモノナリ京都末吉孫左衛門ノ船ハ長二十間ニシテ艫ニ宮殿風ノ樓閣ヲ築キ三本ノ檣ヲ立テ帆ハ板木綿ヲ併用シタリシト云フ艫ニ樓閣ヲ築キ「末吉」ノ幟ヲ樹ツルヲ以テ考フレハ蓋シ末吉孫左衛門ノ船ナルヘシ其構造及艤裝ハ荒木又ハ末次ノ船ニ酷似スルヲ知ル原圖ハ寛永十年(西暦千六百三十三年)十二月二十一日ノ日付ニシテ東京ヨリ無事歸朝セ

ルヲ祝スル爲メ祝宴ノ狀況ヲ寫セシモノナリ清水寺ニハ尚ホ二枚ノ額面アリ本圖ト略ホ相同シ

第二十八　角倉御朱印船

本圖モ亦京都清水寺ノ額面ヨリ撮影シタルモノニシテ彼ノ天竺德兵衛ノ乘リタル京都角倉與一ノ船ハ是ナラン乎德兵衛ノ天竺物語ニヨレハ其船ハ長二十間幅九間ニシテ三百九十七人之ニ乘リテ渡海シ內八十人ハ水夫ナリシト云フ本船ハ其艤裝前數者ト相同シト雖モ船形ハ著シク趣ヲ異ニシ船首及船尾ニ樓閣ヲ備ヘ船尾ニ朱丸ノ內ニ「角」ノ字ノ幟ヲ樹テタリ本圖モ亦東京ヨリ安着セル祝宴ノ狀況ヲ寫セシモノニシテ寬永十一年(西曆千六百三十四年)九月吉日ト記載アリ

第二十九　西村渡航船

原圖ハ近江國蒲生郡八幡神社ノ所藏ニ係ル額面ニシテ國寶ニ列スルモノナリ本圖ハ右ノ額面ヨリ撮影シタルモノニシテ西村太郎右衛門尉ノ船ナリ本船ハ其構造艤裝トモ前揭御朱印船ト相均シク檣ハ大小二竿ニシテ船體ハ稍々小形ナルモノヽ如シ原圖ハ船中宴ヲ開キ渡海長途ノ勞ヲ遣ルノ狀況ヲ畫キタルモノニシテ正保四年(西曆千六百四十七年)丁寅吉日ト記載アリ按スルニ西村太郎右衛門尉ハ寬永十三年(西曆千六百三十六年)鎖國制ノ發セラレタル前ニ安南ニ渡航シ居リ禁令ノ出ルニ及ヒ歸國スルニ由ナク然モ望鄉ノ抑ユヘカラサルモノアリ額面ニ畫ク安南渡航船ノ圖ヲ以テ遙ニ鄉國八幡社ヘ奉獻セシモノナルヘシ

第三十　山田長政ノ軍艦

山田長政カ寬永三年(西曆千六百二十六

年)駿河國淺間神社ニ奉納シタル額面ハ天明八年(西暦千七百八十八年)十一月淺間神社ノ火災ニ罹リシ際燒亡シタレトモ幸ニシテ其摸圖庫中ニ存セシヨリ今日マテ傳フルコトヲ得タリト云フ本圖ハ右ノ摸圖ヨリ撮影シタルモノニシテ現今ノ西洋形帆船ノ如ク舳部及兩舷ニ大砲ヲ裝置シ三本ノ檣ト之ニ人ヲ立タシムヘキ檣樓トヲ設ケ且多數ノ櫓ヲ備フ甲冑ヲ被リ刀ヲ帶ヒ或ハ銃ヲ把リ或ハ弓ヲ持ツ者ハ日本兵士ナリ金兜綵鎧中央ニ立ヲ扇ヲ披キテ指揮スル者ハ山田長政ナリトス

第三十一　天地丸

本船ハ寬永七年(西暦千六百三十年)六月德川家光カ海軍奬勵ノ爲メ芝海ニ泛ヘタルモノニシテ長二十七間三尺幅九間深一丈一尺櫓百挺立ナリト云フ東京帝室博物館ニ本船ノ摸型ヲ存ス

第三十二　安宅丸

本船ノ構造ヲ按スルニ長三十八間横十八間(寸法ニ付キ數說アリ)左右ノ端ニ幅二間長二十六間ノ武者走アリ之ヲ圍ムニ堅固ナル格子ヲ以テス且窓ヲ設ケテ弓鐵砲ヲ發射スルニ便ニシ其下ニモ亦同シ武者走アリ此處ニハ水主二百人ヲ備ヘ櫓一挺ニ二人ヲ充テ左右合セテ水主四百人櫓二百挺ヲ用フ此處ハ水主圍トテ弓鐵砲ヲ防カンカ爲メ塀ノ如ク作レリ座敷三間アリ上段ハ武者ノ居間ニシテ下段ハ兵士ノ居間ナリ又其下ニハ六四立厩ト厠養ノ部屋アリ底ニハ米一萬俵ヲ積ミ得ヘク且水槽ノ設ケアリ之ヲ汲ムニ繩釣瓶ヲ以テス舳先ニハ龍頭艫ニハ鷁首ヲ裝置シ楫ノ頭ニハ鬼首ヲ飾リ其周圍一間三尺アリ最高樓上ノ廣サハ八疊敷ニシテ之ニ登レハ四方ヲ瞰下シ船幕船印或ハ吹貫ヲ立テ御座ハ赤銅ヲ以テ包ミシモノヽ如シ安宅丸ニ關

シテハ諸說紛々トシテ今之ヲ詳ニスルコト能ハスト雖モ寛永十二年(西暦千六百三十五年)伊豆國ニ於テ製造シ天和二年(西暦千六百八十二年)操縦ニ不便ナルヲ爲メ解撤セシト云フ

第三十三　徳島藩御召舟
第三十四　同　上
第三十五　住吉丸
第三十六　飛龍丸
第三十七　泰寶丸
第三十八　同上構造圖

前記諸船ハ御召舟ヲ示セルモノニシテ各藩ノ所有セシモノナリ各藩ニ在リテハ之ヲ參勤交替ニ使用セリ主トシテ櫓ヲ以テ運航スルカ故ニ舷低クシテ幅廣ク又船首材ハ其幅甚タ廣クシテ舳「サガリ」ハ「バラサガリ」トシ全體ニ極メテ美麗ナル裝飾ヲ施セリ第三十三圖及第三十四圖ハ徳島藩ノ御召舟第三十五圖ハ鷹島藩ノ御召舟住吉丸ナリ住吉丸ハ文政九年(西暦千八百二十六年)ノ製造ニ係レトモ五十年前ノ形式ニ摸擬セシモノナリト云フ航ノ長八尋一尺六寸ニシテ十六反帆六十四挺立ナリ第三十六圖ハ高松藩ノ所有セシ飛龍丸ニシテ總長十六間幅四間半十八反帆ナリ第三十七圖ハ熊本藩ノ所有セシ泰寶丸ニシテ第三十八圖ハ該船ノ中心線縦斷面圖、平面圖及中央横斷面圖ヲ示ス以テ御召舟構造ノ一斑ヲ知ルヘシ

第三十九　川御座舟
第四十　同　上

第三十九圖ハ喫水極メテ淺キ川舟ニシテ寶暦三年(西暦千七百五十三年)以前ノモノナリ洵ニ其船樓ノ壯麗ナルヲ見ルヘシ第四十圖ハ朝鮮使者ヲ送迎セル川舟ニシテ其紋所ニ據レハ熊本藩、岩國藩、尼崎藩ノ何レカノ所有ニ屬セシカヲ推

知スヘシ

第四十一　麒麟丸

本圖ハ東京帝室博物館ニ現存セル德川氏御召舟麒麟丸ノ摸型ヨリ撮影シタルモノナリ其寸法ハ長九間幅二間深三尺ニシテ二十六挺立ナリ裝飾美麗ヲ極メタリ

第四十二　琉球貢進船

本圖モ亦東京帝室博物館ニ現存セル摸型ヨリ撮影シタルモノナリ本船ハ琉球ヨリ入貢ノ時使用セシモノトス

第四十三　外車船

本船ハ高松藩ニテ使用セシモノニシテ長二間四尺四寸幅三尺八寸深一尺八寸四人乘ニシテ外車ヲ備フル兵船ナリ高松藩ニ在リテハ之ヲ水中船ト稱ス車船ト區別スル爲メナリ銃手及楫取ハ圍壁ノ内ニアリテ圍壁ノ内側ニハ砂ヲ以テ四方ヲ圍ヒ防禦ニ供ス其製造年代不詳ナレトモ原圖ニ明和九年(西曆千七百七十二年)六月ト記載セルヲ見レハ其以前ノモノナラン降テ安政二年(西曆千八百五十五年)安藝國倉橋島ニ於テ同種ノ船舶ヲ造リシコトアリ之ヲ利渉船ト稱ス寸法ハ前者ヨリ較ヤ大ナリ

第四十四　入子舟

本船ハ高松藩ノ入子舟ト稱スルモノニシテ船體ヲ數箇ノ升形ニ區分シ船ノ中央ナル最大部分ノ一區ヲ外ニ首尾ヲ中ニ入レ子ニ成シタルモノナリ其寸法ハ約總長三間幅三尺八寸深一尺五寸三分ナリ本船ノ用ハ陸地ノ運搬ニ便ニシテ江湖河海ニアリテハ則チ舟トナスモノナリト云フ

第四十五　明神丸

本圖ハ遠江國掛塚港貴船神社ニ寶物トシテ現存セル摸型ヨリ撮影シタルモノナリ本摸型ハ文久三年(西暦千八百六十三年)八月ノ奉納ニ係レトモ今ヨリ凡二百年以前ノ形狀ヲ摸擬シタル所ノモノニシテ船體ハ漆塗金具ハ金色ナリ大サノ割合其他ニ關スル記錄等ナシ但其形狀ヨリ判斷セハ御召舟ニシテ一竿ノ檣ヲ有シ主トシテ櫓ヲ以テ漕進スヘキ矢倉舟ナリ雛形丸ニ酷似ス

第四十六　菱垣船

本船ハ寛永年代(西暦千六百年代)ヨリ盛ニ東京大阪間ノ航海ニ用ヰラレシ船舶ニシテ和漢船用集ヨリ本圖ヲ撮影シタルモノナリ外舷ニ菱形ノ垣ヲ裝フヲ以テ菱垣廻船ノ稱アリ後樽廻船ト稱スル一種ノ船ヲ造リ菱垣船ト競爭ヲ爲セリ天保年間(西暦千八百四十一年)ニ迨ヒ菱垣船ハ遂ニ失敗ニ歸シ全ク其跡ヲ絕ツ

ニ至レリト云フ

第四十七　舊式日本形船

第四十八　日本形船構造圖

第四十七圖ニ掲クルモノハ嘉永(西暦千八百五十年)以前ノ日本形船ニシテ大阪市廣海二三郎所藏ノ摸型ヲ撮影シタルモノナリ其今日ノ日本形船ニ比シ著シク異ルハ第一船首材ノ屈曲甚シキコト第二足洗ハ今日ノモノニアリテハ舳艫ニ全通スレトモ貝ノ口ニテ止マリシコト第三門ハ今日ノモノニアリテハ五尺ノ下邊ニ出ツレトモ「アテリ」ヨリ出テシコト第四垣ハ後ニハ竹造リニテ細ニ編綴スレトモ木造リナリシコト第五傳馬込ハ垣ニ大柱ヲ設ケテ垣ヲ切斷シテ造レトモ垣ヲ切斷セサル構造ナリシコト第六貝ノ口戸締ハ上ヨリ落セトモ前後ニ引ク裝置ナリシコト第七外部裝飾ハ銅板ヲ以テ飾レトモ木口其他ハ單ニ黑

色ニ塗リシコト第八艦ノ船名標示ハ一枚額ニ示セトモ一字毎ニ額面ヲ造リテ出入港ノ場合ニ掲ケシコト第九舳「サガリ」ハ公用船ノトキハ「バラサガリ」商用船ノトキハ「棒サガリ」ニ爲セシコト等ナリ第四十八圖ハ日本形船ノ構造ヲ示スモノナリ

第四十九　新式日本形船

第五十　同　上

第四十九圖ハ大阪市比石造船所々藏ノ摸型ヲ撮影シタルモノニシテ嘉永以後ノ形ナリ第五十圖ハ大阪市大家七平所藏ノ摸型ヲ撮影シタルモノニシテ現今ニ於ケル日本形船ノ艤裝セシ形ナリトス

第五十一　鳳凰丸

本圖ハ鳳凰丸ノ圖畫ヨリ撮影シタルモノナリ徳川幕府ハ嘉永六年(西暦千八百五十三年)九月大船製造ノ禁ヲ解キ安政元年(西暦千八百五十四年)五月相摸國浦賀港ニ於テ外國船ニ摸擬シ長二十二間幅五間二檣ノ巨船ヲ造ラシム卽チ鳳凰丸ニシテ徳川氏カ大船製造ノ禁ヲ解キテ以來製造シタル西洋形船ノ嚆矢ナリ

第五十二　ヲウリン船

本圖ハ京都帝室博物館ニ現存セル摸型ヨリ撮影シタルモノナリ本摸型ハ安政二年(西暦千八百五十五年)大阪ニ於テ戎島町徳次郎ナル者ノ造リシ所ナリ果シテ斯ル船舶ノ實際ニ製造セラレシヤ否ヤ未タ詳ナラスト雖モ本摸型ヲ見レハ船體ハ日本形ニ近ク艤裝ハ西洋形ニ近キ和洋折衷船ニシテ水線附近ハ竹製ノ楯ヲ以テ之ヲ防禦セリ而シテ甲板上ニ數門ノ大砲ヲ裝置セルヲ以テ見レハ軍艦ナルハ明カナリ「ヲウリン」船ト稱スル由來ハ未タ詳ナラス

第五十三　君澤形船構造圖

第五十四　同上進水圖

第五十三圖ハ伊豆國戸田村松城兵作ノ所藏ニ係ル原圖ヨリ轉採シ第五十四圖ハ同村佐山芳太郎ノ圖畫ヨリ撮影シタルモノナリ安政元年(西曆千八百五十四年)露國軍艦「デイヤナ」號修交ヲ求ムル爲メ下田港ニ碇泊セシ際十一月四日恰モ大地震アリ海嘯ノ爲メ船底暗礁ニ觸レテ大ニ破損シ復タ奈何トモスヘキナシ茲ニ於テ艦長「フーチヤチン」造船ニ適スルノ地ヲ伊豆國君澤郡戸田ニ相シ駿豆境上ノ松材ヲ採リ乘込ノ船工鍛工及我造船工ヲ指揮シテ工事ニ從事シ終ニ「スクーナー」形船二隻ヲ造リ安政二年(西曆千八百五十五年)三月本國ニ歸航シタリ第五十三圖ノ原圖ハ其際調製シタルモノナリト云フ當時本邦ニ於テ西洋形船舶ヲ製造スルコト漸ク多カリシカトモ船體ノ要部タル肋骨ノ法式明カナラス

又肋材首尾材緊帶諸部ノ法式ニ暗カリシカ故ニ當時ノ西洋形船ハ外形ノミ洋式ニ摸スルモ內部ハ純然タル日本形船ニシテ船體脆弱ナルヲ免カレサリキ然ルニ露人カ戸田ニ於テ造船ノ擧アリシヤ我ニ西洋形造船ノ法式ヲ實驗スルノ機會ヲ與ヘ造船事業發達ノ端ヲ開キタリ後年幕府ハ伊豆ノ工人ニ命シテ更ニ同形ノ「スクーナー」形船六隻ヲ製造セシメタリ爾後此法式ニ基ク船型ヲ其地名ニ因ミテ君澤形ト稱セリ本船ハ圖面上之ヲ測レハ總長八十一尺二寸(龍骨ノ長六十二尺五寸)最大幅二十三尺二寸深(モールデツト(九尺九寸ニシテ檣二本ヲ備ヘ艙口ハ長九尺四寸幅四尺其他小ナル甲板口三箇(內法四尺ニ二尺三寸五分、四尺ニ四尺二寸、二尺三寸五分ニ二尺四寸七分)ヲ有ス梁ノ心巨ハ二尺乃至四尺五寸肋骨ノ心巨ハ中央部一尺七寸五分ニシテ前後ハ漸次一尺三寸迄ニ減ス內龍

骨ハ高九寸幅八寸龍骨ハ一尺四寸二分
下龍骨ハ高七寸五分幅約七寸舵ノ長十
五尺五寸幅二尺四寸ナリトス

第五十五　開成丸
第五十六　同上進水圖

本圖ハ開成丸ノ圖畫ヨリ撮影シタルモ
ノナリ本船ハ仙臺藩ノ命ヲ受ケ安政五
年(西暦千八百五十八年)陸奥國寒風澤ニ
於テ三浦乾也ナル者ノ製造セシ所ノモ
ノニシテ長十八間二尺幅四間一尺ノ木
造帆船ナリ

第五十七　千代田形艦

本船ハ本邦ニ於テ始メテ製造シタル汽
船ナリ慶應二年(西暦千八百六十六年)十
二月東京石川島ニ於テ全然邦人ノ手ニ
賴リ新造セラル長十七間二尺幅二間半
百三十八噸(總噸數ナルヘシ)六十馬力ノ
單螺旋木造汽船ナリ

第五十八　小菅丸

本船ハ日本郵船株式會社ノ前身ナル共
同運輸會社カ肥前國小菅ニ於テ明治十
六年(西暦千八百八十三年)三月新造シタ
ル木造單螺旋汽船ニシテ製造者ハ松尾
信太郎ナリ本船ハ本邦ニ於テ製造セル
木造汽船中有數ノモノニシテ長二百三
十九尺五寸五分幅(內張板ノ內面ニテ)三
十四尺三寸深(艙內ノ深)二十三尺二寸總
噸數千四百九十六噸登簿噸數九百二十
七噸公稱馬力百七十五檣ノ數三本ナリ
明治二十七年(西暦千八百九十四年)十二
月中韓國全羅道沖玉島近傍ニ於テ坐礁
シ其後本邦ニ曳來リ大阪川口ニ繫留セ
シカ船體大破損ノ爲メ明治二十八年(西
暦千八百九十五年)中ニ解撤セリ本邦製
造ノ木造汽船ニシテ總噸數千噸ヲ超ユ
ルモノハ明治三十四年(西暦千九百一年)
品川緒明造船所ニ於テ第二十二號觀音
丸(總噸數千二百八噸及第二十五號觀音

丸(總噸數千五百二十六噸)ヲ製造セシ迄ハ獨リ此小菅丸アリシノミ

第五十九　常陸丸

本船ハ日本郵船株式會社カ歐洲航路ニ使用スル爲メ本邦ニ於テ製造シタル航洋船ナリ製造所ハ長崎三菱造船所ニシテ明治三十一年(西曆千八百九十八年)四月十六日進水セリ船ノ重要寸法ハ垂線間ノ長四百四十五呎幅(モールデット)四十九呎二吋深(モールデット)三十三呎六吋ニシテ總噸數六千百七十二噸登簿噸數三千八百二十七噸實馬力四千八十三ヲ有スル鋼製雙螺旋三層重甲板船ナリ本船ハ全通二重底支水隔壁七箇艙形兩口汽鑵二箇艙形單口汽鑵二箇ヲ有シ檣四本ヲ備ヘ一等客二十四人二等客二十人三等客百二十四人ニ對スル客室ノ設備アリ

第六十　大元丸

本船ハ大阪商船株式會社カ揚子江用淺喫水船トシテ最初ニ製造セシメタル船舶ナリ製造所ハ神戸川崎造船所ニシテ明治三十二年(西曆千八百九十九年)二月六日進水セリ船ノ重要寸法ハ垂線間ノ長二百三十呎幅(モールデット)四十呎正甲板迄ノ深(モールデット)十呎ニシテ總噸數千六百九十四噸登簿噸數千五十噸(甲板下噸數七百五十噸)實馬力千四十二ヲ有スル鋼製雙螺旋汽船ナリ一等客十六人二等客十六人三等客六百十一人ニ對スル客室ノ設備アリ甲板ハ遮陽甲板、遊遙甲板及正甲板ノ三層ヲ有ス

第六十一　日光丸

本船ハ日本郵船株式會社カ濠洲航路ニ使用スル爲メ本邦ニ於テ製造シタル旅客汽船ナリ製造所ハ長崎三菱造船所ニシテ明治三十六年(西曆千九百三年)九月

二十三日進水セリ船ノ重要寸法ハ垂線間ノ長四百二十呎幅(モールデツト)五十呎深(モールデツト)三十呎六吋ニシテ總噸數五千五百三十九噸登簿噸數三千四百三十四噸實馬力六千七百八十ヲ有スル鋼製單螺旋三層重甲板船ナリ本船ハ全通二重底支水隔壁七箇筒形兩口汽鑵二箇同單口汽鑵二箇ヲ備ヘ檣二本ヲ有シ一等客九十人二等客二十四人三等客百二十九人ニ對スル客室ノ設備アリ

第六十二　大成丸

本船ハ商船學校カ學生練習船トシテ神戸川崎造船所ニ製造セシメタル鋼製四檣バーク」形帆船ニシテ明治三十六年(西曆千九百三年)十二月二日進水セリ船ノ重要寸法ハ垂線間ノ長二百七十呎幅(モールデツト)四十四呎深(モールデツト)二十六呎九吋ニシテ總噸數二千二百八十七噸登簿噸數千四百十八噸ナリ本船ハ運航上ノ補助トシテ三聯成汽機二箇ヲ備ヘ雙螺旋ヲ有シ最強速力九節九八ナリ其構造ハ二重底ノ全通セル二層重甲板船ニシテ二層ノ甲板ト六箇ノ支水隔壁トヲ有シ百二十人ノ練習生ヲ乘船セシムヘキ船室ノ設備アリ

第六十三　小笠原丸

本船ハ政府カ海底電線沈設用ノ爲メ長崎三菱造船所ニ製造セシメタル電線布設船ニシテ明治三十九年(西曆千九百六年)六月二日進水セリ船ノ重要寸法ハ垂線間ノ長二百四十呎幅(モールデツト)三十四呎輕甲板迄ノ深二十二呎三吋ニシテ總噸數千四百五十五噸登簿噸數七百八十六噸實馬力千七百八十九ヲ有スル鋼製雙螺旋二層輕甲板船ナリ本船ハ全通二重底支水隔壁四箇三聯成汽機二箇筒形單口汽鑵二箇ヲ有シ三箇ノ「ケーブルタンク」ト電線布設及修理ニ要スル最

新式機械及裝置ヲ具備セリ

第六十四　岳陽丸

本船ハ日清汽船株式會社カ揚子江航路ニ使用スル爲メ神戸川崎造船所ニ製造セシメタル三姉妹船ノ一ニシテ本邦最大ノ淺吃水船ナリ明治三十九年(西曆千九百六年)十二月二十五日進水セリ船ノ重要寸法ハ垂線間ノ長三百十呎幅四十四呎正甲板迄ノ深十四呎六吋ニシテ總噸數三千五百八十八噸登簿噸數二千二百二十四噸實馬力三千七十六最強速力十五節三ヲ有スル鋼製雙螺旋汽船ナリ一等客三十六人二等客四十六人三等客二百五十二人ニ對スル客室ノ設備アリ甲板ハ遮陽甲板、遊遙甲板及正甲板ノ三層ヲ有ス

第六十五　天洋丸

本船ハ東洋汽船株式會社カ太平洋航路ニ使用スル爲メ長崎三菱造船所ニ製造セシメタル三姉妹船ノ一ニシテ本邦ニ於ケル最大旅客船ナリ明治四十年(西曆千九百七年)九月十四日進水セリ船ノ重要寸法ハ垂線間ノ長五百五十呎幅(モールデッド)六十三呎遮浪甲板迄ノ深四十六呎六吋ニシテ總噸數一萬三千四百五十四噸登簿噸數七千二百六十五噸軸馬力一萬八千九百五十七ヲ有スル鋼製三軸遮浪甲板船ナリ本船ハ全通二重底支水隔壁十二箇及燃料石油庫ヲ有シ汽機ハ「パーソンス」式蒸汽三軸「タービン」汽鑵ハ箱形單口汽鑵十三箇ヲ備ヘ最強速力二十節六ヲ有スル快速船ナリ最新式優等船ノ設備ハ總テ完備シ殊ニ讀書室、談話室及食堂等ノ裝飾ニハ日本式ヲ發揮セリ一等客二百六十一人二等客四十七人三等客八百十六人ニ對スル客室ノ設備アリ

第六十六　三島丸

本船ハ日本郵船株式會社カ歐洲航路用トシテ從來ノ經驗ニヨリ擴張改良ヲ施シテ計畫新造セル六姉妹船ノ一ニシテ製造所ハ神戸川崎造船所ナリ明治四十一年(西曆千九百八年)四月十八日進水セリ船ノ重要寸法ハ垂線間ノ長四百六十五呎幅(モールデツト)五十六呎深三十四呎六吋ニシテ總噸數八千五百噸登簿噸數五千二百七十噸實馬力八千九百二十九最強速力十六節六ヲ有スル鋼製雙螺旋三層重甲板船ナリ本船ハ全通二重底支水隔壁七箇ヲ有シ三聯成汽機二箇筒形單口汽鑵六箇ヲ有シ檣二本ヲ備ヘ一等客八十三人二等客三十二人三等客百四十人ニ對スル客室ノ設備アリ

第六十七　さくら丸

本船ハ帝國海事協會カ義勇艦隊ヲ創設スル爲メ廣ク天下ニ醵金ヲ募リ戰時巡洋艦トシテ使用シ得ヘキ快速船トシテ製造シタル第一船ニシテ長崎三菱造船所ノ製造ニ係ル明治四十一年(西曆千九百八年)六月六日進水セリ船ノ重要寸法ハ垂線間ノ長三百三十五呎幅(モールデツト)四十三呎巡洋甲板迄ノ深三十一呎六吋ニシテ總噸數三千二百四噸登簿噸數千七百三十噸軸馬力八千五百三十五ヲ有スル鋼製巡洋甲板船ナリ本船ハ全通二重底支水隔壁六箇ノ外支水石炭庫隔壁ヲ有シ汽機ハ「パーソンス」式蒸汽三軸(タービン)汽鑵ハ宮原式兩口水管汽鑵六箇ヲ備ヘ最強速力二十一節一八ヲ有スル快速船ナリ戰時ニハ六吋砲二門十二斤砲四門ヲ搭載シ得ル設備ノ外巡洋艦トシテ使用シ得ヘキ幾多ノ裝置アリ使用航路ハ臺灣航路ニシテ一等客四十七人二等客五十三人三等客二百六十八人ニ對スル客室ノ設備アリ

第六十八　たこま丸

本船ハ大阪商船株式會社カ太平洋航路ニ使用スル爲メ製造中ノ六姉妹船ノ一ニシテ本圖ハ明治四十二年(西暦千九百九年)二月五日其製造所タル神戸川崎造船所ニ於テ將ニ進水セントスル前ニ撮影シタルモノナリ船ノ重要寸法ハ垂線間ノ長四百十呎幅(モールデツト)五十一呎三吋深(モールデツト)三十一呎三吋ニシテ總噸數六千百七十八噸登簿噸數三千八百三十噸實馬力四千九百七十五最強速力十五節四八ヲ有スル鋼製雙螺旋三層重甲板船ナリ本船ハ全通二重底支水隔壁七箇ヲ有シ三聯成汽機二箇箕形單口汽罐三箇ヲ有シ檣二本ヲ備フル純貨物船ナリ

第六十九　雲鷹丸

本船ハ水産講習所カ遠洋漁業練習船トシテ大阪鐵工所ニ製造セシメタル鋼製三檣「バーク」形帆船ニシテ明治四十二年(西暦千九百九年)二月二十一日進水セリ船ノ重要寸法ハ水線ニ於ケル長百三十五呎幅(モールデツト)二十八呎六吋深(モールデツト)十六呎ニシテ總噸數四百四十八噸登簿噸數二百七十七噸ナリ本船ハ運航上ノ補助トシテ三聯成汽機一箇ヲ備ヘ單螺旋ヲ有シ最強速力八節九ナリ二層ノ甲板ト四箇ノ支水隔壁トヲ有シ四十人ノ練習生ヲ乘船セシムヘキ船室ノ設備アリ

第七十　うめか香丸

本船ハ帝國海事協會カ長崎三菱造船所ニ製造セシメタル義勇艦第二船ニシテ本圖ハ明治四十二年(西暦千九百九年)三月二十七日進水ノ際撮影シタルモノナリ船ノ重要寸法ハ垂線間ノ長三百三十五呎幅(モールデツト)四十三呎遮浪甲板迄ノ深(モールデツト)三十呎六吋ニシテ總噸數三千二百七十二噸登簿噸數千七

百六十七噸軸馬力八千八百六十四ヲ有スル鋼製遮浪甲板船ナリ本船ハ全通二重底支水隔壁六箇支水石炭庫隔壁ヲ有シ汽機ハ「パーソンス」式蒸汽三軸「タービン」汽鑵ハ宮原式兩口水管汽鑵四箇ヲ備ヘ最強速力二十一節三ヲ有スル快速船ナリ戰時ニハ六吋砲二門十二斤砲四門ヲ搭載シ得ル設備ノ外巡洋艦トシテ使用シ得ヘキ幾多ノ裝置アリ一等客三十七人二等客七十六人三等客三百四十八人ニ對スル客室ノ設備アリ

第七十一　神戸三菱造船所浮船渠

本船渠ハ神戸三菱造船所カ同所所用トシテ建造シタルモノニシテ實ニ現時本邦ニ於ケル最大ノ浮船渠ニ屬シ明治四十一年(西曆千九百八年)十一月進水セリ船渠ノ重要寸法ハ總長五百三十二呎六吋總幅百呎十六分ノ十一吋ニシテ長五百八十呎幅六十六呎喫水二十六呎排水量一萬二千噸以下ノ艦船ヲ四時間以内ニテ浮揚シ得ルノ設備ヲ有セリ

本船渠ノ建造鋼材ハ總テ帝國製鐵所ノ供給スル所ニシテ之ヲ内地製鋼材ノミヲ以テ作リタル大建造物ノ嚆矢ナリ

第七十二　角屋航海圖

本圖ハ伊勢國松阪角屋七郎次郎ノ所有ニ係ル牛皮製ノ原圖ヨリ撮影シタルモノナリ元和寛永(西曆千六百二十年前後)ノ頃角屋ノ祖先七郎兵衛ナル者御朱印船ニ乘リ安南ニ航海シタル際使用シタルモノナリト云フ

第七十三　末吉航海圖

本圖ハ攝津國平野鄉末吉勘四郎ノ所有ニ係ル皮製原圖ヨリ撮影シタルモノナリ原圖ハ元和寛永(西曆千六百二十年前後)ノ頃末吉御朱印船ニ於テ航海圖トシテ使用シタルモノナリト傳フ

at Kobe, intended for their own use; launched on November 1908; length over all 532 ft. 6 ins.; breadth extreme 100 ft. 11/16 in. It has the capacity of floating all vessels under length 580 ft.; breadth 66 ft. draught 26 ft.; displacement 12,000 tons, within four hours.

Steel materials used in its construction was supplied by the Imperial Steel Works at Yawata and it was for the first time that such a large structure was completed by the home made materials only.

No. 72. Kadoya's Chart.

This is a photograph of a chart (drawn on leather) owned by the Kodama family, of Matsuzaka in the province of Ise. The map is said to have been used by an ancestor of the name of Shichirobei of the said family, while engaged on board the "Goshuinbune" (licensed vessel) in carrying on trade with Annam about the Genwa and Kwanyei ears (about 1620).

No. 73. Suyeyoshi's Chart.

This represents the chart (drawn on leather) said to have been used by Mr. Suyeyoshi about the Genwa and Kwanyei ears (about 1620) during his voyage on board the "Goshuinbune."

This is a vessel built at the Osaka Iron Works, intended for the deep-sea fishery training ship of the Fishery Institute, Tokyo, launched on February 21, 1909. She is a three-masted steel sailing bark; length on the load water line 135 ft.; breadth moulded 28 ft. 6 ins., depth moulded 16 ft.; gross tonnage 448; registered net tonnage 277.

She is propelled by one set of triple expansion engines for auxiliary purpose which gives her a maximum speed of 9.8 knots.

She is provided with necessary school appliances and accommodation for 40 students.

No. 70. *"Umegaka Maru."*

This is the second steamer of the volunteer fleet organized by the "Imperial Marine Association." The photograph was taken at the time of her launching at the Mitsubishi Dockyard and Engine Works, Nagasaki, on the 27th March, 1909.

She is a channel steamer, length between perpendiculars 335 ft., breadth moulded 43 ft., depth

moulded to shelter deck 30 ft. 6 ins.; gross tonnage 3,272; registered net tonnage 1,767; shaft horse-power 8,864; maximum speed 21.3 knots; shelter decked steel vessel of through double bottom, having six water-tight bulkheads and longitudinal water-tight coal bunker bulkheads on each side; oil bunker besides ordinary coal bunkers.

The vessel is propelled by Parsons' three shaft marine steam turbines, steam being supplied from four Miyabara double ended water tube boilers, working under forced draught of closed stokehold system, provided with oil burning apparatus.

In the time of war she can easily be fitted up with two 6 inch guns and four 12 pounder guns, besides she has numerous apparati for war purposes. She has comfortable accommodation for 37 first-class, 76 second-class, and 348 third-class passengers.

No. 71. *A floating dock of the Mitsubishi Dockyard and Engine Works at Kobe.*

This is the largest floating dock in Japan, built by the Mitsubishi Dockyard and Engine Works

with two sets of triple expansion engines and six single-ended boilers. She has excellent accommodation for 83 first-class, 32 second-class, and for 140 third-class passengers.

No. 67. "*Sakura Maru.*"

This is the first steamer of the volunteer fleet organized by "Imperial Marine Association." She was built at the Mitsubishi Dockyard and Engine Works, Nagasaki; launched on June 6, 1908; length between perpendiculars 335 ft.; breadth moulded 43 ft.; depth moulded to shelter deck 31 ft. 6 ins.; gross tonnage 3,204; registered net tonnage, 1,730; shaft horse-power 8,535; maximum trial speed 21.6 knots; triple screw, shelter decked vessel of through double bottom, having six water-tight bulkheads and longitudinal water-tight coal bunker bulkheads on each side. The vessel is propelled by Parsons' three shaft marine steam turbines, steam being supplied from Miyabara double ended water-tube boilers, six in number, working under forced draught of closed stokehold system. In the time of war she can easily be fitted up with two 6 inch guns and four 12 pounder guns, besides she was numerous apparati for war

purposes. In the peace time she will be plied between Kobe and Formosa for passenger service. She has comfortable accommodation for 47 first-class, 53 second-class, and 268 third-class passengers.

No. 68. "*Tacoma Maru.*"

This is one of the six sister cargo boats intended for the Pacific line of Osaka Shosen Kaisha. The photograph was taken just before the launching of the ship at Kawasaki Dockyard, Kobe, on the 5th February, 1909. She is a twin screw, three decked vessel; length between perpendiculars 410 ft., breadth moulded 51 ft. 3 ins.; gross tonnage 6,178; indicated horse-power 4,975, having through double bottom, seven water-tight bulkheads.

Her engines are of two sets of triple expansion type, steam being supplied from three single-ended cylindrical boilers.

No. 69. "*Unyo Maru.*"

No. 64. *"Yohyang Maru."*

This is one of the three big river steamers intended for the Yanztse Kiang navigation of the Nisshin Kisen Kaisha. She is the largest river steamer built in this country. She was launched on Dec. 25, 1906, at the Kawasaki Dockyard, Kobe; length between perpendiculars 310 ft., breadth moulded 44 ft., depth moulded to main deck 14 ft. 6 ins.; gross tonnage 3,588; net register tonnage 2,224; indicated horse-power 3,076; maximum trial speed 15.3 knots. The accommodation for 36 first-class, 46 second-class, and 252 third-class passengers is comfortably situated on shade, promenade and main decks respectively.

No. 65. *"Tenyo Maru."*

This is one of the three Pacific liners owned by the Toyo Kisen Kaisha, the largest steamer yet built in this country. She was launched at the Mitsubishi Dockyard and Engine Works, Nagasaki, on the 14th of September, 1907; length between perpendiculars 550 ft.; breadth moulded 63 ft.; depth moulded to shelter deck 46 ft. 6 ins.; gross tonnage 13,454; registered net tonnage 7,265; shaft horse-power 18,957,

maximum trial speed 20.6 knots; triple screw, shelter decked vessel of through double bottom, having twelve water-tight bulkheads and oil fuel bunker. The vessel is propelled by Parsons' three shaft marine steam turbines, steam being supplied from thirteen single-ended cylindrical boilers working under Howden's forced draught.

She has magnificient accommodation for 261 first-class, 47 second-class, and 816 third-class passengers. Reading room, social hall, lounge and dining saloon are decorated in Japanese style.

No. 66. *"Mishima Maru."*

This is one of the six new European liners owned by the Nippon Yusen Kaisha.

She was built at the Kawasaki Dockyard at Kobe, and launched on April 18, 1908; length between perpendiculars 465 ft.; breadth moulded 56 ft.; depth moulded 34 ft. 6 ins.; gross tonnage 8,500; registered net tonnage 5,270; indicated horse-power 8,929; maximum trial speed 16.6 knots; twin screw, three decked vessel of through double bottom, having seven water-tight bulkheads. She is provided

for 16 first-class, 16 second-class, and 611 third-class passengers; is provided with shade, promenade, and main decks.

No. 61. "***Nikko Maru.***"

This is one of the best passenger steamers built in this country. She is intended to be used as an Australian liner; launched at the Mitsubishi Dockyard and Engine Works, Nagasaki, on the 23rd of September, 1903; length between perpendiculars 420 ft., breadth moulded 50 ft., depth moulded 30 ft. 6 ins.; gross tonnage 5,539, registered net tonnage 3,434, indicated horse-power 6,780, single screw, three-decked steel ship, having through double bottom, seven water-tight bulkheads, two double-ended cylindrical boilers, two single-ended cylindrical boilers, and two masts; is provided with accommodation for 90 first-class, 24 second-class, and 129 third-class passengers.

No. 62. "***Taisei Maru.***"

This is a vessel built at the Kawasaki Dockyard, Kobe, intended as a training ship of the Nautical College, Tokyo. She is a four-masted steel sailing bark; launched on December 2, 1903; length between perpendiculars 270 ft., breadth moulded 44 ft., depth mouded 26 ft. 9 ins.; gross tonnage 2,287, with two sets of triple expansion type for auxiliary purpose, with an auxiliary engine of twin screw, which acquires a maximum speed of 9.98 knots per hour. Her construction is of through double bottom and two decks, having two tiers of deck, six water-tight bulkheads; has accommodation for 120 cadets.

No. 63. "***Ogasawara Maru.***"

This is a cable steamer designed by the Department of Communications and constructed at the Mitsubishi Dockyard and Engine Works, Nagasaki. She was launched on the 2nd of June, 1906, length between perpendiculars 240 ft., breadth moulded 34 ft., depth to the spar deck 22 ft. 3 ins.; gross tonnage 1,455; net tonnage 786; indicated horse-power 1,789. She is a steel twin screw spar-decked steamer with two sets of triple expansion engines and two single ended cylindrical boilers. She is provided with three cable tanks and the cable gears equipped in an up-to-date manner.

No. 58. "*Kosuge Maru.*"

This represents the S.S. "Kosuge Maru" owned by the Kyodo Unyu Kaisha, the predecessor to the present Nippon Yusen Kaisha. She was constructed by a builder of the name of Matsuo Shintaro at Kosuge in the province of Hizen, and was a wooden steamer with single screw propeller. She was one of the most prominent wooden steamers built in this country. Her length was 239 ft. 6 inches, internal breadth 34 ft., 4 ins., depth of hold 23 ft. 2 ins., gross tonnage 1,496 tons, registered net tonnage 927 tons, nominal horse-power 175, number of masts three. When she was stranded off Zenradō, Korea, in Dec. 1894, she was towed back to Osaka. There she was moored for some time at the mouth of the river, but on account of the great damage which she had suffered, she was taken to parts the next year. The "Kosuge Maru" was the only wooden steamer of over 1,000 gross tons existing in this country until 1901, when No. 22 "Kwannon Maru" (1,208 gross tons) and No. 25 "Kwannon Maru" (1,526 gross tons) were built at the Oaki Dockyard in Shinagawa.

No. 59. "*Hitachi Maru.*"

This is a steamship built at the Mitsubishi Dockyard and Engine Works, Nagasaki, to be fitted as one of the European liners; launched on April 16, 1898; length between perpendiculars 455 ft.; breadth moulded, 49 ft. 2 ins.; depth moulded, 33 ft. 6 ins.; gross tonnage, 6,072; registered net tonnage, 3,827; indicated horse-power, 4,083; twin screw, three-decked steel vessel of through double bottom, having seven water-tight bulkheads, two double-ended cylindrical boilers, two single-ended cylindrical boilers, and four masts. She has accommodation for 24 first-class, 20 second-class, and 124 third-class passengers.

No. 60. "*Tayuen Maru.*"

This is a shallow draught vessel built at the Kawasaki Dockyard, Kobe, intended for the Yangtse-Kiang River navigation, launched on Feb. 6, 1899, length between perpendiculars 230 ft., breadth moulded 40 ft., depth moulded below maindeck 10 ft., gross tonnage 1,694 tons, registered net tonnage 1,050 tons (tonnage below the deck 750 tons), indicated horse-power 1,042, twin screw steel steamer; has accommodation

concerning the arrangement of frame timber, stem piece, stern post and other important timbers. The European-styled vessels built in those days were of very weak construction. The Russians' work in Shimoda gave the Japanese the first opportunity of seeing the details of shipbuilding, accelerated improvement in the naval architecture of this country. The government of Tokugawa afterwards ordered the shipbuilders of Izu province to construct six schooners of the same style, which the people have called ever since the "Kimisawa style" (Kamisawa is the name of the county where the Russians repaired their man-of-war and constructed two schooners). The whole length of the vessel was 81 ft. 2 ins. (length of keel 62 ft. 6 ins.), the maximum breadth 23 ft. 2 ins., depth moulded 9 ft. 11 ins., with two masts, the length of hatch 9 ft. 5 ins., breadth 4 ft. She has three other small openings on deck, their measurements being 4′×2′.4″, 4′×4′.2″, 2′.4″×2′.6″. The beam spaces were from 2 ft. to 4.5 ft.; the frame space is 1 ft. 9 ins. at the middle portion of the vessel and decreases to 1 ft. 4 ins., towards the stem and the stern. The keelson is 11 ins. in moulding and 10 ins. in siding; the keel 1 ft. 5 ins. in moulding; the lower keel 9 ins. in moulding (the siding of the keel and the lower keel is 9½ ins.), the length of the rudder 15 ft. 6 ins., breadth 2 ft. 5 ins.

No. 55. ***"Kaisei Maru."***

No. 56. ***Launching of the "Kaisei Maru."***

The photograph is that of the rigging plan of the "Kaisei Maru."

She was built in 1858 at Samusawa Ship Yard in the province of Mutsu, by the order of the Lord of Sendai.

She was a wooden sailing vessel of length 109 ft. 4 ins., breadth 24 ft. 10 ins.

No. 57. ***"Chiyodagata."***

This represents the first steamship built in this country. She was completed at Ishikawajima, Tokio in December, 1866, and was built entirely by Japanese. Her length was 104 ft., breadth 15 ft., and she was of 138 gross tons, 60 horse-power, single screw propeller, wooden construction.

vessel ever constructed in this country. In September, 1853, the government of Tokugawa abandoned the old law prohibiting the construction of large vessels, and next year they built a vessel whose length was 132 ft., breadth 30 ft., having two masts, and called her the "Howo Maru."

No. 52. *"Ourin Sen."*

This is a photograph of a model preserved in the Museum of the Imperial Household in Kyoto. The model was constructed in 1855 by a certain Tokutaro of Yebisumachi, Osaka. As to whether such a vessel truly existed or not is uncertain. Her hull is of somewhat Japanese type, and her rig was a compromise between the Japanese and foreign. The vicinity of her water-line was protected with a bamboo shields. As she carried many guns on deck, it is clear that she was a vessel of war, but the reason why she was called "Ourin Sen" is not known.

No. 53. *Plan of Construction of a Vessel of the Kimisawa Style.*

No. 54. *Launching of a Vessel of the Kimisawa Style.*

No. 53 is a photograph was of a picture preserved by Mr. Matsushiro Heisaku of Heda village, Kimisawa country, in the province of Izu. No. 54 is that of a picture preserved by Mr. Sayama Yoshitaro of the same village. During the year 1854 the Russian man-of-war "Diana" came to Japan to make a treaty of friendship, and when she cast anchor in the harbour of Shimoda on the 4th of November there was a great earthquake. The tidal wave happening then caused the bottom of the Russian warship to strike against a reef. She was greatly damaged, whereupon the Russian captain went to Heda, as he thought the place was best adapted for repairing his ship. He obtained some pine timber, gave orders to carpenters, blacksmiths, and other workmen who were under his command, and constructed two schooners, after which he went back to his country in March of the second year of Ansei (1855). The picture, No. 53 was drawn by his order on this occasion.

Although European shipbuilding was being adopted then to more or less extent in this country, yet the method of constructing important framework was not yet known. Moreover, nothing was known

Second: The Ashiarai, a strake of bulwark planking, terminated at the gangway instead of being through from stem to stern.

Third: The Kannuki (the special beam) protruded from the lower sides of the bows and not from the rails of bulwarks.

Fourth: The fence was of wooden construction, instead of being bamboo net-work, which is the case in the work of latter days.

Fifth: The boats were lowered or hove up over the bulwarks instead of being worked through the hewn portion of the bulwark.

Sixth: The gangway door was drawn forward and backward by means of grooves instead of being closed from above.

Seventh: The termination of several constructing pieces and other external decorations were painted black instead of being covered with thin copper plates.

Eighth: Every letter or character composing the ship's name was indicated at the time of entering or leaving the port in a separate tablet hung on the stern instead of the whole of the words being written on a single tablet.

Ninth: Fringes of the ornamental tassel hung on the stem were all free in the case of an official vessel, but they were bound together in a single bunch in the case of a merchant vessel.

No. 48 represents the plan of construction of the Japanese junk.

No. 49. Japanese Junk of Modern Style.

No. 50. Japanese Junk of Modern Style.

Picture No. 49 represents a model preserved in the Hiseki Dockyard in Osaka. Its construction is of later date than 1850.

No. 50 represents the model preserved by Mr. Oiye of Osaka. It is a modern-rigged Japanese junk.

No. 51. "Howo Maru."

This is a photograph of a picture of the "Howo Maru," which was the first European-styled

used on rivers, lakes and seas. The vessel was called "Irikobune" by the Takamatsu feudal clan. The hull was divided into several square boxes. The largest box, which was in the middle portion of the vessel, could contain the other sections each inside the other. Its length is 18 ft., breadth 3 ft. 10 ins., depth 1 ft. 6½ ins.

No. 45. "Miyojin Maru."

This is a photograph of a model preserved as a sacred relic in the Kibune shrine at Kaketsuka, in the province of Totomi. Although the model was dedicated to the temple in August, 1863, it was made after an old style of about two hundred years back. The hull is japanned and the metal work is furnished in gold. Considering her shape, she must have belonged to either to a Shogun or one of the lord. She has a mast, but was chiefly propelled by means of sculls, and her shape resemble that of "Hinagata Maru."

No. 46. "Hishigakibune."

This represents a type of vessels used for commercial purposes between Yedo and Osaka during

the 17th century. The picture was taken of a collection of illustrations of Japanese and Chinese vessels. The vessels was provided on each broad side with a rhombic fence, and on that account it was called "Hishigaki kaisen" (rhombic fenced regular liner). A kind of vessel called "Taru kaisen" (cask loading regular liner) was built afterwards, and this, in a competition with the "Hishigaki-bune," overcame the latter during the Tempo era (1841); since then the "Hishigaki-bune" has gradually vanished from existence.

No. 47. Japanese Junk of Old Style.

No. 48. Plan of Construction of the Japanese Junk.

Picture No. 47 represents the style of Japanese junks which were used during a period previous to the era of Kayei (1850). It was painted from a model preserved by Mr. Hironoumi of Osaka, and the principal features wherein the vessel differed from modern junks are:

First: Marked curvature of the stem piece.

No. 40 represents a river boat used for escorting the Korean embassies on their arrival and departure. Judging from her ensign, she might have been owned either by the lord of Kumamoto, of Iwakuni, or of Amagasaki.

No. 41. *"Kirin Maru."*

This represents a private boat of Tokugawa family. The photograph was taken from a model in the Museum of the Imperial Household in Tokio. Her length was 54 ft., breadth 12 ft., and depth 3 ft., propelled by 26 sculls; decoration was very beautiful.

No. 42. *Loo-Choo Vessel.*

This is a photograph of a model preserved in the Museum of the Imperial Household in Tokio. The boat was used for carrying the tribute from the Loo-Choo Islands.

No. 43. *Paddle-wheel Vessel.*

This represents a war vessel owned by the Lord of Takamatsu. Her length was 16 ft. 5 inches, breadth 3 ft. 10 inches, depth 1 ft. 10 inches, carrying four men as crew. In Takamatsu she was called "Suichoosen" (vessel on water), in order distinguish her from "Kurumabune" (a vessel provided with wheels, to be drawn on land when necessary). The musketeers and the quartermasters stood inside the parapet, the inner side of which was protected with sand heaped in all directions. Although the date of her construction is not certain, it must have taken place previous to 1772—judging from the date on the picture. A vessel of similar description, which was called the "Rishosen" (swift runner), was constructed at Kurahashijima, in Aki province. The dimensions of the latter vessel were somewhat larger than those of the former.

No. 44. *Portable Boat.*

This boat was built in such a way that she could easily be folded and carried over land and be

No. 33. ***Official Yacht.***

No. 34. ***Official Yacht.***

No. 35. ***"Sumiyoshi Maru."***

No. 36. ***"Hiriu Mamu."***

No. 37. ***"Taiho Maru."***

No. 38. ***Plan of Construction of the "Taiho Maru."***

Official yachts represented by these pictures were owned by several provincial lords. They were used by them when they came to Yedo to pay respect to the Shogun. As they were propelled chiefly by means of sculls, the vessel's sides were constructed very low. The hairs of the ornamental tassel on the stem were loosely hung and the other fittings were also very beautifully decorated.

Cuts No. 33 and No. 34 show official yacht owned by the lord of Tokushima. The yacht represented by the cut No. 35 (called "Sumiyoshi Maru") was owned by the lord of Kagoshima. She was constructed in 1826 after the model of an old style, which prevailed in 1776. The length of her keel was 49 ft. 6 inches, and she carried a sail made of 16 rolls of canvas and was propelled by 64 sculls.

Cut No. 36 represents the "Hiriu Maru" owned by the lord of Takamatsu. Her total length was 96 ft., breadth 27 ft., carrying a sail made of 18 rolls of canvas.

Cut No. 37 represents the "Taiho Maru" owned by the lord of Kumamoto, and No. 38 is her profile, plan and midship section.

No. 39. ***River Pleasure-boat.***

No. 40. ***River Pleasure-boat***

Cut No. 39 represents a very shallow draught river boat constructed previous to 1753. She has a magnificent deckhouse.

carrying either a rifle or a bow are soldiers, and the prominent figure standing with an open fan in his hand and giving orders is Yamada Nagamasa.

No. 31. "*Tenchi Maru.*"

The "Tenchi Maru" was a vessel constructed in June, 1630, by Iyemitsu, one of the Tokugawa Shōguns, in order to strengthen his naval power. Her length was 165 ft., breadth 54 ft., depth 11 ft., number of sculls 100. Her model is preserved in the Museum of the Imperial Household in Tokio.

No. 32. "*Ataka Maru.*"

Her length was 228 ft., extreme breadth 108 ft. (her measurement is disputed). She had a gallery of 12 ft. in breadth and 156 ft. in length, on each of the port and starboard sides. They were surrounded by strong lattice work provided with windows for the discharge of arrows and cannon balls.

There were other galleries below, where two men were at each scull, 400 men in all working with 200 sculls. The gallery was protected from the enemy's arrows and shots. There were three decks, the upper one being occupied by the officers, and the middle by the marines. On the lower deck there was a stable which accommodated six horses, some grooms and servants. In the hold there was a space for storing 10,000 bags of rice. Fresh water was kept at the bottom, from which it was drawn up by a bucket fastened to an end of a rope. The stem was decorated with the dragon's head and the stern with that of the snow white heron. The rudder head was adorned with a demon's head, the circumference of which was 9 ft. The tallest structure on the upper deck was provided with a room 12 ft. by 12 ft., from which the eye may scour all directions. The curtains, the ensign and the pennon were placed at their respective proper places. The seat of the Shogun seems to have been covered with copper plates. Many accounts are given in regard to the "Ataka Maru," and though we are almost at a loss as to which one to trust, yet it is believed that the vessel was constructed at Izu province in 1635, and was taken to parts in 1682 on account of her being full of inconveniences for practical purposes.

No. 28. Suminokura's "Goshuinbune."

This is a photograph also taken of a tablet at the Kiyomidzudera, Kyoto. The vessel is said to have been owned by Y. Suminokura of Kyoto and commanded by Tenjiku Tokubei. According to a story told by Tokubei, the length was 120 ft., breadth 54 ft., and the number of men on board was 397, out of which 80 were the crew. The style of the rigging of the vessel is similar to that of the several preceding ones, but her shape is very different. She has a deck house each on her stern and stem, and on the latter she carries a flag bearing the character "角", which was the initial of Suminokura's name. The picture represents the scene of a banquet given on her safe return from Tongking. She is dated September, 1634.

No. 29. Nishimura's Vessel.

This is a photograph taken of a picture representing a vessel owned by Nishimura Taroemon-no-jo, the original of which is preserved in the Hachiman Shrine in the province of Omi, and forms one of the national treasures.

The construction and rigging of the vessel resemble closely those of "Goshuinbune" described in the previous article, but the hull seems to be smaller in size, as it is fitted with only two masts.

The picture is dated 1647 and represents a scene of feast held on board the vessel to break the monotony of long voyage.

It seems that Nishimura sailed to Annam before the promulgation of the National Seclusion Ordinance (1636), and dedicated the tablet to the above mentioned shrine to give vent for his longing for home, forbidden as he was to return home by the issue of the Ordinance.

No. 30. War Vessel of Yamada Nagamasa.

Although the tablet dedicated by Yamada Nagamasa to the temple of Asama Jinja in Suruga province in 1626 was destroyed by fire in 1788, its copy having been kept in the storehouse, it is preserved till this day. She used to carry guns in her bows and on her broadsides, had three masts, each of which had a fighting top for soldiers, and was provided with many sculls. Those wearing armour and swords and

was made specially for the transportation of horses used in war, the front part being protected by bamboo fences.

No. 25. Araki's "Goshuinbune."

This is a photograph taken of a painted tablet hung on the wall of the Kiyomidzudera, Nagasaki. The vessel has three masts, each of the two front masts being furnished with a lugsail made of straw matting, and also with a cotton top-sail. The two front masts have pendants hung on their tops. A square sail is fixed on the mizzenmast and bowsprit respectively. The vessel seems to be modelled after the European and Chinese forms of construction, but its hull is nearly of a European form. The rudder is fixed to the stern post. Galleries are built on the stern and the stem. The original picture gives its date as Nov. 4th, 1622. The vessel is said to have been one of those used in crossing over from Japan to Cochin-China.

No. 26. Suyetsugu's "Goshuinbune."

This is a photograph taken of a tablet dedicated to and kept at the Kiyomidzu temple in Nagasaki. The stern part is constructed in the form of a tower. The vessel has rails and three masts.

Pendants are hoisted on the two front masts. The flag on the mizzenmast has for its sign a red ball, which has the character "寿" in the middle, and the signatures of the dedicators and the date of the dedication of the tablet inscribed on one side—the date being given as 1634. It is said that there were five "licensed vessels" existing then in Nagasaki. This may be one of those owned by Suyetsugu Heizo. The construction and equipment of the vessel are similar to those of the preceding one.

No. 27. Suyeyoshi's "Goshuinbune."

This is a photograph taken of a tablet at the Kiyomidzudera, Kyoto. The fact that the vessel represented in this picture bears the family flag of Suyeyoshi on her deck house makes us believe that she must have been owned by Suyeyoshi Magozaemon. Her construction and rig resemble Araki's or Suyetsugu's make. The picture is dated Dec. 21st, 1633, and represents the scene of a banquet given on her safe return from Tongking, China. There are two more tablets at the Kiyomidzudera, but they are nearly the same as the one just described.

whence the enemy were shot at. The vessel was used in the same way as a gunboat of the present day.

No. 21. "Tortoise-shell Boat."

This represents a war vessel of 150 koku capacity or upward, being constructed in the shape of a tortoise. The building material is camphor wood, and the whole vessel is covered with copper plates. There are windows made along the central line of the deck which could be sprung open. The look-out windows made on one side of the stern were covered with wire nets. On all sides of the vessel are provided embrasures or ports for shooting arrows and shots. The vessel equipped with fire-arrows, as the one represented in this picture, is under array for attacking and burning the enemy's vessel. Probably she was used for the same purpose as the torpedo boat of the present time. She was one of the vessels used in the Korean Expedition.

No. 22. "Uchikaibune."

This represents a war vessel of over 200 koku capacity. Its building material and construction

were the same as those of the preceding vessel. The only difference between these two vessels lay in the fact that the former could be propelled more swiftly than the latter, by means of the short stroke oars with which she was provided. It represents a vessel used on the Korean Expedition previously mentioned. Her use was similar to that of the cruiser of the present time.

No. 23. "Hayabune."

This represents a small swift runner, being used for the same purpose as a despatch boat of the present day. This form of construction is called the "Kobayazukuri." Shields were fixed on the upper side of the vessel in such a manner that they could be sprung outward and serve as shields on both sides of the vessel in case sculls were used. This vessel could move swiftly by means of the short stroke oars with which it is provided.

No. 24. Transport for War Horses.

This represents a kind of transport used at the time of the Korean Expedition by Hideyoshi, and

No. 17. "*Atakabune.*"

No. 18. "*Kakoidatebune.*"

No. 19. ***War Vessel with Curtains for Shields.***

This photograph represents a vessel called "Atakazukuri" or "Sekibune." The craft was sometimes furnished with a battery and also with some shields, which are arranged on all sides. The shields used on a vessel of this description and of over 2000 koku capacity were made of 2½ inch boards, and could be easily removed. In the centre of the vessel there is built a three-storeyed castle, the base of which is 12 feet square and about 15 feet high from the *yagura* (a battery). The fore-end entrance of the *yagura* is easily opened and closed, while the after-end opening of the same is covered with wire nets. This kind of vesssl having 100 sculls had shields on all sides, the thickness of the shields being 2½ inches, and she had at its centre a two-storeyed castle 9 feet square at the base and 10 feet high from the *yagura* (a battery). Both sides of the after-end were covered with wire nettings, while the fore-end opening

or entrance was easily opened and closed. A vessel of this description which had less than 80 sculls was not furnished with a castle. The thickness of the shields varied with the number of the sculls used, decreasing as the latter were reduced in number. This applies to vessels having more than 50 sculls, and the one with 50 sculls had her shield only one inch and a quarter thick. A vessel having 40 sculls had her fore-end and both sides of the fore-end to the extent of 7 or 8 feet protected with shields 1.5 ins. in thickness. Those parts of the vessel unprotected with shields were covered with curtains. Hence the name "a vessel of curtains and shields" for a ship of this description. This kind of vessel is supposed to be the battleship used at the time of the Korean Expedition already referred to.

No. 20. "***Seirobune***" (***Tower Ship***).

This represents a war vessel used in the Korean Expedition despatched by Hideyoshi already mentioned. It is of from 300 koku to 400 koku or more in capacity. The prow and both sides of the vessel were protected with shields. The Seiro built in the middle part of the vessel was used as a seat

the vessels are so constructed as to be turned up by means of hinges. She has one mast and a *Seirō* (a sort of conning tower). It has some gunports on all sides.

No. 12. ***"Nippon Maru."***

This represents a vessel owned by Hideyoshi, a great warrior statesman of old Japan. It was built in 1591. She had 100 sculls and was manned by a crew of 180 and was used on the Korean Expedition undertaken by Hideyoshi. She was afterwards rebuilt into a vessel (then called Dairin Maru), having 60 sculls and of 500 koku capacity (one koku is now taken to be equal to about 10 cubic feet). She was dismembered about the year 1856.

No. 13. ***"Hinagata Maru."***

This is a photograph taken of the model of a ship which is kept at the Chokokwan in Yamada, province of Ise. The model is said to have been make by a citizen of that province in 1854 and was

fashioned after a vessel lying at anchor then off the port of Toba, in that province, the vessel being identical in form with ships used for the Korean Expedition already mentioned.

No. 14. ***War Vessel of Kobayagawa Hideaki.***

No. 15. ***War Vessel of Kobayagawa Hideaki.***

No. 16. ***Plan of Construction of the War Vessel of Kobayagawa Hideaki.***

This photograph represents a war vessel used in the already mentioned Korean Expedition, the picture being taken from a model of the vessel now kept in a certain Buddhist temple in Hachioji village, in the province of Musashi. She has wooden shields on all sides, the outer surface of the shields being protected with bamboo sticks. These shields have gunports opening through them, and are so hinged that they could be extended outward. The vessel is covered with very thick decks. It has one mast and is principally propelled by sculls.

picture of vessels then used in Hyogo, a port on the Inland Sea. This is a photograph taken of the picture rolls of Ippen Shōnin, preserved in the Museum of the Imperial Household in Tokio.

No. 9. Vessel specially constructed for the Voyage to China (During the Min Dynasty).

The original picture is the production of a Chinese artist, on the arrival in China, in 1547, of Sakugen Oshō, a Japanese Buddhist priest, who crossed over the seas to that country (during the Min Dynasty). The picture, which was sent to Japan by the artist a few years after, shows the priest on his return voyage from China, he being on board a vessel belonging to the class specially designed and used for crossing over to China (during the Min Dynasty) during the period of the Ashikaga Shogunate of Japan.

No. 10. War Vessel in the Middle Ages.

This represents a war vessel of the middle ages. She was worked by sculls, had a central battery

built at its middle part, and was protected by wooden shields and curtains. The original picture is kept at our Naval Library.

No. 11. War Vessels of Takeda Shingen.

These represent war vessels used in the 16th century. One of them had her sides protected by bamboo shields, both ends being furnished with wooden shields. The bulwarks have their lower sides hinged so as to be turned over outward if necessary, while the bulwarks themselves served as shields when left standing in their ordinary position. She had some gunports opening through the bulwarks. The other vessel, the picture of which is omitted here, as it is similar in construction to the vessel under No. 14, has wooden shields attached to its bulwarks and to both sides of the hull, these shields being hinged at their lower points of attachment so as to be turned over outside. Those on the sides of the hull are so constructed as to be elongated to some extent by means of double hinges, serving as footsteps that the party aboard this vessel could cross over the board of an enemy's ship in case of necessity. Both ends of

the event of war with their bitter opponent, the Genji clan, to terrify the latter, who might be led thereby to regard this vessel as one conveying reinforcements from China as allies of the Heike clan. The size of the vessel is unknown.

No. 6. Naval Engagement off Dannoura.

This is a photograph taken of a copy of the original picture painted by the artist Tosa Mitsunobu (mentioned previously), the original picture being worn out. The date on which this copy was drawn is unknown, although it is evident that it has passed a number of ages. This vessel is Chinese in form and construction. Compared with contemporaneous vessels, it has a much larger capacity, which shows that it was modelled after a Chinese vessel, other vessels, with the exception of this one, being almost invariably mastless small boats, having bulwarks, shields, and curtains to protect them from the enemy's arrows.

No. 7. Naval Engagement with the Mongols.

This is a photograph taken of picture rolls preserved in the Museum of the Imperial Household in Tokio, which were painted by certain artists living at the time of attacks on the southern part of Japan by the Mongols in 1281. This represents a naval engagement on that occasion. The general form of the vessel and the shelves constructed thereon for the seats of the oarsmen are identical with those of the vessel mentioned already under No. 4. Its anchors are of wood. Canoes were then used in place of boats.

No. 8. Thirteenth Century Vessels.

These represent the general features of the vessels used in the 13th century in Japan. One of them represents a ferry boat, on which a Japanese Buddhist priest of fame, Ippen Shōnin, crossed the waters on his holy journey to a temple in Iyo Province about the year 1290, while the other is the

vessel measuring 11 ft., shows traces of parts having been cut away. Were it not for this, the whole length of the vessel would be about 50 ft. There are no indications of the use of nails in the vessel, which shows in all probability that the boat is the product of an age—doubtless over 1000 years ago—when such things as nails were not used at all. The vessel was built as follows. On the scarf joint a piece of board is placed longitudinally, over which four pieces of board are laid crosswise, the two central pieces of which pierce both sides of the vessel through holes measuring 8 by 5 inches. One end of the other two pieces—both pieces being of the same shape—is inserted into a hollow place on the inside of the side board, and the other end is hammered into a slightly wedge-shaped depression made on the inside of the same. These two outer pieces of board are missing.

No. 4. Boat of Sugawara Michizane.

Original picture used to be kept as a tablet at a certain shrine in Kamakura, in the Province of Sagami. She is now preserved in the Museum of the Imperial Household in Tokio. The figures are

presumably designed to show the vessel on which one of the Japanese loyalists and learned men, Sugawara Michizane, was taken on his sad voyage to Dazaifu, whither he was sent as an exile in 901. While it is doubtful if this picture faithfully represents the vessel referred to, it is evident, however, that it was painted some time in the 13th century, the form of the vessel being quite different from that of vessels of later years. A kind of shelf was built on both sides of the vessel, and was especially intended for the seats of the oarsmen. Braziers were used on board this vessel for lighting purposes.

No. 5. "Gozabune" of the Heike Clan.

Original picture kept at a certain shrine in Shimonoseki, in the Province of Nagato, represents a vessel constructed in the year 1185. The picture was painted by the artist Tosa Mitsunobu. The vessel is purely Chinese in form and construction. It has two masts, and its sails are made of straw matting. The rudder is fixed to the stern post. According to a tradition, this vessel is of the kind that was constructed and used by the Heike clan (one of the renowned military clans in old Japan) for strategic purposes, in

been used seems to have been quite behind the times as compared with the majority of contemporaneous districts in the western parts of Japan. This gives us reason to believe that such a form of vessel must have been used there until quite lately.

No. 2. "*Morotebune.*"

This represents a canoe preserved in the Kotoshiro Shrine, Mihonoseki, province of Idzumo. It is about 26 feet long, 5½ ft. wide, and 2½ ft. deep. It has one Nerikai (an oar used in place of a rudder), 8 oars, and red-painted crests carved on both sides of the hull. This vessel was moddelled after the "Morote-bune," a canoe which is stated, according to an authority, to have been used by a certain holy person of antiquity.

This boat, as it exists at present, retains the same form it originally possessed, althouth it has passed through several processes of rebuilding necessitated by the wear and tear incidentally occuring thereto. The building material, which used to be camphor wood until quite lately, has now been changed into the Momi (a soft wood), on account of the present scarcity of camphor wood. Formerly the vessel was painted

red with red earth, which gave it a gay appearance. This vessel has a number of oars furnished on both sides of the hull resembling human hands, which acquired for it the name "Morote-bune" (many-handed vessel.)

No. 3. *Canoe at Osaka.*

This represents a canoe, built of camphor wood, which was dug out of the earth in Namba village, in the province of Settsu, in the 11th year of Meiji (1878), at the time of the opening of the Itachi River there. It is kept at the Public Museum of Osaka. In spite of the vessel being worn out in many places, it still retains the essential features as they originally existed. The length of the vessel is about 38 feet, its width about 5 feet, and its depth about 1 foot 10 inches. The vessel is constructed of two pieces of boards overlapping at the ends at about the middle of the boat, the scarf joint thus made being 5 feet 8 inches long. The length of the vessel, measured from both ends of the scarf joint to the extreme points of the vessel, is 11 ft. on one side and 21 ft. 4 ins. on the other. This shorter portion, that is, the part of the

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No. 1. Canoe at Taiho.

This represents a canoe, probably used in by-gone days on the Taiho Numa, in the province of Hitachi, the material used being the Hinoki (a species of cedar), or cedar. The canoe itself is preserved in the Hachiman Shrine, in that province. Its length is about 20 feet; breadth about 1 foot 11 inches, depth about 8 inches and thickness about 2 inches. The height at the prow of the vessel is 1 foot 4 inches, that at the stern 1 foot 6 inches, and the bottom of the vessel is flat. There is neither a record nor tradition showing the exact date of its existence, although the fact of its having been used in days long past is evident from the rough and primitive form of its construction. The Hachiman Shrine, where this boat is preserved, was built in the Taiho era (701–703) and was destroyed by fire about 1350. Hence this vessel might have been built after that catastrophe. The locality where this vessel is supposed to have

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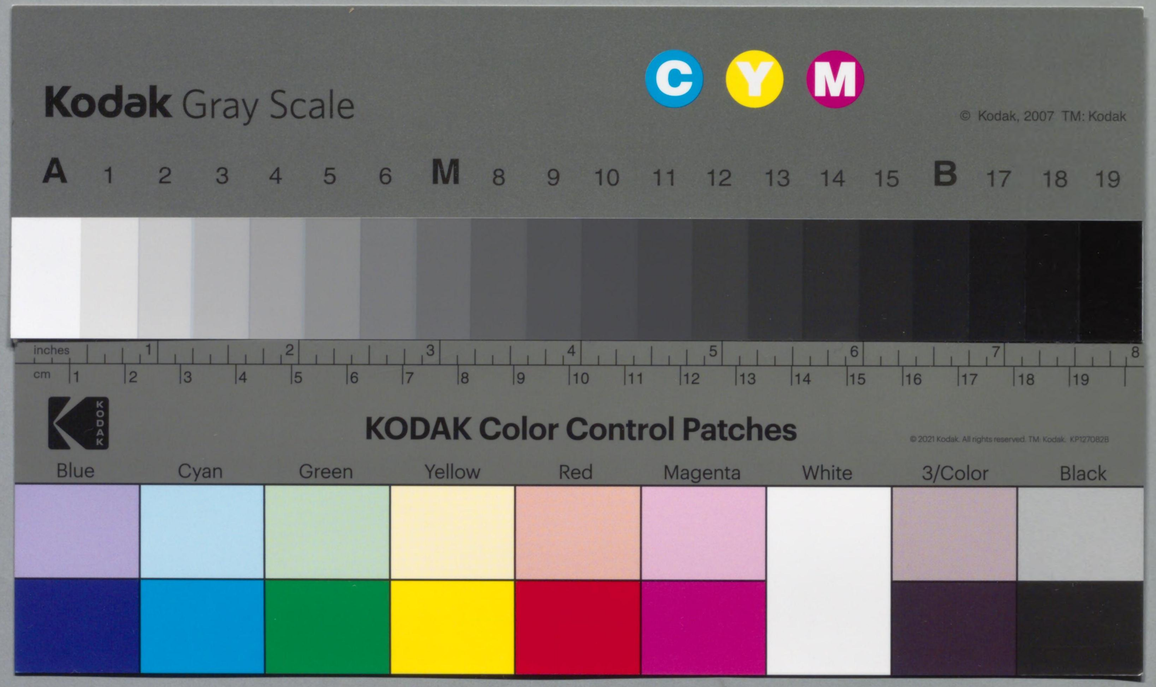
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