

## (ANNEXE.)

## TABLE (A).

SHOWING THE COST OF CONSTRUCTION AND MAINTENANCE OF  
LIGHTHOUSES, LIGHTSHIPS, BUOYS AND BEACONS  
FROM JULY 1868 TO JUNE 1881.

| Signals.  | Locality.                   | Date of completion. | Cost of construction. |       | Ordinary expenditures. |      | Total.             |  |
|---|-----------------------------|---------------------|-----------------------|-------|------------------------|------|--------------------|--|
|   |                             |                     | Yen                   | Sen   | Yen                    | Sen  |                    |  |
| Lighthouses.  | Kwannon-saki, Sagami .....  | 1868                | 8,547                 | 81.7  | 19,825                 | 32.6 |                    |  |
|   | Shinagawa, Musashi .....    | 1870                | 2,098                 | 87.3  | 6,283                  | 94.4 |                    |  |
|   | Jōga-shima, Sagami .....    | 1870                | 2,134                 | 28.1  | 9,110                  | 58.6 |                    |  |
|   | Kashino-saki, Kii .....     | 1870                | 41,101                | 68.9  | 25,979                 | 56.7 |                    |  |
|   | Shiwo-misaki, „ .....       | 1870                | 63,952                | 12.7  | 34,461                 | 52.4 |                    |  |
|   | Noshima-saki, Awa.....      | 1870                | 23,088                | 67.8  | 38,203                 | 20.7 |                    |  |
|   | Tsurugi-saki, Sagami .....  | 1871                | 35,190                | 44.9  | 34,187                 | 25.9 |                    |  |
|   | Mikomoto-shima, Idzu .....  | 1871                | 109,871               | 83.8  | 57,262                 | 15.1 |                    |  |
|   | Irō-saki, „ .....           | 1871                | 2,483                 | 18.1  | 9,692                  | 51.8 |                    |  |
|   | Mejirushiyama, Settsu.....  | 1871                | 6,650                 | 89.2  | 14,156                 | 49.4 |                    |  |
|   | Wadano-misaki, „ .....      | 1871                | 13,810                | 11.2  | 12,241                 | 96.9 |                    |  |
|   | Esaki, Awaji .....          | 1871                | 28,729                | 20.5  | 26,366                 | 34.9 |                    |  |
|   | Mutsure-shima, Nagato ..... | 1871                | 24,224                | 89.4  | 13,103                 | 49.4 |                    |  |
|   | Iwō-shima, Hizen .....      | 1871                | 22,396                | 37.1  | 38,888                 | 21.3 |                    |  |
|   | Sata-no-misaki, Ōsumi ..... | 1871                | 68,287                | 09.3  | 42,226                 | 24.8 |                    |  |
|   | Anori-saki, Shima .....     | 1872                | 13,344                | 08.1  | 11,131                 | 69.9 |                    |  |
|   | Toma-ga-shima, Kii .....    | 1872                | 23,461                | 85.3  | 18,648                 | 13.2 |                    |  |
|   | Hesaki, Buzen .....         | 1872                | 23,851                | 55.4  | 16,606                 | 43.2 |                    |  |
|   | Nosshafu-saki, Nemuro ..... | 1872                | 2,872                 | 98.4  | 9,879                  | 99.9 |                    |  |
|   | Su-ga-shima, Shima .....    | 1873                | 9,341                 | 29.9  | 10,951                 | 43.1 |                    |  |
|   | Nabe-shima, Sanuki .....    | 1873                | 16,462                | 80.0  | 11,208                 | 89.5 |                    |  |
|   | Tsuri-shima, Iyo.....       | 1873                | 19,145                | 84.6  | 14,462                 | 27.0 |                    |  |
|   | Shirasu, Nagato .....       | 1873                | 10,049                | 15.9  | 11,898                 | 97.5 |                    |  |
|   | Yokohama, Musashi .....     | 1874                | 7,351                 | 31.5  | 8,883                  | 62.4 |                    |  |
|   | Omae-saki, Totomi .....     | 1874                | 33,422                | 85.8  | 17,160                 | 39.7 |                    |  |
|   | Inuboye-saki, Shimōsa ..... | 1874                | 44,824                | 88.8  | 20,425                 | 75.9 |                    |  |
|   | Haneda, Musashi.....        | 1875                | 14,646                | 82.0  | 11,910                 | 58.7 |                    |  |
|   | Tsuno-shima, Nagato .....   | 1875                | 47,038                | 61.9  | 13,904                 | 40.0 |                    |  |
|   | Eboshi-shima, Chikuzen..... | 1875                | 72,895                | 11.8  | 18,036                 | 28.7 |                    |  |
|   | Kinkwa-zan, Rikuzen.....    | 1876                | 56,255                | 50.7  | 17,297                 | 04.1 |                    |  |
|   | Shiriya-saki, Mutsu.....    | 1876                | 73,599                | 81.0  | 18,555                 | 40.2 |                    |  |
|   | Osesaki, Hizen.....         | 1880                | 49,095                | 01.3  | 5,915                  | 60.3 |                    |  |
| Kuchinotsu, „ .....   | 1880                        | 4,162               | 27.3                  | 946   | 40.0                   |      |                    |  |
| Kage-no-o-shima, „ .....  | 1881                        | 5,308               | 40.6                  | 623   | 17.6                   |      |                    |  |
| Tateishi-misaki, Echizen.....   | 1881                        | 16,848              | 82.7                  | 420   | 29.0                   |      |                    |  |
| Yokohama, Musashi .....   | 1871                        | 250                 | 49.9                  | 4,078 | 50.9                   |      |                    |  |
| Benten-shima, Nemuro .....  | 1872                        | 430                 | 34.2                  | 7,927 | 91.5                   |      |                    |  |
| Kōbe, Settsu .....  | 1877                        | 1,442               | 55.5                  | 2,819 | 10.3                   |      |                    |  |
|   | Total.....                  |                     | 998,669               | 92.6  | 635,681                | 17.5 | yen 1,634,351.10.1 |  |
| Lightships.   | Hominoku, Musashi .....     | 1869                | 30,287                | 07.4  | 64,854                 | 04.8 |                    |  |
|   | Hakodate, Ōshima .....      | 1871                | 29,894                | 74.6  | 46,215                 | 49.8 |                    |  |
|   | Reserved lightship .....    | 1877                | 23,871                | 22.6  | .....                  | ...  |                    |  |
|   | Total.....                  |                     | 84,053                | 04.6  | 111,069                | 54.6 | „ 195,122.59.2     |  |
| Buoys.  | Yokohama, Musashi .....     | 1869                | 3,226                 | 28.8  | 2,003                  | 57.9 |                    |  |
|   | Haneda, „ .....             | 1871                | 3,208                 | 57.0  | 2,268                  | 80.1 |                    |  |
|   | Futsu, Kadzusa .....        | 1871                | 3,391                 | 12.9  | 3,049                  | 16.4 |                    |  |
|   | Akama-ga-seki, Nagato ..... | 1873                | 12,028                | 63.6  | 5,781                  | 49.6 |                    |  |
|   | Akashi, Harima .....        | 1876                | 2,569                 | 45.4  | 1,917                  | 88.6 |                    |  |
|   | Kama-ishi, Rikuchiu .....   | 1876                | 627                   | 29.6  | 82                     | 07.8 |                    |  |
|   | Kamidono-shima, Iyo.....    | 1880                | 1,342                 | 64.3  | 229                    | 81.7 |                    |  |
|   | Funakawa, Ugo .....         | 1881                | 750                   | 08.0  | 13                     | 36.0 |                    |  |
|   | Total.....                  |                     | 27,144                | 09.6  | 15,346                 | 18.1 | „ 42,490.27.7      |  |
| Beacons.  | Akama-ga-seki, Nagato ..... | 1871                | 1,560                 | 26.8  | 719                    | 99.8 |                    |  |
|   | Fuse, Hizen.....            | 1877                | 25,733                | 40.4  | 84                     | 81.4 |                    |  |
|   | Kama-ishi, Rikuchiu .....   | 1877                | 1,166                 | 13.0  | 50                     | 0.0  |                    |  |
|   | Hoso-shima, Bingo .....     | 1880                | 3,064                 | 56.3  | 6                      | 10.0 |                    |  |
|   | Hirase, Hizen .....         | 1880                | 729                   | 75.4  | 234                    | 84.1 |                    |  |
|   | Total.....                  |                     | 32,254                | 11.9  | 1,046                  | 25.3 | „ 33,300.37.2      |  |
| RECAPITULATION.   |                             |                     |                       |       |                        |      |                    |  |
| Lighthouses and polelights .....  |                             |                     | 998,669               | 92.6  | 635,681                | 17.5 |                    |  |
| Lightships .....  |                             |                     | 84,053                | 04.6  | 111,069                | 54.6 |                    |  |
| Buoys .....   |                             |                     | 27,144                | 09.6  | 15,346                 | 18.1 |                    |  |
| Beacons .....   |                             |                     | 32,254                | 11.9  | 1,046                  | 25.3 |                    |  |
| Total .....   |                             |                     | 1,142,121             | 18.7  | 763,143                | 15.5 | „ 1,905,264.34.2   |  |
| Miscellaneous expenses, such as office expenses, salaries and wages, expenses of lightship tenders &c. .... |                             |                     |                       |       |                        |      | 2,360,133.46.3     |  |
| Grand total .....   |                             |                     |                       |       |                        |      | 4,265,397.80.5     |  |

## TABLE (B).

### DISBURSEMENTS OF THE LIGHTHOUSE DEPARTMENT

FOR THE FISCAL YEAR ENDED JUNE 30TH 1881.

| ITEMIZED DISBURSEMENTS.  |        |      | ITEMIZED DISBURSEMENTS.   |         |      |
|--|--------|------|---|---------|------|
| <b>SALARIES.</b>   |        |      | <b>EXPENSES OF LIGHTHOUSES &amp;c.</b>                              |         |      |
| Salaries of secretaries .....  | 4,800  | 00.0 | Wages of employés.....  | 7,465   | 94.1 |
| "    "    clerks .....   | 7,430  | 00.0 | Fees of all kinds.....  |         | 07.5 |
| "    "    chief engineers.....   | 600    | 00.0 | Reserved articles.....  | 1,535   | 06.8 |
| "    "    engineers .....  | 4,825  | 00.0 | Articles to be consumed.....  | 18,230  | 01.5 |
| "    "    lighthouse keepers .....                                     | 21,644 | 50.0 | Postage .....   | 80      | 90.6 |
| "    "    employés .....   | 3,058  | 90.3 | Telegraph expenses.....   | 12      | 63.0 |
| "    "    foreign employés .....                                       | 3,737  | 53.2 | Transportation expenses.....  | 1,609   | 11.5 |
| Total.....   | 46,095 | 93.5 | Expenses of the ships attached to the department .....              | 322     | 93.0 |
| <b>SUNDRY EXPENSES.</b>  |        |      | Miscellaneous expenses .....  | 41      | 20.0 |
| Travelling expenses .....  | 6,141  | 60.0 | Total.....  | 29,297  | 88.0 |
| Gratuities .....   | 317    | 50.0 | <b>EXPENSES OF THE S. S. "MEIJI MARU".</b>                          |         |      |
| Expenses for clothing.....   | 902    | 00.0 | Salaries of the clerks .....  | 300     | 00.0 |
| Wages of employés.....   | 2,658  | 73.1 | "    "    engineers .....   | 1,085   | 00.0 |
| Sundry expenses.....   | 157    | 55.0 | "    "    employés .....  | 50      | 00.0 |
| Fees of all kinds.....   | 860    | 50.1 | "    "    foreign employés .....                                    | 22,927  | 72.8 |
| Expenses incurred on account of the death and accidents .....          | 33     | 17.1 | Travelling expenses .....   | 12      | 90.0 |
| Sundry expenses of foreigners .....                                    | 2,565  | 60.1 | Wages of employés.....  | 7,147   | 24.5 |
| Total.....   | 13,636 | 65.4 | Sundry expenses of foreigners .....                                 | 2,513   | 10.6 |
| <b>OFFICE EXPENSES.</b>  |        |      | Reserved articles.....  | 890     | 78.3 |
| Reserved articles.....   | 550    | 19.9 | Articles to be consumed.....  | 13,580  | 57.5 |
| Expenses of repairs to machinery.....                                  | 3,832  | 99.3 | Transportation expenses.....  | 106     | 25.5 |
| Articles to be consumed.....   | 1,270  | 82.4 | Expenses for food .....   | 3,187   | 33.4 |
| Printing expenses .....  | 157    | 61.0 | "    "    treatment of sick persons.....                            | 17      | 19.9 |
| Postage .....  | 89     | 56.0 | "    "    incurred on account of the death and accidents .....      | 63      | 90.2 |
| Telegraph expenses .....   | 174    | 38.0 | "    "    of repairs to ship .....                                  | 8,073   | 64.8 |
| Transportation expenses .....  | 399    | 87.2 | Miscellaneous expenses .....  | 127     | 80.6 |
| Expenses for food .....  | 168    | 00.5 | Total .....   | 60,083  | 48.1 |
| "    of the ships attached to the department .....                     | 39     | 34.7 | Advances repaid.....  | 186     | 36.0 |
| Miscellaneous expenses .....   | 797    | 20.0 | Grand Total .....   | 205,804 | 56.2 |
| Total .....  | 7,488  | 99.0 | <b>RECAPITULATION.</b>  |         |      |
| <b>EXPENSES OF REPAIRS.</b>  |        |      | Cost of construction .....  | 29,498  | 50.1 |
| Expenses of general repairs of the department .....                    | 4,982  | 32.7 | Cost of maintenance .....   | 176,306 | 06.1 |
| "    of the residences of foreign employés .....                       | 462    | 26.8 | Total.....  | 205,804 | 56.2 |
| Cost of re-construction of the crane on the wharf near the office..... | 543    | 95.5 | <b>EXPENSES OF CONSTRUCTIONS &amp; REPAIRS</b>                      |         |      |
| Expenses of the fences in the compound of the department.....          | 833    | 36.2 | <b>OF LIGHTHOUSES &amp;c.</b>                                       |         |      |
| Cost of alteration of the library of the department .....              | 291    | 87.0 | Cost of construction of new lighthouse at Fukuyeshima in Hizen..... | 6,599   | 96.6 |
| Total.....   | 7,112  | 78.2 | "    "    reconstruction of the beacon at Fuse in Hizen .....       | 2,172   | 68.9 |
| <b>EXPENSES OF CONSTRUCTIONS &amp; REPAIRS</b>                         |        |      | "    "    lighthouse at Tateishi in Echizen.....                    | 9,510   | 54.9 |
| <b>OF LIGHTHOUSES &amp;c.</b>  |        |      | "    "    "    "    Kageno-o in Hizen.....                          | 3,777   | 89.4 |
| Cost of construction of new lighthouse at Fukuyeshima in Hizen.....    | 6,599  | 96.6 | "    "    beacon at Hirase .....                                    | 535     | 05.4 |
| "    "    reconstruction of the beacon at Fuse in Hizen .....          | 2,172  | 68.9 | "    "    construction of lighthouse at Tsuruga in Echizen .....    | 4,621   | 75.7 |
| "    "    lighthouse at Tateishi in Echizen.....                       | 9,510  | 54.9 | "    "    "    "    Nagasaki .....                                  | 1,530   | 51.2 |
| "    "    "    "    Kageno-o in Hizen.....                             | 3,777  | 89.4 | "    "    "    "    new buoy at Funakawa in Ugo .....               | 750     | 08.0 |
| "    "    beacon at Hirase .....                                       | 535    | 05.4 | Expenses of general repairs of buoys and beacons &c.....            | 12,402  | 97.9 |
| "    "    construction of lighthouse at Tsuruga in Echizen .....       | 4,621  | 75.7 | Total.....  | 41,901  | 48.0 |
| "    "    "    "    Nagasaki .....                                     | 1,530  | 51.2 | <b>RECAPITULATION.</b>  |         |      |
| "    "    "    "    new buoy at Funakawa in Ugo .....                  | 750    | 08.0 | Cost of construction .....  | 29,498  | 50.1 |
| Expenses of general repairs of buoys and beacons &c.....               | 12,402 | 97.9 | Cost of maintenance .....   | 176,306 | 06.1 |
| Total.....   | 41,901 | 48.0 | Total.....  | 205,804 | 56.2 |

TABLE (D).

LIST OF THE JAPANESE LIGHTHOUSES, LIGHTSHIPS,  
BUOYS AND BEACONS.

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CORRECTED JANUARY 1<sup>ST</sup> 1882.

## LIGHT HOUSES.

| Name of Light.                | Situation of Light.  | North Latitude.            | East Longitude.             | Date of First Exhibition.  | Description of Building.  |
|-------------------------------|--|----------------------------|-----------------------------|--|---|
| SHINAGAWA.....                | Western side of Fort No. 2 in Yedo Anchorage.  | 35° 37' 35"                | 139° 46' 11"                | <i>day mo. year</i><br>5th 3rd 3rd<br>5th April, 1870  | Brick Tower, painted White.   |
| HANEDA.....                   | About 1½ miles off the mouth of the Rokugo-gawa near Kawasaki, Bay of Yedo.  | 35° 31' 56"                | 139° 48' 03"                | <i>day mo. year</i><br>15th 3rd 8th<br>15th Mar. 1875  | Screw Pile Iron Tower, placed in a depth of 7 feet of water at low tide, painted Black and White, horizontal stripes. |
| YOKOHAMA HATO-BA.....         | On the point of the Eastern arm of the English Hatoba.   | 35° 26' 57"                | 139° 38' 51"                | <i>day mo. year</i><br>14th 1st 2nd<br>24th Feb. 1869  | Staff, painted White.   |
| KWAN-ON-SAKI.....             | In the Province of Sagami at the entrance to the Gulf of Yedo.   | 35° 15' 18"                | 139° 45' 12"                | <i>day mo. year</i><br>1st 1st 2nd<br>11th Feb. 1869   | Brick Tower, painted White.   |
| TSURUGI-SAKI.....             | In the Province of Sagami at the entrance to Gulf of Yedo.   | 35° 8' 27"                 | 139° 41' 8"                 | <i>day mo. year</i><br>11th 1st 4th<br>1st March 1871  | Stone Tower, painted White.   |
| JO-GA-SHIMA.....              | On West end of Joga-sima near Misaki, Province of Sagami.  | 35° 8' 8"                  | 139° 37' 7"                 | <i>day mo. year</i><br>13th 8th 3rd<br>8th Sept. 1870  | Brick Tower, painted White.   |
| NOSHIMA-SAKI.....             | In the Province of Awa, East of Mela Head.   | 34° 53' 20"                | 139° 53' 57"                | <i>day mo. year</i><br>21st 12th 2nd<br>22nd Jan. 1870   | Brick Tower, painted White.   |
| MIKOMOTO-SHIMA.....           | Rock Island, South of Shimoda, Province of Idzu.   | 34° 34' 25"                | 138° 56' 57"                | <i>day mo. year</i><br>11th 11th 3rd<br>1st Jan. 1871  | Stone Tower, painted White.   |
| IRO-Ô-SAKI.....               | Southernmost Point of the Province of Idzu.  | 34° 36' 02"                | 138° 51' 12"                | <i>day mo. year</i><br>21st 8th 4th<br>5th Oct. 1871   | Octagonal Wooden Tower, painted White.  |
| OMAI-SAKI.....                | Southernmost Point of the Province of Totomi, to the West of Suraga Gulf.  | 34° 35' 46"                | 138° 18' 28"                | <i>day mo. year</i><br>1st 5th 7th<br>1st May 1874   | Circular Brick Tower, painted White.  |
| TOBA,<br>(SUGASHIMA.).....    | North Eastern extreme of Sugashima, at entrance to Toba Harbour, in the Province of Shima.   | 34° 30' 40"                | 136° 54' 50"                | <i>day mo. year</i><br>1st 7th 6th<br>1st July 1873  | Brick Tower, painted White.   |
| MATOYA,<br>(ANORI-SAKI.)..... | Eastern extreme of Anori-saki, Southern Head, at the entrance to Matoya Harbour.   | 34° 21' 55"                | 136° 54' 44"                | <i>day mo. year</i><br>1st 4th 6th<br>1st April 1873   | Octagonal Wooden Tower, painted White.  |
| KWASHINO-SAKI.....            | East point of Island of Oshima, in Kii.  | 33° 28' 15"                | 135° 52' 10"                | <i>day mo. year</i><br>10th 6th 3rd<br>8th July 1870   | Stone Tower, painted White.   |
| SHIWOMI-SAKI.....             | Southernmost point of the Province of Kii.   | 33° 26' 20"                | 135° 45' 40"                | <i>day mo. year</i><br>15th 9th 6th<br>15th Sept. 1873   | Circular Stone Tower, painted White.  |
| TOMANGA-SHIMA,<br>SAKAI.....  | On the Western extreme of Tomangashima, in Isumi Straits.<br><br>On the end of the Southern Pier and marking the Southern head of the entrance to Sakai harbour. | 34° 16' 50"<br>34° 35' 12" | 135° 0' 40"<br>135° 27' 44" | <i>day mo. year</i><br>27th 6th 5th<br>1st Aug. 1872<br><br><i>day mo. year</i><br>15th 9th 10th<br>15th Sept. 1877. | Granite Tower.<br><br>Hexagonal Wooden Tower, painted White.  |

| Appearance and Order of Light.                  | True Bearings within which Light is visible. | True Bearings of Dangers and of the Coloured Rays to mark them.  | Height of Light-house to Centre of Lantern, in ft. | Height of Light above the Sea, in ft. | Range of Visibility. | REMARKS.   |
|---|--|--|--|---------------------------------------|----------------------|--|
| Fixed, Red, 5th Order.                          | From S. 68° E. to N. 18 E.                   |  | 19   | 52                                    | About 9 miles        | Erected by the Yokoska officials, M. VERNY, Engineer.  |
| Fixed, Green, 4th Order.                        | From N. 30° W. to S. 60° W.                  |  | 53   | 40                                    | 8 miles.             |  |
| Fixed, Red.                                     | The whole horizon.                           | Red ray to the southward from S. 2° E. to S. 15° W. covering Plymouth Rocks (Ashika-shima), exhibited from the main Lantern. Also Red Ray to the northward between the bearings N. 7° 30' W. and N. 18° 30' E. covering Saratoga Buoy and Spit, exhibited from a window of the light house 22ft. below, and slightly to the westward of the vertical plane of the main light, range about 7 miles. | —  | 48                                    | About 6 miles.       |  |
| Fixed, White, 3rd Order.                        | From N. 27° W. to S. 31° W.                  |  | 40   | 178                                   | About 14 miles.      | Erected by the Yokoska officials M. VERNY, Engineer.   |
| Flashing every 10 seconds.<br>White, 2nd Order. | From N. 27° E. to S. 75° W.                  | Red ray from N. 27° E. to N. 43° E. covering Plymouth Rocks (Ashika-sima.)   | 25   | 110                                   | 16½ miles.           |  |
| Fixed, Green, 5th Order.                        | From S. 55° E. to N. 74° E.                  |  | 19½  | 106                                   | About 9 miles.       | Erected by the Yokoska officials, M. VERNY, Engineer.  |
| Fixed, White, 1st Order.                        | From N. 70° E. to N. 85° W.                  | Mela Ledge bears S. 83° W. distant 4 miles.  | 99   | 133                                   | 17½ miles.           | Erected by the Yokoska Officials, M. VERNY, Engineer.  |
| Fixed, White, 1st Order.                        | The whole horizon.                           | Red Ray between N. 6° E. and N. 49° W. covering dangers between Rock Island and the shore.   | 60   | 164                                   | 19 miles.            |  |
| Fixed, Red, 5th Order.                          | From N. 78° E. to N. 72° W.                  |  | 20   | 185                                   | About 10 miles.      |  |
| Revolving every half minute, White, 1st Order.  | From N. 41° 30' E. to N. 76° 11' W.          | Outside edge of "Lady Inglis" Rock bears from the Lighthouse S. 86 30' E., distant 1½ miles.   | 57   | 173                                   | 19½ miles.           |  |
| Fixed, White, 4th Order.                        | From N. 24° W. to S. 8° W.                   |  | 28½  | 176                                   | About 15 miles.      |  |
| Revolving every half minute, White, 4th Order.  | From N. 87° W. to S. 33° W.                  |  | 36   | 102                                   | About 15 miles.      |  |
| Revolving every half minute, White, 2nd Order.  | From N. 71° W. to S. 33° W.                  |  | 15   | 130                                   | 18 miles.            |  |
| Fixed, White, 1st Order.                        | From S. 88° E. to N. 50° W.                  |  | 63   | 163                                   | 20 miles.            | Rebuilt of stone 1878, Light first exhibited from stone tower 15th day of the 4th month of the 11th year of Meiji (15th April 1878.) |
| Fixed, White, 3rd Order.                        | From S. 10° E. to N. 52° E.                  |  | 21   | 208                                   | About 19 miles.      |  |
| Fixed, Green, 5th Order.                        | From S. 14° 30' W. to S. 75° 30' E.          |  | 32½  | 53½                                   | 10 miles.            | Erected at the expense of Takayama Yasujiro.   |

## LIGHT

| Name of Light.      | Situation of Light.  | North Latitude. | East Longitude. | Date of First Exhibition.                           | Description of Building.   |
|---------------------|--|-----------------|-----------------|---|--|
| KIDZUKAWA.....      | On the Eastern Bank of the mouth of the Kizugawa.  | 34° 37' 48"     | 135° 27' 44"    | { day mo. year<br>1st 5th 11th<br>1st May 1878      | { Circular Brick Tower,<br>painted in Black and White<br>Horizontal Bands. |
| TEMPOSAN .....      | On Temposan Fort at the mouth of the Ajikawa, Osaka.   | 34° 39' 45"     | 135° 26'        | { day mo. year<br>29th 8th 5th<br>1st Oct. 1872     | { Square Wooden Tower,<br>painted White.                                   |
| KOBESTAFFLIGHT.     | On the Eastern Haotab of the Foreign Concession.   | 34° 41' 18"     | 135° 11' 38"    | { day mo. year<br>15th 8th 10th<br>15th August 1877 | Staff, painted White.  |
| WADA-NO-MISAKI.     | On Wada-no-misaki, Southwest of Kobe Anchorage.  | 34° 39' 20"     | 135° 11'        | { day mo. year<br>29th 8th 5th<br>1st Oct. 1872     | { Octagonal Wooden Tower,<br>painted White.                                |
| ESAKI, .....        | North Point of Island of Awaji in Akashi Straits, the Eastern entrance to the Inland Sea.  | 34° 37'         | 134° 39' 40"    | { day mo. year<br>27th 4th 4th<br>14th June 1871    | Granite Tower.   |
| NABE-SHIMA, .....   | On the Summit of Nabeshima, a small Island close to the Southern extreme of Yōshima in the Inland Sea.   | 34° 23' 5"      | 133° 49' 10"    | { day mo. year<br>15th 11th 5th<br>15th Dec. 1872   | Granite Tower.   |
| TSURI-SHIMA, .....  | Four hundred yards inshore from the North Western point of Tsurī-Shima in the Inland Sea at the point marked "White Patch" on Chart.                 | 33° 53' 35.6"   | 132° 38' 15"    | { day mo. year<br>15th 6th 6th<br>15th June 1873    | Granite Tower.   |
| ISAKI, .....        | On the North Eastern extreme of the Point of Isaki at the Eastern entrance to Shimonoseki Straits.   | 33° 57' 43"     | 131° 1' 52"     | { day mo. year<br>22nd 1st 5th<br>1st March 1872    | Granite Tower.   |
| ROCKUREN, .....     | On the Eastern extremity of Island of Rockuren at Western entrance to Shimonoseki Straits.   | 33° 58' 53"     | 130° 52' 31"    | { day mo. year<br>21st 11th 4th<br>1st Jan. 1872    | Granite Tower.   |
| SHIRASU, .....      | On the Southern end of Shirasu, a low reef about 1½ miles to the South West of Ai-no-shima at the Western entrance to Shimonoseki Straits.           | 33° 59' 11"     | 130° 47' 56"    | { day mo. year<br>1st 9th 6th<br>1st Sept. 1873     | { Square Wooden Tower,<br>painted Black and White<br>horizontal stripes.   |
| EBOSHI-SHIMA, ..... | On the summit of Eboshishima, a small Island at the Northern entrance to the channel between the Island of Ikishima, the province of Hizen, Kiushiu. | 33° 41' 30"     | 129° 58' 50"    | { day mo. year<br>1st 8th 8th<br>1st Aug. 1875      | { Octagonal Iron Tower,<br>painted White.                                  |
| TAKASHIMA .....     | On the Northern end of Takashima at the entrance to the Harbour of Yobuko Province of Hizen.   | 33° 33' 38"     | 129° 54'        | { day mo. year<br>1st 12th 14th<br>1st Dec. 1881    | Square Wooden Tower.   |
| OSE-SAKI .....      | On the South Western extreme of Fukukeye, the Southernmost Island of the Goto group.   | 32° 36' 45"     | 128° 36' 6"     | { day mo. year<br>15th 12th 12th<br>15th Dec. 1879  | { Round Iron Tower, painted<br>white.                                      |
| IWO-SHIMA .....     | On the Northernmost Point of Island of Iwoshima, at the entrance to Nagasaki Harbour.  | 32° 43'         | 129° 45' 13"    | { day mo. year<br>30th 7th 4th<br>14th Sept. 1871   | { Hexagonal Iron Tower,<br>painted White.                                  |
| KAGE-NO-O-SHIMA.    | On the Northern point of the Island of Kage-no-o-Shima, at the entrance to Nagasaki Harbour.   | 32° 42' 42"     | 129° 49' 20"    | { day mo. year<br>1st 3rd 14th<br>1st March 1881    | Stone Tower.   |
| KUCHINOTSU .....    | On the Western head of the entrance to Kuchinotsu Harbour, Shimabara Gulf.   | 32° 36' 17"     | 130° 12' 20"    | { day mo. year<br>10th 5th 13th<br>10th May 1880    | Brick Tower, painted white.  |

## HOUSES.

| Appearance and Order of Light.                         | True Bearings within which Light is visible. | True Bearings of Dangers and of the Coloured Rays to mark them.  | Height of Light-house to Centre of Lantern, in ft. | Height of Light-above the Sea, in ft. | Range of Visibility. | REMARKS.  |
|--|--|--|--|---------------------------------------|----------------------|---|
| { Fixed, Red, 6th<br>Order.                            | { From S. 22° 20' E. to<br>N. 67° 40' E.     |  | 29   | 40                                    | 8 miles.             | { Upheld by Osa-<br>ka-Fu.                            |
| Fixed, White, 4th Order.                               | { From S. 57° E.<br>to N. 63° E.             |  | 30   | 53                                    | About 12 miles.      |   |
| { Fixed, Green, Staff<br>Light.                        | The whole horizon.                           |  | 34   | 42                                    | About 6 miles.       |   |
| Fixed, Red, 4th Order.                                 | { From N. 27° W.<br>to S. 68° W.             |  | 46   | 52                                    | About 12 miles.      |   |
| Fixed, White, 1st Order.                               | { From S. 61° 20' W.<br>to N. 86° E.         |  | 15   | 158                                   | 18½ miles.           |   |
| Fixed, White, 4th Order.                               | { From N. 11° E. to<br>N. 89° W.             |  | 21   | 85                                    | About 12 miles.      |   |
| Fixed, White, 3rd Order.                               | From S. 7° W. to N. 70° E.                   |  | 21   | 186                                   | 20 miles.            |   |
| Fixed, White, 3rd Order.                               | From N. 82° W. to S.                         | { Red Ray between N. 82° W.<br>and S. 58° E. which covers the<br>Spit off Motoyama.  | 21   | 122                                   | 16 miles.            |   |
| Fixed, White, 4th Order.                               | { From N. 40° W. to S.<br>12° W.             | { Light eclipsed about half a mile<br>seaward of the Ai-no-shima Buoy<br>which marks the end of the Shoal<br>to the North of Ai-no-sima.                                 | 25   | 89                                    | About 12 miles.      |   |
| Fixed, Red, 5th Order.                                 | The whole horizon.                           |  | 42   | 44                                    | About 10 miles.      |   |
| Fixed, White, 2nd Order.                               | The whole horizon.                           |  | 44½  | 182                                   | 19¼ miles.           |   |
| Fixed, White, 6th Order.                               | { From S. 39° 50' W. to<br>S. 70° 10' E.     | { Green ray between N. 66° 20' W.<br>and N. 36° 20' W. covering Usima<br>or Mō-se; and Red ray between N.<br>3° 45' W. and N. 21° 15' E. cover-<br>ing Hirasé and Orisé. | 15   | 156                                   | About 8 miles.       | { Erected at the<br>expense of Naka-<br>yama Atsushi. |
| { Revolving every half<br>minute, White, 1st<br>Order. | { From S. 58° 53' E.<br>to N. 4° 33' W.      |  | 36½  | 265                                   | 22½ miles.           |   |
| Fixed, White, 1st Order.                               | { From S. 30° W. to<br>S. 85° E.             |  | 23   | 205                                   | 21½ miles.           |   |
| Fixed, Red, 6th Order.                                 | { From N. 81° 30' W.<br>to S. 55° 30' E.     |  | 15' 8"   | 40                                    | About 8 miles.       |   |
| Fixed, White, 6th Order.                               | { From N. 2° W. to<br>66° W.                 |  | 16½  | 126                                   | About 8 miles.       |   |

## LIGHT HOUSES.

| Name of Light.          | Situation of Light.   | North Latitude. | East Longitude. | Date of First Exhibition.                          | Description of Building.                    |
|-------------------------|---|-----------------|-----------------|--|---|
| SHIMABARA .....         | { On a small island at the Northern entrance to Shimabara Junk anchorage.   | 32° 46'         | 130° 25' 30"    | { day mo. year<br>1st 9th 10th<br>1st Sept. 1877.  | Brick Tower.                                |
| SATA-NO-MI-SAKI.....    | { Cape Chichakoff. On a small Island at the Southernmost Point of Island of Kiushiu.  | 30° 58' 50"     | 130° 40' 30"    | { day mo. year<br>18th 10th 4th<br>30th Nov. 1871  | { Octagonal Iron Tower,<br>painted White.   |
| KAGOSHIMA .....         | { On the Northern end of the Break-water off Benton Fort, Kagoshima.  | 31° 32' 5"      | 130° 30' 21"    | { day mo. year<br>15th 4th 12th<br>15th April 1879 | Staff, painted White.                       |
| TSUNO-SHIMA, .....      | { On the North West point of the Island of Kado-shima. Near to the entrance of Aburatai Harbour (Igama Bay.)  | 34° 21' 30"     | 130° 50'        | { day mo. year<br>1st 3rd 9th<br>1st March 1876    | Granite Tower.                              |
| TATE-ISHI-NO-HANA ..... | { On the Western head of the entrance to Tsuruga Bay.   | 35° 47' 30"     | 135° 58'        | { day mo. year<br>20th 7th 14th<br>20th July 1881  | Stone Tower.                                |
| ROKKO-SAKI .....        | { On the North Western Bank of the river called Minato, on which stands the town of Fushiki.  | 36° 47' 47"     | 137° 3' 42"     | { day mo. year<br>10th 10th 10th<br>10th Oct. 1877 | Hexagonal Wooden Tower,<br>painted White.   |
| FUSHIKI .....           | { On the Southern Bank of the Shinanogawa.  | 37° 56' 26"     | 139° 3' 56"     | { day mo. year<br>15th 2nd 10th<br>15th Feb. 1877  | Hexagonal Wooden Tower<br>painted Black.    |
| NIIGATA .....           | { Situated at a distance of about 100 yards from the coastline and directly opposite the town of Awomori, which lies at the Southern extreme of Awomori Bay, Province of Mutsu. | 40° 51' 45"     | 140° 45' 15"    | { day mo. year<br>1st 11th 7th<br>1st Nov. 1874    | Staff, painted White.                       |
| AWOMORI, .....          | { On Cape Noshiaf, Province of Nemero, Island of Yezo.  | 43° 26' 47"     | 145° 52'        | { day mo. year<br>12th 7th 5th<br>15th Aug. 1872   | { Hexagonal wooden Tower,<br>painted White. |
| NOSHIAFU-SAKI, .....    | { On the North Eastern extreme of Bentenshima, Nemero Anchorage, Island of Yezo.  | 43° 20' 30"     | 145° 32'        | { day mo. year<br>20th 6th 5th<br>25th July 1872   | Staff, painted White.                       |
| NEMERO, .....           | { In the Province of Mutsu, extreme North Eastern point of the Island of Nippon, Eastern entrance to the Tsugar Straits.  | 41° 26' 10"     | 141° 29' 25"    | { day mo. year<br>20th 10th 9th<br>20th Oct. 1876  | Brick Tower, painted White.                 |
| SHIRIYA-SAKI .....      |   |                 |                 |  |   |

| Appearance and Order of Light.                 | True Bearings within which Light is visible. | True Bearings of Dangers and of the Coloured Rays to mark them.  | Height of Light-house to Centre of Lantern, in ft. | Height of Light above the Sea, in ft. | Range of Visibility. | REMARKS.   |
|--|--|--|--|---------------------------------------|----------------------|--|
| Fixed, White Light.                            | The whole horizon                            |  | 17   | 37½                                   | About 6 miles.       | { Rebuilt at the expense of Shijo-Sha in 1880, the former Wooden Tower having been destroyed by fire.  |
| Fixed, White, 1st Order.                       | { From N. 62° E. to N. 30 30° W.             |  | 20   | 200                                   | 21 miles.            |  |
| Fixed, Red, Staff Light.                       | The whole horizon.                           |  | 40   | 45                                    | 6 miles.             | { Erected at the expense of Nakamura Shingozayemon and others.   |
| { Flashing every 10 seconds, White, 1st Order. | { From S. 8° E. to N. 52° E.                 | { A dangerous Reef, the extreme point of which just uncovers at low water, runs out from the lighthouse in a N. N. Westerly direction for nearly one mile. | 86' 4"   | 142                                   | 18 miles.            |  |
| Fixed, White, 4th Order.                       | { From S. 60° 25' W. to S. 40° 35' E.        |  | 18½  | 407                                   | About 20 miles.      |  |
| Fixed, White, 5th Order.                       | { From N. 37° 17' W. to S. 48° 57' W.        |  | 33   | 38                                    | 10 miles.            | { Good anchorage in 5 fathoms water with the Lighthouse bearing S. 25 degrees W. distant about ¼ of a mile. Erected by Hachiya Tokuhet and others.   |
| Fixed, White.                                  | { From S. 66° 30' W. to N. 67° 30' E.        |  | 44   | 69½                                   | About 9 (f) miles.   | { Erected by Niigata Kencho.   |
| Fixed, Red.                                    |  |  | 43   | 45                                    | About 6 miles.       | { Upheld by Iizuka Jukichi.  |
| Fixed, White, 5th Order.                       | { From N. 74° 30' W. to S. 27° 30' W.        | { Dangerous Rock (Miyoto Rock) bears from the Lighthouse S. 12° E. distant 1 mile 8½ cables.   | 31   | 74                                    | About 10 miles.      | { Light will be shown each Year, every night from the 1st of the 4th month to the 15th of the 12th month (1st April to 15th December) and no light will be shown during the remainder of the year. |
| Fixed, Red.                                    | The whole horizon.                           |  | 40   | 75                                    | About 6 miles.       | { Fog Bell rung at the rate of 12 strokes per minute during fogs, snow storms, &c.   |
| Fixed, White, 2nd Order.                       | { From S. 52° 18' W. to S. 2° 43' W.         | { The Rattler Rock bears from the Lighthouse N. 65° E., distant about 1½ miles.  | 93½  | 150                                   | 18½ miles.           | { Light will be shown each Year, every night from the 1st of the 4th month to the 15th of the 12th month (1st April to 15th December) and no light will be shown during the remainder of the year. |

## LIGHT HOUSES.

| Name of Light.             | Situation of Light.   | North Latitude. | East Longitude. | Date of First Exhibition.                         | Description of Building.                  |
|----------------------------|---|-----------------|-----------------|---|---|
| <b>KINKWAZAN</b> .....     | { Eastern side of the Island of Kinkwazan.  | 38° 16' 57"     | 141° 36'        | { day mo. year<br>1st 11th 9th<br>1st Nov. 1876   | Granite Tower.                            |
| <b>ISHINO-MAKI</b> .....   | { At the mouth of the river Kita kami and on its Eastern bank, Province of Rikuzen.         | 38° 26'         | 141° 15'        | { day mo. year<br>1st 2nd 7th<br>1st Feb. 1874    | Staff, painted White.                     |
| <b>INU-BO-YE-SAKI</b> .... | { Easternmost point of the province of Shimosa and at South East extreme of the promontory. | 35° 43' 30"     | 140° 53' 30"    | { day mo. year<br>15th 11th 7th<br>15th Nov. 1874 | { Circular brick Tower,<br>painted White. |

| Appearance and Order of Light.                         | True Bearings within which Light is visible. | True Bearings of Dangers and of the Coloured Rays to mark them. | Height of Light-house to Centre of Lantern, in ft. | Height of Light above the Sea, in ft. | Range of Visibility. | REMARKS.   |
|--|--|---|--|---------------------------------------|----------------------|--|
| Fixed, White, 1st Order.                               | { From N. 9° E.<br>to S. 45° W.              |   | 27½  | 178                                   | 19¼ miles.           | { Steam Fog Siren giving<br>a blast of 5 seconds' dura-<br>tion with intervals of<br>55 seconds. |
| Fixed, White.  | The whole horizon.                           |   | 39   | 52                                    | About 6 miles.       | { Erected at the ex-<br>pense of the people in<br>the district of Ishino-<br>maki.               |
| { Revolving every half<br>minute. White, 1st<br>Order. | { From N. 11° W.<br>to S. 65° W.             |   | 90   | 168                                   | 19¼ miles.           |  |

## LIGHT SHIP.

| Name of Light.                 | Position of Ship.   | True Bearings of Neighbouring Headlands.   | Date of Establishment of Vessel.                  |
|--------------------------------|---|--|---|
| <b>KAI-SHO-MARU</b> No. 1..... | { Yokohama Bay.—South East of Yokohama Anchorage, outside the Shoal off Treaty Point, Hom-moku. | { Treaty Point S. 33° W.<br>Mandarin Bluff S. 53° W.<br>Mouth of the Creek W.        | { day mo. year<br>19th 11th 2nd<br>21st Dec. 1869 |
| <b>KAI-SHO-MARU</b> No. 2..... | { Hakodate Harbour.—On the Northernmost Point of the Spit which runs out from Point Anama.      | { Mouth of Kameda creek S. 74° E.<br>White Bluff S. 10° W.<br>Yanena Point S. 85° W. | { day mo. year<br>26th 4th 4th<br>13th June 1871  |
| <b>KAI-SHO-MARU</b> No. 3..... | Spare Lightship.  |  |   |

| Description of Vessel.   | Depth of Water moored in, at low-water Spring Tides. | Appearance of Light. | Height of Light above the Sea. | Range of Visibility. | REMARKS.   |
|--|--|----------------------|--------------------------------|----------------------|--|
| { Wooden, Red Hull, two<br>Masts, with red ball at Fore-<br>mast head. | 10 Fathoms.  | Red, Fixed.          | 36 Feet.                       | 10 Miles.            |  |
| Ditto.   | 7½ Fathoms.  | White, Fixed.        | 36 Feet.                       | 10 Miles.            | { It is advisable for vessels of large draught<br>to round the Lightship to the Northward, as<br>there is a rough bank of boulder stones<br>directly to the South of it. |

## BUOYS.

| Position of Mark.   | Description of Mark.  | Depth of Water, at low-water Spring tides. | True Bearings of Neighbouring Headlands.  |
|---|---|--|---|
| { Northern side of Yokohama Anchorage. At Point of Spit which stretches from Kanagawa Fort. | { Iron Buoy, Red, surmounted by a Cage standing 10 ft. above the water. | 4 Fathoms.                                 | { Mandarin Bluff S. 18° E.<br>S. mouth of creek S. 4½° W.<br>Kanagawa Fort N. 59° W.<br>Lightship S. 54° E. |
| { Southward of Yokohama Anchorage. Northern extreme of shallow at ditte.                    | { Iron Buoy, Red, surmounted by a Cage standing 10 ft. above the water. | 4½ Fathoms.                                | { Mandarin Bluff S. 15° E.<br>Mouth of creek S. 35° W.<br>Centre of Foot at Kanagawa N. 45° 30' W.          |
| { Outside the Bank off Kawasaki in the Bay of Yedo. Southernmost Buoy.                      | { Iron Buoy, Red, surmounted by a Cage standing 10 ft. above the water. | 6 Fathoms.                                 | { Treaty Point S. 48° W.<br>Kawasaki N. 8½° W.<br>Bansu Hama S. 68° E.                                      |

## BUOYS.

| Position of Mark.   | Description of Mark.   | Depth of Water, at low-water Spring tides. | True Bearings of Neighbouring Headlands.   |
|---|--|--|--|
| { Western extremity of Saratoga Spit off Futsu Hana in the Bay of Yedo.   | { Iron Buoy, Red, surmounted by a Cage standing 15 ft. above the water.  | 9 Fathoms.                                 | { Mandarin Bluff N. 26½° W.<br>Sarushima S. 55½° W.<br>Kanonsaki Lighthouses S. 4° E.  |
| { Hira-iso Rock at the Northern side of the Eastern entrance to Akasi Straits, about half a mile from the Northern shore. | { Iron Buoy, Red, surmounted by a Cage standing 15 feet above the water. | 5 Fathoms.                                 | { Ichi no tani yama (End hill)<br>N. 51° 30' E., White Stone<br>Fort near Maiko, Northern<br>shore N. 64° 30' W. Yesaki<br>Lighthouses S. 76° 30' W. |

## BUOYS.

| Position of Mark.   | Description of Mark.  | Depth of Water at low-water Spring Tides. | True Bearings of Neighbouring Headlands.   |
|---|---|---|--|
| { About 4½ Cables Southward of the middle of the shoal called Shika-no-se, in the Hari-ma-nada, Inland Sea, about 9 miles Westerly and Southerly from Esaki Lighthouse. | { Iron Buoy, Red, surmounted by a Cage standing 15 feet above the water.                              | 17 Fathoms.                               | { Yesaki Lighthouse N. 79° E. Summit of Jōriū-ji-yama in Awadji, S. 54° E. Western extreme of Yesaki near Yei-nra Western shore of Awadji S. 5° E.   |
| { Immediately to the Northward of the sunken rock North of Kodono-Shima in the Aogi Seto.   | { Iron Buoy, Black and White horizontal bands, surmounted by a Cage standing 10 feet above the water. | 4½ Fathoms.                               | { Centre of Karasima (single tree) N. 41° 15' W. Eastern extreme of Matsu sima, N. 37° 45' E. Eastern extreme of Kodono sima, S. 1° 15' E.   |
| { On the extreme Southern limit of the shoal which extends to the Southward and Eastward of Motoyama.   | { Iron Buoy, Red, surmounted by a Cage standing 15 feet above the water.                              | 5½ Fathoms.                               | { Kamino Sima S. 69° 15' W. Isaki Lighthouse N. 64° W. Summit of Motoyama N. 35° 15' W. Summit of Himesima S. 65° 15' E.   |
| { On the Shallow called Hiku flat at the Westward entrance of Shimo-no-seki Straits.  | { Iron Buoy, Red, surmounted by a Cage standing 12 feet 6 inches above the Water.                     | 9 Fathoms.                                | { Manaita Rock Beacon S. 49° E. Extreme point of Nagoyasaki S. 81° 30' W. Centre of Hamo Island N. 2° 30' W. And about 8 Cables to the North Westwards of the Black and White Beacon on Manaita Rock and marks the Eastern extreme of the Shallow. |
| { On the Shoal to the Northwestward of Ainoshima (Flat Island) to the Northwestward of Shimo-no-seki Straits.   | { Iron Buoy, Red, surmounted by a Cage standing 15 feet 6 inches above the water.                     | 5 Fathoms.                                | { The Northern end of North Siro Sima N. 89° 30' W. The summit of Cape Morotsu N. 55° E. The Northern end of Rockuren Island S. 53° 15' E.   |

## BEACONS.

| Position of Mark.   | Description of Mark.  | Depth of Water at low-water Spring Tides. | True Bearings of Neighbouring Headlands.   |
|---|---|---|--|
| { On a Rock near to the entrance of Yokosuka Gulf.                              | { Iron Pole Beacon, surmounted by a cage 2 feet in diameter, painted red, standing 4 feet above high water. | { Rock has 1½ fathoms on it at low water. | { Centre of Hasima bears S. 64° W. distant 4½ cables.  |
| { On the sunken-Rock North of Hoso-Shima in the Mekari seto.                    | { Stone Beacon, circular; 23 feet high, painted with red and black horizontal bands.                        | { Rock covered at low water.              | { Centre of Kusirajima, N. 26° 15' E. North Eastern point of Hoso Sima, S. 72° 10' E. North point Kosaki sima, S. 78° 45' W. |
| { On Yodsibi Rock in Shimo-no-seki Straits, Eastwards of navigable Channel.     | { Stone Beacon, cone-shaped; 20ft. high painted red.  | { Rock uncovers 4ft.                      | { Kibune Point S. 63° W. distant 4½ cables.  |
| { On Narushi Shallow in Shimo-no-seki Straits, Northwards of navigable Channel. | { Stone Beacon, cone-shaped with pear shaped top; 20ft. high, painted white.                                | { Shallow uncovers 2ft.                   | { Kibune Point N. 41° E. distant 2½ cables.  |
| { On Manaita Rock in Shimo-no-seki Straits, Northwards of Navigable Channel.    | { Stone Beacon, cone-shaped; surmounted by a ball; 20 ft. high, painted with White and Black Rings.         | { Rock scarcely uncovers.                 | { Oyama-no-hana S. 82° E. distant 4½ cables.   |

## BUOYS.

| Position of Mark.  | Description of Mark.   | Depth of Water at low-water Spring Tides.                          | True Bearings of Neighbouring Headlands.   |
|--|--|--|--|
| { Eastern end of the Shallow called "Middle Ground" East of Simonoseki Straits.  | { Iron Buoy, Black, surmounted by a Cage standing 10ft. above the water.   | 3 Fathoms. A one fathom patch lies immediately to the North of it, | { Island of Manziu. N. 8½° E. Mozi Point S. 73½° W. Isaki Lighthouse S. 1½° W.                             |
| { On the shallow called "Middle Ground," East of Simonoseki Straits.   | { Iron Buoy, Red, surmounted by a Cage standing 10ft. above the water.   | 3 Fathoms.   | { Kusi Saki N. 30½° W; Summit of Manziu N. 42° E. Isaki Point S. 39° E; Buoy at Fisherman's rock S. 74° W. |
| { Directly to the South of Kanabuse or Fisherman's Rock, East of Shimo-no-seki Straits.  | { Iron Buoy, with Black and White rings, surmounted by a Cage standing 10ft. above the water.  | 9 Fathoms.   | { Mozi Hill S. 41½° W. Isaki Point S. 70½° E. Kusi Saki N. 30° E.  |
| { Funakawa anchorage.—Good holding ground with 3½ to 4½ fathoms water, in the triangular space formed between the bearings S. E. from the Buoy to the point where the White Cliffs at the East side of the Bay, are in transit with the wooded knoll still further Eastward, and again from this point due North until the Buoy bears West. Shoal to Westward of Buoy. | { Iron Buoy, Red, surmounted by a Cage standing 10 feet above the water.   | 3½ Fathoms.  |  |
| { To the North of the Rocks in the centre of Kamai-shi Harbour.  | { Iron Buoy, Black, surmounted by a Cage standing 8 feet 6 inches above water.<br><small>NOTE.—This Buoy to be withdrawn on the 1st May, 1882.</small> | 11 Fathoms.  |  |

## BEACONS.

| Position of Mark.  | Description of Mark.  | Depth of Water at low-water Spring Tides.  | True Bearings of Neighbouring Headlands.  |
|--|---|--|---|
| { On Fukushe Rock 6½ miles to the South Eastward of the Southern point of Hirado Shima and to the Southward of the Southward entrance of Hirado or Spex Straits. | { Stone Beacon, circular; 40 feet high, painted with red and white horizontal bands.  | { Rock uncovers 4 feet.                    | { Sisiki Peak, Hirado sima. N. 32° 15' W. Eastern end of, Otate sima S. 5° 40' W. |
| { On Hirase Rock at the entrance to Nagasaki Harbour.  | { Stone Beacon, cone-shaped, surmounted by a ball; 20ft. high, painted with red and white horizontal bands.   | { Rock uncovers about 7 feet at low water. | { Iwoshima Lighthouse bears N. 82° 15' W. distant 1 mile and one cable.           |
| { On the Southern Rock in Kamaishi Harbour.  | { Pole Beacon, surmounted by a circular cage over a triangular one with a basework of Stone; painted Red.<br><small>NOTE.—Navigable Channel Westward of Beacon.</small> | { Rock covered about 2 feet at low water.  |   |

## TABLE (E)

showing the tonnage of the different vessels engaged in foreign trade entering the open ports of Japan, during the financial year ended June 30th, 1881, together with the estimated revenue derivable from tonnage and light dues, at the rate of 40 sen per ton for Mail Steamers and 50 sen per ton for all other vessels, payable once in four months.

| No. of times payable | Tonnage of Mail Steamers | Tonnage of all other vessels | Total Tonnage | Amount.          |
|----------------------|--------------------------|------------------------------|---------------|------------------|
| One                  | 1,900                    | 165,053                      | 166,953       | Yen<br>83,286.50 |
| Two                  | 1,959                    | 26,408                       | 28,367        | 27,975.20        |
| Three                | 31,474                   | 6,572                        | 38,046        | 47,626.80        |
| Total                | 35,333                   | 198,033                      | 233,366       | 158,888.50       |

### RECAPITULATION.

Total number of entries.....655.  
 Total tonnage entered.....668,636.  
 Rate of dues upon entire tonnage entered 23.8 sen per ton.

TABLE (F).

showing the number of different vessels engaged in the foreign trade; the number of times each said vessel entered an open port, and the tonnage thereof, for the financial year ended June 30th, 1881, together with the estimated revenue derivable from tonnage and light dues thereon, at the rate of 40 sen per ton for Mail Steamers and 50 sen per ton for all other vessels, payable once in four months.

| Vessels.                    | No. of vessels entered. | No. of times entered. | Total entries. | Dutiable tonnage. | Total tonnage entered. | Rate of dues per annum. | Amount of dues. | Total dues.    |
|-----------------------------|-------------------------|-----------------------|----------------|-------------------|------------------------|-------------------------|-----------------|----------------|
|                             |                         |                       |                |                   |                        | yen                     | yen             |                |
| <i>Sumida Maru</i> .....    | 1                       | 8                     | 8              | 826               | 6,608                  | .800                    | 660.80          |                |
| <i>Niigata Maru</i> .....   | 1                       | 10                    | 10             | 1,096             | 10,960                 | 1.200                   | 1,315.20        |                |
| <i>Kokonoye Maru</i> .....  | 1                       | 4                     | 4              | 1,133             | 4,532                  | .800                    | 906.40          |                |
| <i>Takasago Maru</i> .....  | 1                       | 12                    | 12             | 1,229             | 14,748                 | 1.200                   | 1,474.80        |                |
| <i>Genkai Maru</i> .....    | 1                       | 13                    | 13             | 2,000             | 26,000                 | 1.200                   | 2,400.00        |                |
| <i>Hiroshima Maru</i> ..... | 1                       | 13                    | 13             | 1,900             | 24,700                 | 1.200                   | 2,280.00        |                |
| <i>Tokio Maru</i> .....     | 1                       | 13                    | 13             | 2,140             | 27,820                 | 1.200                   | 2,568.00        |                |
| <i>Nagoya Maru</i> .....    | 1                       | 1                     | 1              | 1,900             | 1,900                  | .400                    | 760.00          |                |
| <i>Menzaleh</i> .....       | 1                       | 9                     | 9              | 1,502             | 13,518                 | 1.200                   | 1,802.40        |                |
| <i>Tanais</i> .....         | 1                       | 9                     | 9              | 1,735             | 15,615                 | 1.200                   | 2,082.00        |                |
| <i>Volga</i> .....          | 1                       | 8                     | 8              | 1,502             | 12,016                 | 1.200                   | 1,802.40        |                |
| <i>City of Peking</i> ..... | 1                       | 9                     | 9              | 5,080             | 45,720                 | 1.200                   | 6,096.00        |                |
| <i>City of Tokio</i> .....  | 1                       | 9                     | 9              | 5,080             | 45,720                 | 1.200                   | 6,096.00        |                |
| <i>Malacca</i> .....        | 1                       | 10                    | 10             | 1,079             | 10,790                 | 1.200                   | 1,294.80        |                |
| <i>Sunda</i> .....          | 1                       | 13                    | 13             | 1,029             | 13,377                 | 1.200                   | 1,234.80        |                |
| <i>Oceanic</i> .....        | 1                       | 10                    | 10             | 2,670             | 26,700                 | 1.200                   | 3,204.00        |                |
| <i>Belgic</i> .....         | 1                       | 9                     | 9              | 1,716             | 15,444                 | 1.200                   | 2,059.20        |                |
| <i>Gaelic</i> .....         | 1                       | 8                     | 8              | 1,716             | 13,728                 | 1.200                   | 2,059.20        | yen 40,096.00  |
|                             | 1                       | 2                     | 2              | 414               | 828                    | .500                    | 207.00          |                |
| Japanese Steamers .....     | 1                       | 16                    | 16             | 293               | 4,688                  | 1.500                   | 439.50          |                |
|                             | 1                       | 26                    | 26             | 612               | 15,912                 | 1.500                   | 918.00          |                |
| Japanese Sailing Vessels    | 1                       | 30                    | 30             | 466               | 13,980                 | 1.500                   | 699.00          | „ 2,263.50     |
|                             | 1                       | 6                     | 6              | 441               | 2,646                  | 1.500                   | 661.50          | „ 661.50       |
|                             | 52                      | 1                     | 52             | 66,872            | 66,872                 | .500                    | 33,436.00       |                |
|                             | 17                      | 2                     | 34             | 23,395            | 46,790                 | .576                    | 13,477.50       |                |
|                             | 7                       | 3                     | 21             | 8,273             | 24,819                 | 1.000                   | 8,273.00        |                |
| Foreign Steamers .....      | 2                       | 4                     | 8              | 1,392             | 5,568                  | 1.500                   | 2,088.00        |                |
|                             | 2                       | 5                     | 10             | 1,765             | 8,825                  | 1.500                   | 2,647.50        |                |
|                             | 2                       | 9                     | 18             | 805               | 7,245                  | 1.500                   | 1,207.50        |                |
|                             | 1                       | 10                    | 10             | 404               | 4,040                  | 1.500                   | 606.00          |                |
|                             | 1                       | 27                    | 27             | 769               | 20,763                 | 1.500                   | 1,153.50        | „ 62,889.00    |
|                             | 117                     | 1                     | 117            | 79,025            | 79,025                 | .500                    | 39,512.50       |                |
|                             | 27                      | 2                     | 54             | 8,527             | 17,054                 | .772                    | 6,581.00        |                |
| Foreign Sailing Vessels     | 6                       | 3                     | 18             | 2,005             | 6,015                  | 1.500                   | 3,007.50        |                |
|                             | 2                       | 4                     | 8              | 650               | 2,600                  | 1.500                   | 975.00          |                |
|                             | 3                       | 5                     | 15             | 1,296             | 6,480                  | 1.500                   | 1,944.00        |                |
|                             | 1                       | 6                     | 6              | 387               | 2,322                  | 1.500                   | 580.50          |                |
|                             | 1                       | 9                     | 9              | 252               | 2,268                  | 1.500                   | 378.00          | „ 52,978.50    |
| Total.....                  | 264                     |                       | 655            | 233,376           | 668,636                |                         |                 | yen 158,888.50 |

NOTE. The foregoing table was prepared from "Return of the foreign Commerce and Trade of the Empire of Japan, for the financial year ended June 30th, 1881," published by the Bureau of Customs, and from a List of all the different vessels entered from and cleared to foreign ports for the same period, which List was compiled from records of the Custom Houses at the several open ports.

The Return of the Customs' Bureau gives the total tonnage entered as 677,092 tons  
 while the foregoing table estimates it at 668,636 „  
 Difference 8,456 „

This difference results from the fact that the Return and List record the Steamships "Sunda" as having entered 26 times; "Malacca" 22 times; "Niigata Maru" 13 times; "City of Peking" 9 times, and "Lord of Isles" twice, while on the other hand the foreign shipping reports show that the "Sunda" entered 13 times; the "Malacca" 10 times; "Niigata Maru" 10 times; "City of Peking" 8 times, and the "Lord of the Isles" 3 times, and in addition the "Chitose Maru" 16 times.

Some other discrepancies between the Customs Returns and the newspaper reports have been noticed, and in each case the figures tending to swell the total have been taken.

It was found upon careful examination that a number of Steamers which entered twice arrived the second time more than four months after the first entry and in consequence that some of them would be liable to tonnage dues at the rate of yen 1.00 per ton per annum, hence .576 sen has been taken as a fair average. It was also found that about one-half of the sailing vessels entering twice would be liable to dues at the rate of yen 1.00 per ton, hence .772 sen per ton has been taken as an average. It was believed that all or nearly all the sailing vessels entering three times would consume more than eight months in so doing, and in consequence would be liable to the highest rate of dues. The Steamers entering the same number of times have, on the contrary, been charged uniformly at the rate of yen 1.00 per ton per annum.

It is well known that the foregoing table is only approximately correct, but considering the fact that the total tonnage entered after making the deductions hereinbefore referred to, exceeds, in this table, the figures given in the official Returns, it is believed that yen 158,888.50 represent the maximum revenue H. I. M's Government may, at the rate named, hope to obtain annually from tonnage and light dues.