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## *Early Steam Navigation in China* *Hong Kong and the Canton River*

BY E. K. HAVILAND

**A** SPEAKER not long ago remarked that in his young days at sea in sailing vessels the crew used to rush on deck to see a steamer pass, and with the present trend to motor shipping the time appeared to be at hand when crews would again rush on deck to see the novelty of a passing steamer. Actually, steam will probably be with us for some years to come, but it is less and less used as a mode of propulsion and it seems desirable to set down the early history of steam navigation before the facts are lost. It is probable that the effects of introducing steam propulsion were nowhere more striking than in the Far East, particularly in the waters of China, in view of the difficulty or impossibility of communication by land, and it is the purpose of this series of papers to treat steam shipping from the beginning down to the close of the southern phase of the Second Anglo-Chinese War in the early part of 1858, the present paper being devoted to steam shipping on the Canton River.

Steam navigation in China had its beginning in the south. In a certain sense the first steamer there seems to have been *Diana*, a paddle vessel of 80 tons, which was a speculation of Mr. J. T. Robarts, a member of the East India Company's factory at Canton. Being in England in 1821, he suggested to the Court of Directors that a steamer might be employed on the Canton River with great advantage to the Company. The court, however, took the opinion of Mr. Rennie, who approved the idea, but felt that the Chinese would not allow the employment of such a vessel, and the proposal was accordingly declined by the directors. Therefore, Mr. Robarts went into the scheme on his own account and ordered a pair of sixteen horsepower engines of Messrs. Maudslay, with a copper boiler and the other requisites for a fast vessel of 110 tons, which he sent out in frame. Her length was to have been 85 feet, the breadth of the hull 16 feet, and the extreme breadth over the paddles 26 feet. The whole arrived after himself, early in 1822, and very much excited the curiosity

and admiration of the people at Canton, by whom he was urged to put it together without delay. Unfortunately, however, his health failed before this could be done, so that in view of his imminent retirement he abandoned the design of launching and working the vessel around Canton, and reshipped the engines and materials to Calcutta, where they arrived in June of the same year. The English frame of oak was not considered sufficiently durable, so a new one was constructed in Calcutta—somewhat larger than the original—and under the name of *Diana* the little steamer was launched by Kyd and Company at Kidderpore on 12 July 1823.<sup>1</sup> At the time of her launch *Diana* was described by the Calcutta *John Bull* as the first steam vessel which ever floated on the waters of the East.<sup>2</sup> No registry document for *Diana* can now be traced, but in Lieutenant Brown's manuscript book (at the Registry General of Shipping and Seamen) the first owner at Calcutta is given as one Henry William Hobhouse. Subsequently, she was purchased by the Hon. East India Co. and used on the Irrawaddy.

The first steamer to operate in Chinese waters is generally thought to have been *Forbes*, a small paddle steamer of 161 tons constructed in 1829 by the Howrah Dock Co. of Calcutta for McIntosh and Co. Under charter to James Matheson of Jardine, Matheson and Co. she arrived off Macao on 18 April 1830, and E. C. Bridgeman, the pioneer of American missions in China, is quoted as describing his arrival at Macao on 19 April in 'the steamer *Forbes*, the first ship of the kind to have visited these shores,' a characterization confirmed in the account of her arrival in the *Canton Register* of 1 May 1830.<sup>3</sup> As, however, she did not ply regularly in Chinese waters, *Forbes* will be discussed in more detail in a subsequent paper on early steam navigation between India and China.

A steamer named *King-fa* is said to have been advertised in Canton newspapers in 1832.<sup>4</sup> It has not been possible for the present author to check the original of this advertisement, but the *Nautical Magazine*<sup>5</sup>

<sup>1</sup> The foregoing account is taken from G. A. Prinsep, *An Account of Steam Vessels and of Proceedings connected with Steam Navigation in British India* (Calcutta, 1830), p. 3.

<sup>2</sup> As quoted in *The Asiatic Journal and Monthly Register*, XVII (1824), 195. According to W. S. Lindsay, *History of Merchant Shipping and Ancient Commerce* (London, 1876), IV, 448, footnote, the first recorded steamboat in the Far East was *Van der Capellen*, built at Batavia about 1810 or 1811. He states that she was later renamed *Pluto*, used as a dredge, then as a floating battery, and lost in a gale in 1830.

<sup>3</sup> Cf. *A Century of Service, the Early History of Jardine, Matheson and Co., Ltd., and the Indo-China S. N. Co., Ltd.* (16 pp., n.p., n.d.), pp. 6-8. For further references to the voyage of *Forbes*, see E. K. Haviland, 'American Steam Navigation in China, 1845-1878,' *THE AMERICAN NEPTUNE*, XVI (1956), 159-160. The papers of this series will for convenience be referred to in the present paper as *ASNC*. See also G. R. G. Worcester, 'The Coming of the Chinese Steamer,' *The Mariner's Mirror*, 38 (1952), 132.

<sup>4</sup> G. H. Preble, *History of Steam Navigation* (Philadelphia, 1883), pp. 129-130.

<sup>5</sup> *Nautical Magazine*, I (1832), 217.

quotes the *London Times* as saying, 'steamboats now run between Canton and Peking. A Canton paper contains an advertisement of the steamer *King-fa*, to leave the following day.' The obvious absurdity of this statement suggests that the whole affair may have been a hoax.

In 1835, Jardine, Matheson and Co. had built by Alexander Hall and Co. of Aberdeen the small steamer *Jardine*, 58 tons register, which they sent to China, intending to run her between Lintin, Macao and Whampoa. However, the Chinese authorities refused to permit her operation, so *Jardine* was sent to Singapore, where she seems to have established a reputation for mechanical defects. A contemporary account<sup>6</sup> states that in the spring of 1836 'the *Jardine* steamer had gone on a pleasure trip to Malacca, but her newly repaired lever breaking, her passengers were glad to return in boats sent to their assistance from Singapore, without having seen Malacca.' Such experiences were probably responsible for her being converted to sail and employed as a schooner in coastwise service,<sup>3</sup> and efforts to introduce steam navigation in the waters of China were for the time suspended.

The resumption of the efforts to introduce steam, this time with success, was in several ways a result of the First Anglo-Chinese War. First of all, the victory of the British placed them in a position to exert strong pressure on the Chinese to permit the introduction of steam navigation, while the ceding of the island of Hong Kong to Great Britain under the terms of the Treaty of Nanking provided a secure base from which commerce in general and steam navigation in particular could proceed to develop. Moreover, the first practical steamers in Chinese waters were those of the Royal Navy and the East India Company which came out during the course of the war,<sup>7</sup> and the authorities took advantage from time to time of the sailings of these steam vessels to send out the mails more rapidly than could otherwise have been done. For example, when H.M.S. *Vixen* arrived off Canton on 16 March 1843 with the Treaty of Peace, she also brought the January Overland Mail.<sup>8</sup> The benefits to be obtained from steam communication, both in local and in overseas services, were too obvious to be neglected by the Western commercial community in China, and it appears that the firm of Jardine, Matheson and Co., with the assistance of the British Consul in Canton, were among the first to break the Chinese ban on steam shipping.<sup>3</sup> The Americans must

<sup>6</sup> *Canton Press*, 4 June 1836, probably quoting the *Singapore Free Press*.

<sup>7</sup> Some of the steamers coming to China during and immediately following the First Anglo-Chinese War were H.M.S. *Driver*, *Medusa*, *Pluto*, *Spiteful* and *Vixen*, and H.C.S.S. *Akbar*, *Phlegethon*, *Proserpine*, and *Sesostris*.

<sup>8</sup> *Canton Press*, 18 March 1843.

have been likewise active, and it appears actually to have been an American steamer, *Midas*, which inaugurated regular commercial steam service between Hong Kong and Canton.

It will be recalled that the Treaty of Nanking, following the close of the First Anglo-Chinese War was ratified on 26 July 1843. Not long afterward Robert Bennet Forbes, John Murray Forbes and W. C. Hunter, all of the American house of Russell and Co., had built by Samuel Hall of East Boston the wooden twin-screw auxiliary schooner *Midas*, 148 tons, with engines designed by John Ericsson and built by Hogg and Delamater of New York. She left New York under sail in command of Captain William Poor on 4 November 1844, left Mauritius on 22 March 1845, and arrived at Macao on 14 May and at Hong Kong on the twenty-first.<sup>9</sup> Steam was used occasionally, but most of the voyage was made under sail, and in retrospect it appeared that it would have been better to have made the trip under sail alone, for sailing with the propellers in place both retarded her speed and ruined her bearings, while inadequate or improper care of her boilers on the trip out badly damaged them. Eventually, however, the damage was repaired and a notice<sup>10</sup> dated at Victoria on 23 September 1845 states that, 'the steam schooner *Midas*, Capt. W. Poor, will run between Hong Kong and Canton until further notice, leaving this harbour on Wednesdays and Saturdays and Canton on Mondays and Thursdays. The rate of passage is established at \$12.00. Freight taken at the usual river rates. Apply to Capt. Poor on board or to Bush and Co.' *Midas* was so advertised through 4 December, but appears to have been laid up for repairs shortly after that. About mid-March in 1846 she returned to service after refitting, an event that gave rise to a poem<sup>11</sup> running in part:

The steam is up, the screw has got a turn,  
The anchor to the bows is coming fast,  
The star-bespangled banner floats astern,  
And the shrill whistle tells her off at last.

By then, however, the larger *Corsair* was on the Hong Kong-Canton route, and *Midas*, which had previously been employed from time to time as a tug and tender, retired to devote herself entirely to the latter work. On 6 April 1846 she left Hong Kong for Macao and Manila, apparently on a salvage expedition, in the course of which she is said to have

<sup>9</sup> See Robert B. Forbes, *Personal Reminiscences*, 2nd ed. (Boston, 1882), pp. 208-209; *China Mail* (later denoted by *CM*), Table of Arrivals and Departures of Ships from February 1845 to February 1846; *Hong Kong Register* (later denoted by *HKR*), 27 May 1845.

<sup>10</sup> *CM*, 25 September 1845.

<sup>11</sup> *CM*, 19 March 1846.

been sunk. If so, she was raised easily, as on 21 May she arrived back at Macao from Ylocos.<sup>12</sup> *Midas* was around Hong Kong for the rest of 1846, but by then was disabled by neglect of her boilers and returned to the United States under sail, evidently early in 1847, after which she was converted to a sailing vessel. From a financial point of view, the China venture of *Midas* was, according to R. B. Forbes, not a success. While her failure had been predicted in America on the ground that the Chinese would not let her run, it was actually due to quite different causes, primarily to lack of experience on the part of her engineers with the operation and care of marine steam machinery. In addition, *Midas* was too small and her passenger accommodation too limited to make her suitable for the Hong Kong-Canton route.

In 1846, R. B. Forbes sent out from New York the little iron-screw steamer *Firefly* of 20 tons for service between Canton and Whampoa. She appears to have entered service the following year, making at first two round trips daily, the service being reduced to one round trip daily in the spring of 1848. *Firefly* continued to run until the spring of 1849, but not long after was withdrawn and sent by ship to California.

*Corsair*, which, as mentioned above, was the second steamer to enter the Hong Kong-Canton trade, was a wooden paddle steamer of 186 tons register, built at Port Glasgow in 1827 by John Wood and James Barclay for the Irish Sea service of George Langtry and Co. After some years in those waters, she went to Australia in 1841, though her registry was not changed (from Belfast to Sydney) until 14 November 1843.<sup>13</sup> The following year she was acquired by Thomas Larkins of London, then her master, who appears to have been her owner and manager during much of the time she was on the Canton River. Under Captain William Soames, *Corsair* left Sydney on 7 December 1845, and arrived at Hong Kong on 28 January 1846, consigned to Jardine, Matheson and Co. Their precise connection with the steamer is not now clear. From the Company History,<sup>14</sup> it appears that they were sponsoring the service, but there is no evidence in *Corsair's* documents to show that they owned her, nor is there any indication in contemporary newspapers that they acted as her agents. An advertisement,<sup>15</sup> dated at Victoria on 11 February 1846, states that, 'the steamer *Corsair* will leave Canton for this place on the evening of

<sup>12</sup> *HKR*, 7 April 1846 and 9 June 1846.

<sup>13</sup> *Corsair* probably arrived at Adelaide in March or April 1841, and is known to have arrived at Melbourne from Adelaide on 30 May 1841. Cf. *Sydney Morning Herald*, 19 May 1841 and *Biddle Ms.*, vol. ii (at Melbourne Public Library). These references have been kindly furnished me by Mr. H. Bateson of Sydney, N.S.W.

<sup>14</sup> See footnote 3.

<sup>15</sup> *CM*, 12 February 1846.



Saturday, the 14th inst., and return, leaving Hong Kong on the evening of Monday, the 16th. She will carry treasure, freight and passengers.' Thereafter, *Corsair* seems to have been in fairly regular service on the route. In April 1846 the Chinese authorities at Canton detained her three days and refused to allow her to load her cargo of tea,<sup>16</sup> nominally on the ground that the treaty had not given steamers the privilege of carrying cargo, but actually because the officials regarded the increasing use of steam vessels as a source of danger to the native craft. The British officials shortly succeeded, however, in securing for steamers the right of carrying merchandise as well as passengers in return for a promise that the shipmasters would exercise greater care in navigation.<sup>17</sup> *Corsair* appears to have made one to two round trips per week between Hong Kong and Canton with some regularity, although, like most of the early steamers in China, she engaged in towing and was available for charter. For instance, in January 1847 she made a trip to the West Coast, having been employed by a Chinese merchant in Canton to tow up a junk of about 500 tons burden, that had been driven past the mouth of the river in a storm and was unable to beat up against the monsoon. On 1 January 1847 the office for conducting the business of *Corsair* was removed from Franklyn and Milne's house to the house of Holmes and Bigham. Packets and parcels for shipment by the steamer could be left there with Mr. R. F. Stubbs, the clerk in charge and passage secured, or arrangements could be made directly with Mr. Strang, the purser, on board.<sup>18</sup>

Among the papers of Augustine Heard and Co.,<sup>19</sup> there are receipted bills for the transmission of letters by *Corsair* (between Hong Kong and Canton) from 13 November 1846 to 13 February 1847 at \$15 per month. Not long afterward, the postmaster general brought an action against Captain Larkins, as proprietor of *Corsair*, for carrying letters not exempted from the exclusive privilege of the postmaster general, asking for a fine of £5,200. At the trial, on 2 June 1847, the court apparently took a less serious view of the matter and actually imposed a fine of £100.<sup>20</sup> Thereafter, the bills for \$15 per month continued, but were entitled, 'A. Heard and Co. (Charterers), Drs. to Owners of steamer *Corsair*. For one month's subscription to date,' and so continued through 16 February 1849. One suspects that about the same service was being performed, but in a way designed to comply formally with the law.

<sup>16</sup> *CM*, 23 April 1846.

<sup>17</sup> (British) Government Notification, *CM*, 21 May 1846.

<sup>18</sup> Advertisement in *CM*, 7 January 1847.

<sup>19</sup> At Baker Library, Harvard University. A large number of the Heard papers such as these, are filed under the names of ships, and will henceforth be referred to as *HCS*.

<sup>20</sup> Cf. *Treaty Ports of China and Japan* (Hong Kong, 1867).

Steam competition on the Canton River, which had been absent since the departure of *Midas*, overtook *Corsair* in 1849 with the arrival of the new P. and O. river steamer *Canton* on 19 February. The latter was certainly the superior vessel, but her charges, particularly for passage, were disappointingly high, and in an editorial on 22 February the *China Mail* remarked, 'It may not be amiss in the community to continue a share of their support to the *Corsair*, until the local Company's steamers are fairly afloat on the river<sup>21</sup>. . . It may be found the *Corsair* has not abused the monopoly more than others would have done. She has already reduced her charges to one-half, being a fourth less than the *Canton*. . . Until [the fares] are still farther reduced, no great increase in passengers can be looked for. People will still prefer clubbing together in a fastboat, to incurring an outlay of \$16—with no fixed time to return.' *Corsair* seems to have continued to operate for another month or so and then to have been laid up.<sup>22</sup> On 9 July 1849 MacEwen and Co., as agents and auctioneers, announced that the steamer would be sold by public auction on 26 July.<sup>23</sup> *Corsair*, which had hitherto been registered at Sydney, was re-registered (as No. 2 in 1849) at Hong Kong with William Soames of Victoria (her master), William Henry Biggs of Victoria (apparently her engineer), and Alexander Wilson of Victoria and Amador Viegas of Canton (both merchants), each owner of sixteen shares. This change of ownership probably preceded the auction, but this is not sure. The steamer is listed as lying at Hong Kong at least as late as 10 January 1850, after which no reference to her appears in the contemporary press. In answer to a query of 1871, the registrar general was informed the following year that *Corsair* had been lost, but date and place of loss were not stated, and it seems more probable that because of her age the steamer found no purchasers and was dismantled or allowed to fall to pieces. Captain Larkins, her former owner, died about 1850, and Captain Soames later commanded the new *Canton* of the P. and O.

When it became clear that the service between Hong Kong and Canton could no longer be cared for adequately by *Corsair* and sailing vessels, some of the local merchants decided to form a company of their own. The leading spirit in this undertaking seems to have been Archibald Campbell, a partner of Dent and Co., who in 1845 or early 1846 represented to J. A. Olding, then P. and O. superintendent at Hong Kong, and Captain Gribble, superintendent of the Bombay Line (then on a

<sup>21</sup> Reference is to *Hong Kong and Canton* of the newly formed Hong Kong and Canton S. P. Co., then on their way out. See below.

<sup>22</sup> In *HCS* there is a freight bill dated 19 March 1849.

<sup>23</sup> *CM*, 12 July 1849.

visit to China), how much the community wished that the P. and O. would establish steamers for the purpose of keeping up a regular, and, if possible, a daily communication between Canton and Hong Kong.<sup>24</sup> The superintendents were favorably impressed and presumably recommended the matter to the directors, but no action appeared to be forthcoming, and so Campbell and Alexander Matheson,<sup>25</sup> a partner in Jardine, Matheson and Co., went to England in the spring of 1847 to sound out the intentions of the P. and O. directors and, if the latter did not contemplate a service on the Canton River, then to order two steamers for the trade. According to Campbell, the directors in conversation disclaimed any intention of starting such a service, but in reply to a letter from Campbell dated 10 June 1847, C. W. Howell, assistant secretary of the P. and O., stated that on 11 June the Board had decided to take immediate steps to have constructed a vessel suitable for the Hong Kong-Canton trade. Apparently Campbell and Matheson did not feel that this promised an adequate service, so through one G. T. Braine (presumably related to Charles Joseph Braine, a partner of Dent and Co.) Campbell sent a second letter to the effect that they were planning to send out two steamers. In a reply to Braine dated 17 June 1847, the P. and O. directors restated their intention of sending out one vessel designed for the Canton River trade and continued by saying that, 'as regards additional vessels, they will adhere to the uniform custom of ascertaining in the first instance whether the trade is likely to require further accommodation, before they embark capital in additional vessels.' Whether Campbell received the second communication or not, is not now clear. Apparently, he claimed he did not and he later criticized the P. and O. directors for concealing their intentions, to which they replied by publishing the two letters just mentioned.<sup>26</sup> It would seem that each party must have been aware of what the other was doing, the actual situation being that the P. and O. contemplated their Hong Kong-Canton service primarily as a feeder to their seagoing steamers, while Campbell and Matheson felt that such a service would not be adequate to serve the needs of the community and that there was money to be made by putting additional ships on the route. If so, Campbell's later statement seems designed primarily to pacify the shareholders in the new company. In any case, both sides continued with their plans. On 15 July 1847 the P. and O. directors accepted a tender for the construction of the branch steamer *Canton*, while on 28

<sup>24</sup> Letter of A. Campbell, *CM*, 22 February 1849.

<sup>25</sup> Alexander Matheson, a nephew of Sir James Matheson, Bt., was at this time a partner in Jardine, Matheson and Co., retiring on 30 June 1852.

<sup>26</sup> *CM*, 22 February 1849.



August Campbell and Matheson concluded with William Pitcher of Northfleet, Kent, an agreement for the building of two sister ships, *Hong Kong* and *Canton*, wooden paddle steamers of about 140 tons register each, with engines of 90 H.P. by H. W. Harman. The total cost of the hull and engines of *Canton* was £10,543, 1s. and that of *Hong Kong* about the same. To operate these steamers, Campbell and Matheson formed the Hong Kong and Canton Steam Packet Co. with a capital consisting of 120 shares of £250 each, and upon their return to China in the late fall, as Campbell later stated, 'nearly the whole foreign community came forward and took shares in the steamers.' Actually, 101 of the shares were subscribed and paid,<sup>27</sup> and it is worth noting that the subscribers must have been aware of the P. and O. competition, for on 17 August 1847, J. A. Olding had written to the Canton British Chamber of Commerce, saying that the P. and O. would shortly send out a steamer especially designed for the Canton Branch Line. William Pitcher took one eighth of the contract price of the H. K. and C. S. P. Co. steamers as his interest, but was not to be counted as a shareholder, presumably to avoid being involved in the operation of the company.

On 19 October 1848, the shareholders of the Hong Kong and Canton Steam Packet Co. held a preliminary meeting to elect directors, approve the deed of settlement, and receive the report of the provisional committee.<sup>28</sup> The directors elected were Donald Matheson (Jardine, Matheson and Co.), Archibald Campbell (Dent and Co.), T. D. Neave (Smith, Kennedy and Co.), F. T. Bush (Bush and Co.), all of Hong Kong, and T. W. L. Mackean (Turner and Co.), S. Rawson, J. Heard (A. Heard and Co.), W. W. King (probably W. H. King of Russell and Co.), and D. J. Camajee (P. and D. N. Camajee). These represented most or all of the principal firms in Hong Kong or Canton. While they were competitors in many of their business operations, they joined in the promotion of steam navigation, partly because all would benefit indirectly and partly because it was probably felt that the undertaking might not in itself prove overly profitable and no one of them was willing, even if able, to invest so much capital in an enterprise from which the direct returns might be small. Augustus Carter was appointed agent of the new company, but his management was unsatisfactory and quickly resulted in liabilities of \$15,000 or more. In consequence, by the time the steamers commenced running on a regular schedule he had been replaced by George Lyall and Co. of Hong Kong.

<sup>27</sup> Information on the early days of the H. K. and C. S. P. Co. and its ships is largely from circulars in the Heard Collection, Box 31.

<sup>28</sup> *CM*, 26 October 1848.

In the meantime the new P. and O. *Canton*, an iron paddle steamer of 140 tons register built by Tod and Macgregor, had left Southampton on 4 July 1848 under Captain Jamieson, arriving Hong Kong on 19 February 1849. On the twenty-first she got off to an indifferent start by leaving on her first voyage to Canton at 4:30 P.M. after having been advertised to sail at noon. However, she was a great improvement upon her predecessors with respect to both speed and passenger accommodations. In the spring of 1849 she was advertised to leave Hong Kong for Canton direct three hours after the delivery of the mails.<sup>29</sup> This evidently allowed insufficient time for the transfer of the mails as in the fall it was increased to four hours.<sup>30</sup> *Canton's* principal employment seems to have been to take passengers, mail and cargo to and from the P. and O. ocean steamers. When not so engaged, she was, like most steamers of the period, available for towing or similar purposes. For instance, in September 1849 she was chartered by the owners of the missing sailing vessel *Sylph* to search for their ship, an enterprise which developed into an expedition against the Hainan pirates.<sup>31</sup> While similarly engaged a little later, *Canton* distinguished herself by towing H.M.S. *Columbine*, which had been becalmed, to within range of some pirate junks, enabling the latter to be destroyed. This was not accomplished without some risk, as can be seen from the fact that a six-pounder shot passed through *Canton's* paddle box within a foot or two of the spot where Captain Jamieson was standing.<sup>32</sup>

A strike at the engine-builders' works delayed the completion of the Hong Kong and Canton S. P. Co.'s steamers, but their *Canton* under Captain Alexander Cowie left London on 28 March 1849 and arrived at Hong Kong on 30 August, consigned to Dent and Co., who were evidently heavily interested in the local shipping concern. In fact, both *Canton* and her sister *Hong Kong*, which left Falmouth under Captain Norman Hill on 19 May and arrived at Hong Kong on 27 September, were registered in the name of Lancelot Dent. They appear to have been placed in service between Hong Kong and Canton soon after their arrival, but it was not until after the completion of some modifications to *Canton's* engines early in 1850 that they acquired a regular schedule. On 25 April 1850, George Lyall and Co. as agents of the H. K. and C. S. P. Co. advertised that, beginning on first May, their steamers would leave Hong Kong and Canton every Monday, Wednesday and Friday morning at 8 A.M., each steamer sailing on Monday from Hong Kong and on Friday

<sup>29</sup> *CM*, 17 May 1849.

<sup>30</sup> *CM*, 18 October 1849.

<sup>31</sup> *CM*, 20 September 1849.

<sup>32</sup> *CM*, 4 October 1849.

from Canton to call at Macao.<sup>33</sup> On other days they were to touch at Macao and Cumsingmoon as inducement offered. The passage rates were: Hong Kong to Canton and Canton to Hong Kong or Macao: \$8.00; Hong Kong to Macao: \$5.00. Chinese passengers were carried for \$1.00 each, irrespective of destination. Cargo was carried at prevailing lorcha rates. A circular dated 7 May 1850 quotes the following freight charges: treasure and precious stones,  $\frac{1}{8}\%$  ad valorem; chow chow cargo, \$3.50 per ton of 40 cubic feet; raw silk, \$1.50 per bale or case; silk piece goods, \$4.50 per ton, etc.

The foregoing was typical of the Company's schedule for the rest of its existence, but, as with all the local steamer lines of that period, there were many variations. In the first place, accidents and breakdowns were frequent. Following a small fire on board, *Hong Kong* had to be withdrawn for repairs in the latter part of July 1850, her place being taken by the P. and O. *Canton*.<sup>34</sup> Again, steamers were withdrawn from time to time for special charters, and even on their regular voyages they were likely to engage in towing, with a corresponding reduction in speed. The regular service to Macao was apparently not profitable, for commencing on 1 December 1850, the call was omitted, save when sufficient inducement offered.<sup>35</sup>

The year 1850 also saw the return of American competition to the Canton River. In 1849, R. B. Forbes, of Russell and Co., had had the wooden paddle steamer, *Spark*, built at New York and sent out in frame to China, chiefly for the account of Captain James B. Endicott.<sup>36</sup> She was erected at Whampoa, probably by Thomas Hunt and Co., and upon completion in February 1850 made two excursions on which she exhibited a speed of eleven knots or better. Thereafter she was in service between Hong Kong, Canton and Macao, although it is not now clear with what regularity.<sup>37</sup> In the latter part of March some difficulty arose at Canton with respect to both *Spark* and *Hong Kong*, the Chinese objecting to their carrying cargo, but this was straightened out before long. Other objections to *Spark*, on the part of foreign residents of Hong Kong, arose from her use of her whistle, leading to a poem on the subject in the

<sup>33</sup> CM, 25 April 1850.

<sup>34</sup> CM, 25 July 1850.

<sup>35</sup> CM, 28 November 1850.

<sup>36</sup> Cf. ASNC, AMERICAN NEPTUNE, XVI (1956), 162. *Spark* was the first vessel in China built along the lines of an American sound or Hudson River steamer, and her model was typical of American steamers later used on the Canton River. The British steamers of this period (and for some time afterward) were essentially seagoing vessels, modified sometimes by having hulls of less draft.

<sup>37</sup> *Spark* was advertised to leave Hong Kong for Canton direct on 24 October 1851. CM, 23 October 1851.

*China Mail* for 6 June 1850. Apparently the complaints were effective and the whistling stopped.<sup>38</sup>

The year 1851 started badly for the P. and O. river service, as on 25 January their steamer *Canton*, on her way from Cumsingmoon to Canton, struck on a sunken rock near the former anchorage and remained fast until 5 March. About 11 o'clock that night on the high tide she was finally floated off and taken to Whampoa for repairs. As a temporary replacement, the P. and O. agent hired *Sir Charles Forbes*, then available.<sup>39</sup> This was a wooden paddle steamer of 141 tons register, built at Bombay in 1846 for the Bombay Steam Company. She had previously come to Hong Kong in March 1847, returning to Bombay the following month, perhaps because of failure to find suitable employment in China, for she was rather small for regular service between India and China. After *Canton* was repaired, *Sir Charles Forbes* continued in the P. and O. service to Macao and to Canton,<sup>40</sup> and came to be spoken of as a P. and O. steamer, although they never actually owned her. In December *Canton* made a trip to Amoy and return, *Sir Charles Forbes* continuing on the Canton service.

The Hong Kong and Canton S. P. Co.'s service seems to have continued uneventfully throughout 1851, save that on 1 July George Lyall and Co., the agents, became Lyall, Still and Co. upon the admission of Charles Frederick Still as a partner. *Spark's* career seems also to have been uneventful.

At the beginning of 1852, the Hong Kong and Canton S. P. Co. announced that their service would be reduced to two (round) trips per week, due to the fact that each of the steamers needed to be laid up for overhaul.<sup>41</sup> The usual schedule of three round trips per week was resumed on 1 May.<sup>42</sup> *Canton*, under Captain Hill, captured a pirate junk in early September, while later that month both *Canton* and *Hong Kong* were sent to the wreck of the ship *Charlotte*.<sup>43</sup>

In a notice dated 29 January 1852, it was stated that the P. and O. steamer *Canton* would ply regularly between Hong Kong and Amoy, touching at Namoa if sufficient inducement offered, in connection with the P. and O. steamers of the Bombay and Calcutta lines. Evidently, the

<sup>38</sup> *CM*, 4 July 1850.

<sup>39</sup> For the wreck of *Canton* and her replacement by *Sir Charles Forbes*, see *CM*, 30 January 1851, 6 March 1851, and the report of the semiannual meeting of the P. and O., in *CM*, 14 August 1851.

<sup>40</sup> Advertisement in *CM*, 28 August 1851, 2 December 1851.

<sup>41</sup> *CM*, 8 January 1852.

<sup>42</sup> Advertisement dated 23 April 1852, in *CM*, 6 May 1852.

<sup>43</sup> *CM*, 9 September, 30 September, and 14 October 1852.

trial voyage of the preceding year had been a success. The new service had soon to be suspended, apparently because *Canton* was in need of major overhaul, and the little steamer was advertised to leave Hong Kong on 21 March for Singapore, Penang and Calcutta, taking treasure and small parcels, but having no room for goods. She sailed as scheduled and returned to Hong Kong on 8 May, the service being maintained in the meantime by *Sir Charles Forbes*. Either the P. and O. were having difficulty in employing their local steamers fully or else they were attracted by the profits of towing, for as of 12 July they advertised that *Lady Mary Wood* (then on the Shanghai Line) and *Canton*, when not otherwise engaged, would be ready to tow vessels at reduced rates. *Canton* made a trip to Amoy in October, but otherwise seems to have been employed around Hong Kong, as was the chartered steamer *Sir Charles Forbes*.

In the early spring of 1853, one of the Hong Kong and Canton S. P. Co.'s steamers had again to be laid up and as of 28 February service was reduced to two round trips per week, the third trip not being restored until 22 August.<sup>44</sup> There seems not to have been much change in the P. and O. Canton service during 1853. Toward the end of June the sailing vessel *Falcon* went ashore off Ly-ee-moon and the P. and O. *Canton* was sent to tow her off.<sup>45</sup> When the following August the captain of the brig *Arratoon Apcar* and the other Europeans on board were murdered by the Chinese crew, R. S. Walker, the P. and O. superintendent, got steam up in *Sir Charles Forbes* and placed her at the free disposal of Admiral Pellew, to go to the aid of the unlucky vessel, but the admiral did not accept the offer, for which action (or lack of action) he was sharply criticized.<sup>46</sup> Some later arrangement seems, however, to have been made, as the P. and O. *Canton* left on the seventeenth for the West Coast, the seat of much of the trouble with pirates, returning on the twenty-first. Benjamin McDermot (or McDermott) was her captain at the time.

An advertisement, dated 13 May 1853, states that, '*Spark*, having undergone an efficient repair, will again run between Hong Kong, Macao and Canton as heretofore.' How long she had been off the route is not now known. The American river fleet was augmented in 1853 by *Confucius*, 468 tons, which had been built at New York that year and under Captain Thomas W. Dearborn arrived at Hong Kong on 15 September, consigned to Russell and Co.<sup>47</sup> She did not stay, however, but soon pro-

<sup>44</sup> Advertisements in *CM*, dated 26 February and 18 August 1853.

<sup>45</sup> *CM*, 30 June 1853.

<sup>46</sup> *CM*, 11 August 1853.

<sup>47</sup> For further information regarding *Confucius*, see *ASNC*, AMERICAN NEPTUNE, XVI (1956), 163.



ceeded to Shanghai, where she was used primarily for towing vessels between Woosung and the sea.

Another newcomer to the Hong Kong local service was *Queen*, a small steamer of 137 tons and 40 horsepower, built at Hong Kong for Bowra and Co. under the superintendence of Mr. Lamont. She seems to have been the first steamer constructed at Hong Kong, and made a trial trip to Cumsingmoon on the morning of 13 November, returning on the following day.<sup>48</sup> *Queen* was intended for river service, but on completion was immediately chartered by the United States Commodore to serve as a dispatch vessel and to lie off the factories at Canton during the absence of the squadron. She is sometimes referred to in contemporary accounts as an American steamer, but this seems to be only by virtue of her charter. The charter expired about the middle of 1854, and although it was at first reported that it would not be renewed, it actually was and *Queen* accordingly kept out of the Canton trade.

There was, however, ample addition to the competition on the river in 1854, even without *Queen*. In the first place, the P. and O. increased its Canton service by the addition of the new paddle steamer *Tartar*, built of wood by Thomas White and Sons according to the diagonal principle of Robert White. *Tartar*, which was 50 tons larger than *Canton*, but of the same horsepower, left Southampton under Captain Caldbeck on 29 September 1853, reached Singapore on 14 February 1854 and, after refitting, proceeded to Hong Kong, arriving there on 15 April.<sup>49</sup> Following her arrival, *Tartar*, in conjunction with *Sir Charles Forbes*, acted as a tender to and from Hong Kong, Cumsingmoon and Canton to the Company's larger steamers plying between Hong Kong and Bombay, Calcutta and Shanghai. At the same time, the P. and O. took the opportunity of sending *Canton* back to India for overhaul.

On 20 August 1854, *Tartar*, under Captain McDermott, went from Canton to Hong Kong, 98 miles, in seven and a quarter hours, the fastest passage performed up to then. Meanwhile, *Canton*, under Captain Roskell, had left Calcutta on 10 August and arrived at Hong Kong on the thirtieth, whereupon it was reported that Captain McDermott would resume command of *Canton*, while Captain Soames would take *Tartar*. *Sir Charles Forbes* was either to be sold in China or to return to Bombay. Actually, she and *Canton* were chartered in November by Admiral Stirling for operations against the Chinese pirates.<sup>50</sup>

*Spark*, Captain H. Castilla, described as the 'most comfortable passage

<sup>48</sup> *CM*, 17 November 1853.

<sup>49</sup> *CM*, 9 March and 20 April 1854.

<sup>50</sup> *CM*, 29 June, 31 August, and 9 November 1854.

boat on the river,' continued in service through the year. In early October a bag of swords was discovered on board, leading to a report that an attempt to seize the vessel had been uncovered. Her owners denied this, however, and stated that the bag merely belonged to a gentleman passenger from Canton, who forgot it when he left the steamer at Whampoa.<sup>51</sup> It is hard to imagine his forgetting the swords and hard to see just what he was doing with them, anyway; but at all events *Spark* was not plundered at this time, and it was many years before such a fate was to overtake her.

The final addition to the local steam fleet in 1854 was *Ann*, which came up from Australia via Singapore, arriving at Hong Kong under Captain Welsh on 12 September with a cargo of rice.<sup>52</sup> *Ann* was a wooden three-masted schooner of about 230 tons gross with machinery aft and funnel behind her mainmast. She had originally been built at Littlehampton, Sussex, in 1839 as a two-masted schooner, registered at Cork, where the majority of her 64 shares were owned. Four of the shares, however, were owned by the firm of William Ian Ogilby and Moore, ship agents of London, who eventually acquired a majority interest in the vessel. About 1846, *Ann* was lengthened and rebuilt and fitted with a steam engine, and in May 1850 the ship was sold to Henry William Schneider of London, who resold her on 3 October 1850 to James Hartley, a director of the P. and O. S. N. Co. and head of James Hartley and Co., of London, managers of the London and Oriental Steam Transit Insurance Office. Hartley had the steamer further rebuilt in 1851 and later sent her to Australia, where she was one of the first merchant vessels to cross the Tasman Sea under steam, having arrived at Wellington on 3 September 1853.<sup>53</sup> She made only this one voyage to New Zealand and in December of that year, after her return to Australia, received new engines, built in England by Summers, Day and Baldock. Upon her arrival in China, *Ann* was thoroughly overhauled and on 4 October 1854 was advertised to ply between Hong Kong, Macao, Whampoa and Canton, touching at Cumsingmoon when inducement offered and carrying passengers, treasure and merchandise. Her proposed schedule was not stated, but emphasis was laid upon her large cargo capacity and upon her low fares, which were as follows: First class: Hong Kong-Macao, \$5.00 one way, \$8.00 return; Hong Kong-Canton, \$8.00 one way, \$12.00 return;

<sup>51</sup> CM, 5 October 1854.

<sup>52</sup> CM, 14 September 1854.

<sup>53</sup> W. Lawson, in his *Pacific Steamers* (Glasgow, 1927), calls her the first merchant steamer to cross the Tasman Sea; but Mr. Ronald Parsons, of Woodville, South Australia, tells me, from information furnished by Mr. W. A. Laxon of Auckland, New Zealand, that this honor belongs to *Juno*. *Ann* was, however, the first merchant steamer to cross to the South Island of New Zealand.

Second class: Hong Kong-Macao, \$3.00 one way, \$5.00 return; Hong Kong-Canton, \$5.00 one way, \$8.00 return. In addition, *Ann* engaged in towing.<sup>54</sup> The agents were Robert S. Walker at Hong Kong, Lorenzo Pereira at Macao, and Maximilian Fischer at Canton. Walker was at this time P. and O. superintendent at Hong Kong, and Fischer held this position later, so it is not surprising to find them acting as agents of Hartley, in view of his connection with the great liner company.<sup>55</sup>

To the actual competition was added the threat of further competition to come in the form of the large American steamer *River Bird*, then on her way out to China, and of three iron steamers being sent out in pieces from England and intended for night service between Hong Kong and Canton.<sup>56</sup> These rising clouds cast a shadow over the future of the Hong Kong and Canton S. P. Co., an enterprise which had anyway not turned out to be profitable,<sup>57</sup> and on 7 October 1854, G. Urmson, R. C. Antrobus (Lindsay and Co.) and C. F. Still, as a committee for the shareholders, announced that *Hong Kong* and *Canton* would be offered for sale and, unless previously disposed of by private contract, would be put up at public auction on 15 December.<sup>58</sup> Up to that time the steamers had been operating about as usual, but on 1 April the Company had abandoned its system of annual passage tickets and on the twenty-fifth of that month they had reduced their calls at Macao to approximately one every fortnight. The service apparently continued into December, but on the fifteenth the steamers were sold at auction (as previously advertised) for \$33,000 each; *Hong Kong* to Lyall, Still and Co., the agents, and *Canton* to Captain James B. Endicott, who placed her under the Peruvian flag. It was reported that the steamers were to be continued under the same masters, Gibson and Bennett, respectively.<sup>59</sup> Thus terminated the career of the Hong Kong and Canton S. P. Co. On commenting on its end, the *China Mail* remarked that it 'might have proved a greater boon to the community and more profitable to the proprietors, had the charges, especially for passage, been reduced within a reasonable limit.' The *Mail*

<sup>54</sup> See footnote 51.

<sup>55</sup> R. S. Walker left Hong Kong on a leave of absence in the latter part of 1857 and as of 1 December was replaced as P. and O. superintendent in China by Maximilian Fischer, who had formerly been a partner in Fischer, Wills and Co. of Canton, dissolved on 7 March 1846, after which he continued the business under the name of Fischer and Co. Following his return to China, Walker became a partner in Walker, Borradaile and Co. on 25 November 1858. James Hartley died in the spring of 1857 on board the P. and O. *Nubia*, while on his way home from Calcutta. See *Mitchell's Maritime Register*, 18 April 1857.

<sup>56</sup> *CM*, 26 October 1854. For further details, see below.

<sup>57</sup> For an account of the finances of the H. K. and C. S. P. Co., see Appendix I.

<sup>58</sup> *CM*, 19 October 1854.

<sup>59</sup> *CM*, 21 December 1854.

continued, 'We are now pretty well supplied with river steamers, having no fewer than seven [*Hong Kong, Canton, Canton (P. and O.), Tartar, Sir Charles Forbes, Spark and Ann*] plying between Hong Kong, Macao, and Canton, with an eighth [*River Bird*] on her way from New York, and three others [*Rose, Thistle and Shamrock*], the frames of which, sent out from England, are now being put up in Hong Kong. There is plenty of room for all of them, however, for every day seems to raise steam transit higher in the estimation of the natives, and a very short time will probably elapse before Chinese merchants become steamboat proprietors.'<sup>59</sup>

The P. and O. S. N. Co. advertised that, beginning on 1 December 1854, they would start a steamer from Hong Kong to Canton and from Canton to Hong Kong every Tuesday, Thursday and Saturday.<sup>60</sup> It was further stated that, 'with a view of ensuring quick passages, the hours of departure (which will be daily announced by advertisement and otherwise) will be regulated by the state of the tide.' From the foregoing it is clear that they had previously regarded their Canton steamers primarily as feeders to their seagoing vessels and that they did not enter the regular Hong Kong-Canton trade until the H. K. and C. S. P. Co. was about to withdraw, at which time the expanding traffic promised to support more steamers than had previously been engaged in it.

Toward the latter part of 1854, the Taiping rebellion, which had originated a few years earlier in the outlying sections of the provinces of Kwangtung and Kwangsü, spread to the vicinity of Canton and virtually stopped the native traffic on the river.<sup>61</sup> This meant more business as well as more danger for the steamers, towing of native craft being a particularly profitable occupation, and both British and American ship-owners sought and received assurances of protection from their respective governments. For instance, R. S. Walker, the P. and O. superintendent, wrote as follows to Sir John Bowring on 11 January 1855:<sup>62</sup> 'Having in an interview this morning with His Excellency, Admiral Sir James Stirling, understood that, if the Company's steamers continued to tow up to Canton boats containing cargo, such as the Company have been in the habit of towing up for some time past, they would no longer be entitled to the protection of the British flag, . . . I have the honour to request of Your Excellency . . . to inform me, whether the trade with Canton has been suspended.' To this, W. Woodgate, Secretary to the Superintendent of Trade, replied, 'The Treaty rights possessed by Her Britannic Majesty's subjects to trade in legal commodities with the Five

<sup>59</sup> CM, 7 December 1854.

<sup>61</sup> Cf., e.g., D. C. Boulger, *The History of China* (London, 1898), II, 211 ff.

Ports in China ought to be respected by all the subjects of China, whatever may be the internal commotions which exist in the country, and as far as His Excellency can exercise authority, such trade will be protected.'<sup>62</sup>

Similarly, Captain James B. Endicott wrote on 19 January to the Honorable Peter Parker, Chargé d'Affaires of the U. S. A. at Canton,<sup>63</sup> '... Should either yourself or Commodore Abbot wish her [*Spark*] to discontinue towing, I should prefer to be officially notified, as the business is lucrative. . . .' Mr. Parker's reply was to the effect that legitimate trade between the United States and China must not be interfered with by any subject or number of subjects of the Empire of China, and that, in particular, the towing of merchant junks and boats by foreign steamers was no new custom, was in accordance with the treaty, and must not be interfered with. He went on to say, 'I am happy to have received the concurrence of Commodore Abbot in the foregoing principles and purposes . . . and still further gratified to learn, that a similar policy has been adopted on the part of Their Excellencies, Sir John Bowring and Sir James Stirling.'<sup>64</sup> In commenting on this correspondence, the *China Mail* intimated that the British officials were not in as complete agreement as Parker's statement might suggest, but at all events, the towing continued.

Trade at Canton remained disrupted for the first part of 1855 and this fact, together with the prospect of further competition, may have led the owner of *Ann*, through his agents, to offer her for sale at auction on 23 May. In the accompanying description, she was stated to have comfortable accommodations for passengers and space for 240 tons of measurement goods, as well as bunker capacity for forty tons of coal. She had been on the Hong Kong-Canton route until at least the end of April. It would appear that the steamer had been sold shortly afterward, though her document does not indicate a date, for in the *China Mail* for 24 May *Ann* is advertised for freight or charter by B. E. Carneiro of Macao. The following month she was reported chartered by the Portuguese authorities, together with about twenty Macao lorchas, for action against the West Coast pirates.<sup>64</sup> In the fall she was placed in coastal service and did not return to the Canton River until about a year later.

<sup>62</sup> *CM*, 18 January 1855.

<sup>63</sup> *CM*, 1 February 1855.

<sup>64</sup> *CM*, 14 June 1855. On 1 December 1860, *Ann* returned to British registry and was renamed *Maria*, being sold foreign once more at Shanghai in February 1861. She returned to British registry in 1864, being then owned by William Davidson, of Ningpo, who sold her at Nagasaki in May 1867, perhaps to the American F. H. B. Jenkins, who is known to have purchased her on 16 May 1867. See *ASNC*, AMERICAN NEPTUNE, XVII (1957), 215. The building date 1842, there given, taken from American consular records, turns out to be incorrect.



Following the withdrawal of the Hong Kong and Canton S. P. Co., the P. and O. service seems to have been the most regular on the river, and in April 1855 they reduced the fare between Hong Kong and Canton to \$50 for a ten-trip ticket and \$5 each for any additional tickets.<sup>65</sup> On the nineteenth of that month, the *China Mail* stated that, 'The Admiral [Admiral Stirling] has at length decided to charter the P. and O. Company's river steamer *Tartar* to accompany the fleet to the north as a despatch boat.' As a matter of fact, she was then or soon afterward purchased by the Navy and as of 10 May is listed as H.M.S. *Tartar*, 3 guns. As such, under Lieutenant Collingwood, she accompanied Admiral Stirling's expedition to Japan, returning to Hong Kong on 22 October. At the beginning of November she was renamed as H.M.S. *Coromandel* and her services in the Second Anglo-Chinese War under this name will be referred to below. The steamer never returned to the P. and O. fleet but was sold for merchant service about 1866, renamed *Naruto* three years later, and finally broken up in Japan in the early part of 1876.<sup>66</sup> To replace *Tartar*, the P. and O. Co. acquired *Sir Jamsetjee Jeejeebhoy*, a wooden paddle steamer of 82 tons register built at Mazagon, Bombay, in 1848 for Bynamjee Jeejeebhoy of Jeejeebhoy Dadabhoy and Sons.<sup>67</sup> She was subsequently owned jointly by various members of the Jeejeebhoy family until her acquisition by the P. and O.<sup>68</sup> On 17 July she left Bombay under Captain Haselwood and arrived at Hong Kong on 16 August, after which she and *Canton* carried on the P. and O. local service out of Hong Kong, possibly with the assistance of *Sir Charles Forbes*.

The most important addition to the Hong Kong-Canton service in 1855 was the American steamer *River Bird*, which had been built at Brooklyn, New York, the previous year for Robert S. Sturgis, James B. Endicott and Gideon Nye, Jr.<sup>69</sup> Under Captain Josiah Paul, she arrived at Macao on 24 May, consigned to Captain Endicott, who was evidently the managing owner. *River Bird* arrived at an auspicious time, as the rebellion in and around Canton had been put down, the *China Mail* remarking that, 'many signs of returning prosperity and trade are seen.'<sup>70</sup> In consequence, the owners of the new steamer, who had contemplated

<sup>65</sup> Advertisement in *CM*, 12 April 1855.

<sup>66</sup> (British Document.) J. J. Mahlmann, *Reminiscences of an Ancient Mariner* (Yokohama, 1918), pp. 121-141 passim. In the present paper, final dispositions of steamers (where known) are given only for ships whose dispositions neither have been given in *ASNC* nor are expected to be given in future papers.

<sup>67</sup> Cf. R. A. Wadia, *The Bombay Dockyard and the Wadia Master Builders* (Bombay, 1957), p. 327.

<sup>68</sup> *BD*. The entry relative to the purchase of *Sir Jamsetjee Jeejeebhoy* by the P. and O. is missing.

<sup>69</sup> *ASNC*, AMERICAN NEPTUNE, XVI (1856), 164.

<sup>70</sup> *CM*, 14 June 1855.

sending her elsewhere, decided to keep her permanently on the Canton route, continuing her schedule of leaving Hong Kong at 7:00 A.M. on Monday and Thursday for Canton and leaving the latter port on her return at 11:00 A.M. on Tuesday and Friday. Williams, Anthon and Co. were the steamer's agents at Hong Kong and William C. Hunter (a former co-owner of *Midas*, see above) at Canton. First-class passage was \$6.00 for Europeans and \$2.00 for Chinese; second-class passage \$2.00 for Europeans and \$1.00 for Chinese. Breakfast was \$1.00 and dinner \$2.00, including wine and beer. Cargo, up to 700 tons, was to be carried at lorch rates. Towing was to be undertaken—previous notice to be given by circular when possible. In addition, the owners bound themselves, until further notice, to place another steamer on the route upon any day that it might be necessary to withdraw *River Bird*, except in case of accident to the boat,<sup>71</sup> all of which is of interest in showing how much regularity of service and regard for the passengers had increased during a decade of steam communication between Hong Kong and Canton. In addition to the direct service by *River Bird*, Captain Endicott had a weekly service to and from Canton via Macao with *Canton* (formerly of the Hong Kong and Canton S. P. Co.) under the Peruvian flag and *Spark* under the American flag. This service was apparently less regular than the direct service. As of 16 August 1855, no exact schedule had been announced for it, but it was recorded that on 11 July *Canton* had made a special excursion from Hong Kong to the Patriotic Bazaar at Macao.<sup>72</sup>

The year 1855 saw the arrival of several further additions to the local trade out of Hong Kong. First of these was the British steamer *Eaglet*, 165 tons, which, under Captain Stewart, left Calcutta on 1 May and arrived at Hong Kong on 6 June, consigned to the British firm of Gibb, Livingston and Co.<sup>73</sup> In an advertisement dated 18 June, the consignees

<sup>73</sup> *CM*, 7 June 1855.

invited tenders for her purchase until the twenty-fifth. It was stated that she had been built at Cochin in 1854, was of light draft and had excellent accommodation for passengers. All this suggested that she was headed for regular service to Canton or Macao, but such was not the case. Actually, she was purchased for \$40,000, in shares, chiefly by Chinese, who secured the versatile D. R. Caldwell as her commander. Mr. Caldwell had an excellent knowledge of Chinese, and had been an interpreter, counsel to the Navy, and a joint superintendent of police, resigning

<sup>71</sup> From an advertisement signed by Jas. B. Endicott and dated 10 September 1855, *CM*, 20 September 1855. The accident was not long in coming. See below.

<sup>72</sup> *CM*, 16 August and 12 July 1855.

from the latter position to take command of *Eaglet*.<sup>74</sup> The steamer's principal occupation turned out to be the convoying of lorchas and junks. While so engaged the following August, *Eaglet* met a much superior pirate force and had to get help from H.M.S. *Rattler* and men from U.S.S. *Powhatan*. The end result, however, was the destruction or capture of many of the pirate junks.<sup>75</sup> In October, the second engineer of *Eaglet* was fined (or imprisoned) for letting the water get low in the boiler. Fortunately, no serious accident resulted, as there were eighty persons on board at the time.<sup>76</sup> That the damage, however, was considerable is suggested by the fact that the steamer arrived at Hong Kong on 15 October and at the end of the year was still there undergoing repairs.

The next steamer to come to China to seek a share in the Hong Kong-Canton trade was *Willamette*, an iron paddle steamer of 370 tons which left San Francisco under sail in command of Captain W. E. Newcomb on 16 June and arrived at Hong Kong on 29 August, consigned to Jardine, Matheson and Co. and bringing with her a staff of artificers to put her machinery together.<sup>77</sup> Her registered owners at this time were the California S. N. Co. In an advertisement dated 30 November 1855, it was stated that *Willamette* would leave Hong Kong for Canton at 8:00 A.M. Wednesday and Saturday and leave Canton on the return trip at 11:00 A.M. on Monday and Thursday. Rates were the same as those of *River Bird*. Captain William Curry, the master of *Willamette*, acted as agent on board, while Robert S. Walker was agent at Hong Kong and Maximilian Fischer at Canton, both of these men being connected also with the P. and O. S. N. Co., as mentioned earlier. Whether *Willamette* had actually started operating before the end of the year is not now clear, but on 20 December the beam of *River Bird*'s engine broke, causing much damage to the engine. In addition, the roof of the upper cabin was smashed in by the falling beam, but very fortunately no one was injured and the disabled steamer was towed in by the steamer *Hong Kong*. As *River Bird* would clearly be out of service for some time to come, the agents of *Willamette* (in a notice dated 26 December) stated that the latter steamer would adopt the sailing schedule of the former, viz., leaving Hong Kong for Canton on Mondays and Thursdays at 8:00 A.M. and leaving Canton on the return trip Tuesdays and Fridays at 11:00 A.M.

<sup>74</sup> CM, 5 July 1855.

<sup>75</sup> CM, 9 August 1855.

<sup>76</sup> CM, 25 October 1855.

<sup>77</sup> For further history of *Willamette*, see ASNC, AMERICAN NEPTUNE, XVI (1956), 168-170. The statement there made that she was a propeller steamer is incorrect. See Appendix III below.

On 11 September 1855, not long after the arrival of *Willamette*, the British steamer *Iron Prince* arrived at Hong Kong under Captain Samuel Sharp after an extraordinarily long voyage from Sydney, New South Wales, which she had left on 28 June. *Iron Prince* was an iron screw steamer of 135 tons register built at Liverpool in 1845 by James Hodgson and Co., apparently for their own account. After passing through several changes of ownership in Great Britain, she was sold in late 1853 or early 1854 to Edye Manning and Robert Scott Ross, both of Sydney, where she was registered in 1854. These owners presumably sent her to China as a speculation, as on 19 September she was offered for sale, application to be made to Captain Sharp on board, or to Siemssen and Co. at Canton or Hong Kong, or to G. C. Schwabe and Co. at Shanghai.<sup>78</sup> No suitable purchasers appearing, *Iron Prince* was advertised to be sold at auction on 17 November by Charles Markwick, the government auctioneer.<sup>79</sup> Again no sale resulted and as the year closed the little steamer was still awaiting a purchaser.

Hitherto the mails between Hong Kong and Canton had been transported primarily by sailing vessels and it will be recalled that the steamer *Corsair* had gotten into difficulties by carrying a portion of them. Systematic carriage of the mails seems first to have been undertaken in the mid-1840's by Yorick Jones Murrow, who until 30 June 1849 traded at Canton under the name of Murrow and Co. In a circular dated 5 January 1850 and addressed to the subscribers to the Hong Kong and Canton Post Boats, he says in part,<sup>80</sup> 'The want of regular communication between Hong Kong and Canton some years ago, entailing, as it did, repeated and serious inconvenience, . . . I was induced to establish the Hong Kong and Canton Post Boats. . . . I was of the opinion that when the River Steamers should commence to ply, the necessity for the continuance of a line of Post Boats would no longer exist and was prepared to break up the establishment. The unanimous opinion of that portion of the community whom I consulted, induced me not only to abandon my intentions, but to perfect arrangements for the continuance of the Boats [with a view to securing consistent delivery of letters within twenty-four hours of their despatch].' It appears that at the close of 1849 Bush and Co. withdrew their subscription, as well as the subscriptions of their constituents, and established a rival line of boats of their own, and in

<sup>78</sup> Advertisement in *CM*, 20 September 1855.

<sup>79</sup> Advertisement dated 29 October in *CM*, 8 November 1855.

<sup>80</sup> From circular in Heard Collection, Box 31. While the postal service was apparently supported primarily by the subscription of firms, it was presumably conducted under some arrangement with the Postmaster General.

the above circular Murrow appealed for support of his enterprise. Evidently sufficient support was forthcoming, for the original post boats continued. After leaving Canton for Hong Kong, Murrow associated himself with James Stephenson and on 1 January 1851 they formed the firm of Murrow, Stephenson and Co. In the opinion of the contemporary press, Murrow was brilliant, but unreliable. Perhaps this had something to do with the firm's being dissolved on 10 May 1854, Joseph Frost Edger being appointed receiver 13 November 1856.<sup>81</sup> In the meantime it had become clear that the post boats must inevitably be superseded by steamers and in 1853 or 1854 Murrow ordered three iron paddle steamers from Robert Stephenson and Co. of Newcastle, to be shipped out in pieces for erection at Hong Kong. They were each fitted with three watertight compartments and designed to draw not more than four feet of water, so as to permit operation at any state of the tide. Twelve hours were to be allowed for the passage and the schedule called for a steamer to leave each night from Canton at 4:00 P.M. while another left Hong Kong at 6:00 P.M., the earlier departure on the down trip being due to the advisability of getting clear of the crowded harbor of Canton before dark. A third boat was considered necessary, as their operating at night made it necessary for the crews to have an entire day's rest at the end of each trip. The steamers were designed to carry passengers, as well as the mails, but it was not intended that they should be employed on any other service except towing small craft, and then only if the passage could be made within twelve hours.

The original outlay on the three steamers amounted to £15,000 and Murrow estimated that a further \$30,000 would be required for their erection and completion at Hong Kong, and since the recent experience of the Hong Kong and Canton S. P. Co. tended to discourage public investment in steamboat companies, it was proposed that the \$30,000 should be raised by issuing five-year 9 per cent mortgage bonds with face value of \$1,000 each; three trustees, in whose names the mortgage should stand, together with Murrow himself, acting as joint managers of the ships.<sup>82</sup>

Some such arrangement must have been made, for in the fall of 1854 the sailing vessel *Harpley* arrived with the materials and machinery for the three postal steamers, together with the engineer who had superintended the construction and shipment, and the work of erection at the

<sup>81</sup> Cf. [James] Stephenson vs. [Y. J.] Murrow, Supreme Court of Hong Kong, *CM*, 27 November 1856; also advertisement in *CM*, 12 March 1857.

<sup>82</sup> From a circular dated 16 December 1854, in the Heard Collection, Box 31.



yard of William Ross began.<sup>83</sup> *Rose*, the first of the three to be completed, made her first trip around the island of Hong Kong on 31 July 1855, and the *China Mail* commented that, 'the accommodations of the little vessel are wonderful for her size.' *Thistle*, the second of the trio, was launched on 25 November 1855, while *Shamrock* was not launched until 22 June 1856.<sup>84</sup> Murrow was, of course, effectively the manager of the ships when they were in operation.<sup>85</sup> The steamers themselves appear to have been well built, but the enterprise was unfortunate and perhaps not well run. In December 1855 *Rose's* machinery broke down and required substantial repairs, in consequence of which the steamer was laid up, so that the Hong Kong *Shipping List* for 10 December 1855 reported that, 'the nightly mails between this and Canton will be despatched per post boat as heretofore.'

Last of the additions to the steam fleet of Hong Kong in 1855 was the American screw steamer *Carolina*, 545 tons, which had been purchased in California for Gideon Nye, Jr., and was brought to China by Captain Sampson, leaving San Francisco on 8 September and arriving at Hong Kong on 11 November.<sup>86</sup> On the twenty-fourth of that month, Williams, Anthon and Co., of Hong Kong, and Nye Bros. and Co., of Canton, as agents were advertising that, 'the powerful screw steamer *Carolina* will tow ships to sea through the Ly-yü-moon Passage, or to Whampoa, or will accept a charter to any practicable port or place.' Her owner soon decided that prospects for her employment or sale were brighter in India,<sup>87</sup> so, on 10 January 1856, *Carolina* under Captain Sampson left Hong Kong for Calcutta via Manila. In speaking of her departure, the *China Mail* said, 'Her great power—700 horse—and her capacity of 600 tons render her a most serviceable boat for towing, freight, or the conveyance of mail, and we should suppose that, should she return, in these waters she can always find constant and profitable employment.' However, she never returned.

Another arrival from America about this time was the big screw tug *Underwriter*, 433 tons gross, built by William Cramp and Sons at Philadelphia in 1854. Under Captain Watson, she left San Francisco on 17

<sup>83</sup> *CM*, 26 October 1854.

<sup>84</sup> *CM*, 29 November 1855, quoting from the *Hong Kong Shipping List* [*Dixon's Recorder's Shipping List*] for 26 November 1855; *CM*, 26 June 1856.

<sup>85</sup> Evidence of Antonio Xavier, who had been appointed by Murrow as master of *Shamrock* on 5 January 1857, Supreme Court of Hong Kong, *CM Extra*, 7 February 1857.

<sup>86</sup> For further information regarding *Carolina*, see *ASNC, AMERICAN NEPTUNE*, XVII (1957), 143-144.

<sup>87</sup> Gideon Nye, Jr., the owner of *Carolina*, was probably in urgent need of cash at this time, as Nye Bros. and Co. failed in the early spring of 1856, executing as Assignment at the U. S. Consulate at Canton on 11 March 1856. Advertisement in *CM*, 17 April 1856.

February 1856 and arrived at Hong Kong on 25 April, consigned to Jardine, Matheson and Co. Presumably they were acting as agents or possibly she was acquired as a speculation, since in an advertisement dated 5 May 1856 they were offering her for sale. Evidently, there were no purchasers, in China at least, and on 3 July *Underwriter* sailed from Hong Kong, still under the American flag and with Captain Watson in command, for Calcutta with miscellaneous cargo.<sup>88</sup>

The breakdown of *Rose* provided an opportunity for *Iron Prince*, as on 9 January 1856, Siemssen and Co., the agents for the latter and her Australian owners, advertised that, alternately with *Thistle*, *Iron Prince* would leave Hong Kong for Canton on Monday, Wednesday and Friday at 6:00 P.M. and from Canton for Hong Kong at 5:00 P.M. on Tuesday, Thursday and Saturday. It would seem that *Iron Prince* (or her crew) could not keep up this schedule, or else business did not warrant it, for on 15 January Siemssen and Co. were advertising her on the above schedule, but with the omission of the Wednesday trip from Hong Kong and the Thursday trip from Canton. Presumably, *Iron Prince* continued so running after the return of *Rose*. The latter steamer soon got into trouble again, and this time the trouble was more serious. She left Hong Kong for her regular trip to Canton on 28 May 1856 and was wrecked on well-known rocks off Castlepeak Point, the captain having hugged the shore too closely. The captain, mate, engineers and European passengers were all saved, as well as thirty-five out of sixty-one Chinese passengers, the remainder being drowned in the fore hold. When *Queen*, whose boats rescued the survivors from the beach, left the scene of the wreck at 4:00 the following morning, *Rose* was lying with her head buried up to the funnel and only her stern above water.<sup>89</sup> Three steamers were chartered from or through the P. and O. to render assistance to *Rose*,<sup>90</sup> and the latter was in course of time refloated and subsequently rebuilt, though apparently not in time to return to the postal service, which was meanwhile carried on by *Thistle* and *Shamrock*, before that service was interrupted by the Second China War. Flebbe, the master of *Rose*, was indicted for manslaughter, but absconded, thus avoiding trial.<sup>91</sup>

A number of new steamers (in addition to *Shamrock*) were built at Hong Kong in 1856 for local service on the route to Canton and Macao.

<sup>88</sup> See also *ASNC*, AMERICAN NEPTUNE, XVII (1957), 307.

<sup>89</sup> *CM*, 29 May 1856.

<sup>90</sup> R. S. Walker, as agent for the P. and O. Co., vs. Murrow, Supreme Court of Hong Kong. The debt of \$494.50 was not denied, but upon application of the defendant's attorney, one month's time was granted for payment of the debt and costs. *CM*, 7 August 1856.

<sup>91</sup> *CM*, 19 June 1856.

The largest of these was *Lily*, a wooden paddle steamer of 411 tons, builders' measure, launched on 20 April 1856 by J. C. Cowper of Whampoa for Captain James B. Endicott. Her engine was built by H. W. Harman and there is reason for thinking that it came from *Canton* of the Hong Kong and Canton S. P. Co., as the latter steamer had been purchased by Captain Endicott near the end of 1854 and seems to have disappeared within a year after that, which suggests that she may have been condemned and dismantled or broken up.

*Lily* was apparently intended as a speculation, as she was advertised for sale immediately after her launching and four or five weeks before her completion. It was emphasized that she was of light draft, but adapted for either river or coastal work.<sup>92</sup> No suitable purchasers appearing, her owner placed her in service between Hong Kong and Canton in early August. Under Captain Williams, she was advertised to leave Hong Kong on Tuesdays and Fridays at 8:00 A.M. for Canton, and to leave Canton on her return trip at the same hour on Wednesdays and Saturdays.<sup>93</sup> Her agents were W. C. Hunter at Canton and S. Drinker at Hong Kong.<sup>94</sup>

A much smaller steamer built about the same time by Mr. Cowper was *Mirage*, 120 tons. She was actually built the previous year for Angier and Allanson, in whose name she was first registered, but this firm got into financial difficulties and the steamer seems to have been left on her builder's hands. In any case, soon after her first registration she was re-registered in the name of J. C. Cowper and, under charter to the Chinese Alum, commenced in June 1856 a service between Hong Kong and Macao, leaving the former port Tuesdays, Thursdays and Saturdays at 8:00 A.M. and the latter Mondays, Wednesdays and Fridays at 10:00 A.M., calling at Cumsingmoon (in either direction) if inducement offered. The fare was \$3.00, or \$5.00 for a round trip ticket. Captain W. Kohler commanded the little steamer and William Pustau and Co. were her agents at Hong Kong.<sup>95</sup>

Still smaller was *Squirrel*, 47 tons, launched from William Ross's yard on 4 June 1856, two months after the laying of her keel. She was a screw steamer with an English-made engine of 25 H.P. which had been found on board a Russian prize at Ayan the previous year and brought to Hong

<sup>92</sup> *CM*, 24 April 1856.

<sup>93</sup> Advertisement dated 5 August 1856 in *CM*, 7 August 1856.

<sup>94</sup> S. Drinker had established himself as a storekeeper and ship chandler at Hong Kong on 1 August 1856.

<sup>95</sup> Advertisement dated 25 June 1856 in *CM*, 26 June 1856.

Kong by H.M.S. *Pique Squirrel* was launched with steam up and proceeded at once on a trial trip around the harbor. Because of her small size, she does not seem to have been well adapted for any regular route, and was probably intended for purely local service,<sup>96</sup> though her later career shows that she must have been fairly seaworthy. William Ross, her builder, was also the sole owner of the steamer until she was sold Portuguese, her British registry being closed on 22 March 1858.<sup>97</sup>

Another product of J. C. Cowper's yard in 1856 was *Fei Ma* (*Flying Horse*), 193 tons gross, launched 28 June 1856 for Lyall, Still and Co. as a running mate for *Hong Kong*, formerly of the Hong Kong and Canton S. P. Co., on the Hong Kong-Canton route.<sup>98</sup> Lyall, Still and Co. owned 48 of her 64 shares, the remaining 16 being held by Henry Castilla, her master. Under Captain Castilla, *Fei Ma* made a trial trip from Whampoa to the Bogue on Saturday, 16 August, in the course of which she overtook and passed both *Spark* and *Hong Kong*.<sup>99</sup> The following Monday afternoon the new steamer further justified her name by arriving at Hong Kong on her first trip from Canton in seven hours and ten minutes against wind and tide, and it was conjectured that under favorable conditions she should make the run in six hours.<sup>99</sup>

With the entry of *Fei Ma* into service, steam navigation between Hong Kong, Canton and Macao reached its full bloom before being overtaken by the blight of war, and on 14 August the *China Mail* printed for the first time a list of river steamers operating out of Hong Kong, of which a recapitulation may be of some interest. The Penninsular and Oriental S. N. Co. had *Canton* (1848), Captain Soames; Lyall, Still and Co., *Fei Ma* (1856), Captain Castilla, and *Hong Kong* (1849), Captain Gibson; and James B. Endicott, *Spark* (1850), Captain Creessy; and *Lily* (1856), Captain Williams, with Williams, Anthon and Co. as his agents. Y. J. Murrow had the 'postal' steamers *Rose* (1855), Captain Wood, *Shamrock* (1856), and *Thistle* (1855). Robert S. Walker, then P. and O. superintendent, was agent for *Sir Charles Forbes* (1846), Captain Bennett, *Queen* (1853), Captain Campbell, and *Willamette* (1849), Captain Curry, though the P. and O. were probably not connected with any of these. *Sir Charles Forbes* had as of 20 May 1856 been advertised to leave Hong Kong for Canton at 8:00 A.M. Tuesdays and Fridays, returning at the same hour on Wednesdays and Saturdays, R. Ruttunjee & Co. acting as agents at Canton. Finally, Siemssen and Co. were agents for *Iron Prince* (1844),

<sup>96</sup> *CM*, 5 June 1856. For her later history, see *ASNC*, AMERICAN NEPTUNE, XVII (1957), 97.

<sup>97</sup> *BD*.

<sup>98</sup> *CM*, 3 July 1856.

<sup>99</sup> *CM*, 21 August 1856.

Captain Sharp; and William Pustau and Co. were agents for *Mirage*, Captain Kohler. All the foregoing ships were primarily on the Canton route, save *Mirage*, which operated only to Macao, and *Spark*, which appears to have operated mainly to that point. *River Bird* was still laid up, though the iron work for her repair was hourly looked for.<sup>99</sup>

In the latter part of August, *Ann*, having had her machinery repaired and having received a thorough overhaul, resumed her running on the river, but her service, if regular, did not long remain so, as the *Recorder* of 10 September stated that *Queen* and *Ann* had gone down the coast to tow up a junk, and soon afterward *Ann* returned to coastal service, leaving for Amoy on 14 September. Some of the other river steamers also exhibited the usual variations in schedule; for instance, in September, *Spark* towed the hulk of the burnt coolie ship *Banca* from Macao to Whampoa, to be stripped of copper and bolts.<sup>100</sup>

The beginning of the Second Anglo-Chinese War is usually taken as the attack on the lorcha *Arrow* on 8 October 1856.<sup>101</sup> After that, the situation with respect to mercantile steam shipping on the Canton River steadily deteriorated. In view of the mounting difficulties with the Chinese, Williams, Anthon and Co. wound up their affairs at Canton as of 1 September and established a strictly agency and commission business at Singapore,<sup>102</sup> Thomas Hunt and Co. succeeding them as agents for Captain Endicott's steamers in China. The latter firm had on 25 August established a branch of their business as storekeepers and shipchandlers at Hong Kong under the management of H. C. Endicott. Their principal premises remained, however, at Whampoa. In the meantime, they had had a small steamer sent out from New York in parts to Whampoa, where they set her up. As *Cum Fá*, she was launched in September 1856 and made her trial trip on 22 October. Thomas Hunt and Co. planned to run her between Whampoa and Canton, but the breaking out of the war put a stop to that and *Cum Fá* was used for towing, particularly in connection with the naval operations on the river. As of April 1857, Captain Macdonald was listed as her master.

The immediate concern of the British authorities upon the outbreak of the war was to keep the Canton River open, and to this end on 23 October Rear Admiral Sir Michael Seymour captured the four Barrier Forts, about five miles below Canton, as well as the Blenheim and Macao Forts, commanding alternate passages up the river. On 6 November

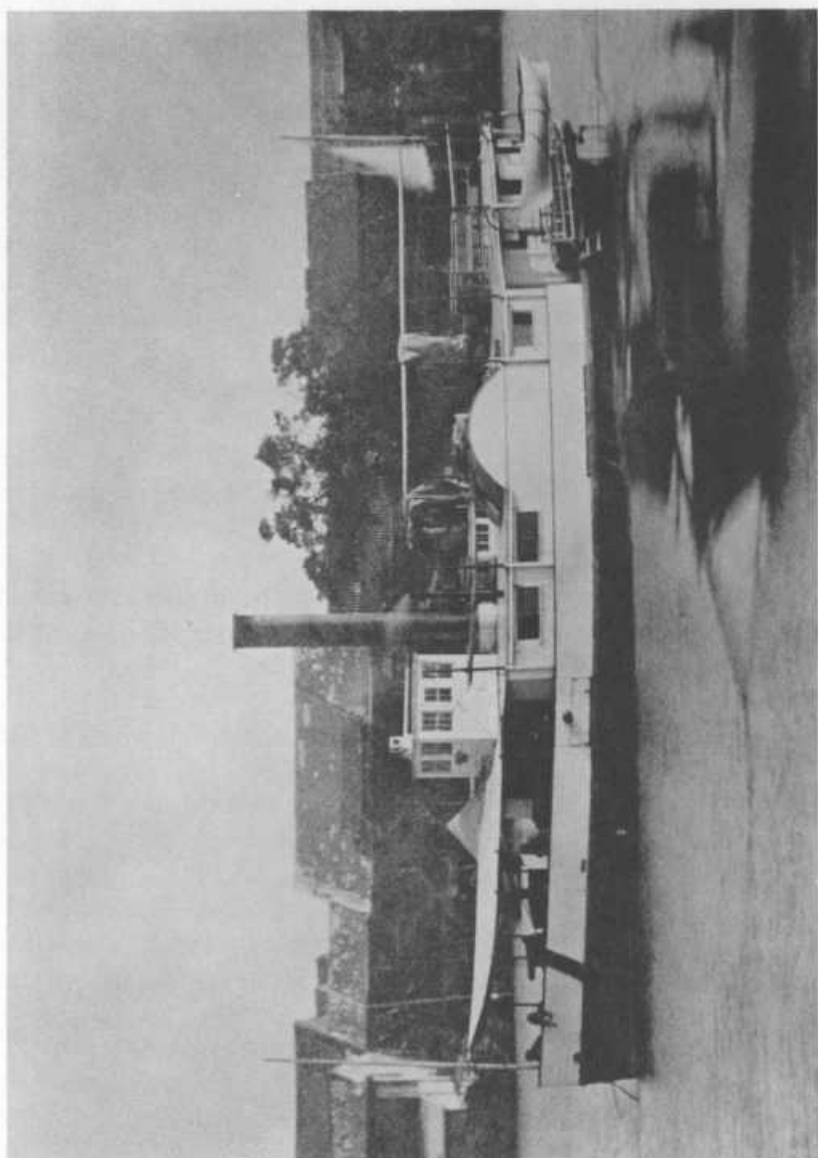
<sup>100</sup> *Dixon's Recorder's Hong Kong Shipping List*, 10 September 1856 (quoted in *CM*).

<sup>101</sup> Cf. *The Second China War, 1856-1860*, D. Bonner-Smith and E. W. R. Lumby, editors (The Naval Records Society, 1954), pp. 1 ff. This work will afterward be referred to as *SCW*.

<sup>102</sup> The partners at this time were C. D. Williams, H. Anthon, Jr., and G. L. Haskell.







Thomas Hunt and Company's steamer *Cum Fâ*  
*Courtesy of the Peabody Museum of Salem*

French Folly Fort, just below Canton, was captured and on the twelfth the Bogue Forts, near the mouth of the river, were captured. In the former action, the steamer *Queen* aided in refloating H.M.S. *Niger*, while *Lily* towed the lorch *Centaur* with ammunition. *Lily* was advertised as in service between Hong Kong and Canton as late as 13 November,<sup>103</sup> but seems to have been withdrawn soon afterward. Early in 1857, she was placed in coastwise service out of Hong Kong.

While some attempt had been made to dismantle the river forts after their capture, they had then been abandoned and the Chinese soon re-occupied them and restored the armament to such an extent that on 15 November the Barrier Forts fired on the P. and O. steamer *Canton*, on her way from Canton to Hong Kong, causing slight damage. On the same day the forts fired on a boat belonging to U.S.S. *Portsmouth*, as a result of which this vessel and U.S.S. *Levant*, under Commodore Armstrong, Commander in Chief of the United States naval forces in those waters, were on the following day towed up to fire on the forts by two private steamers (apparently *Willamette* and *Cum Fâ*). On the twentieth, the American ships reopened a heavy fire on the forts and by the twenty-second the latter were captured and partly destroyed, the guns burst and their carriages burnt.<sup>104</sup> The civilian engineers of *Cum Fâ* were unwilling to tow *Levant* into action and were accordingly replaced by engineers from U.S.S. *San Jacinto*.<sup>105</sup> On 6 December, the American ships completed the demolition of the Barrier Forts and then dropped down to Whampoa.<sup>106</sup>

The British were likewise engaged in putting the Chinese forts more effectively out of action. On 16 November they destroyed the guns, fifty-five in number, of the Little Tycocktow Fort, near the mouth of the river. On 4 December, Admiral Seymour captured and completely destroyed French Folly Fort and about the same time the Bogue Forts were dismantled under the direction of Captain Keith Stewart of H.M.S. *Nankin*, and the Blenheim Fort likewise destroyed.<sup>107</sup>

For all that the forts had been effectively put out of action, the situation on the Canton River continued to deteriorate, from the point of view of shipping and commerce. By the beginning of December it was reported that all the carpenters had left the shipyards at Whampoa;<sup>108</sup> and on the twentieth of that month William Cowper, the father of J. C.

<sup>103</sup> *CM*, 13 November 1856.

<sup>104</sup> *SCW*, p. 119.

<sup>105</sup> *CM*, 27 November 1856.

<sup>106</sup> *SCW*, p. 136.

<sup>107</sup> *Ibid.*, p. 144.

<sup>108</sup> *CM*, 4 December 1856.

Cowper, the shipbuilder, was abducted by the Chinese from his floating residence at Whampoa and was never seen or heard of again.<sup>109</sup>

Meanwhile, shortly after 11:00 P.M. on 14 December, fire, clearly of incendiary origin, broke out in some Chinese houses close to the foreign factories at Canton and spread to the latter, and by the morning of the sixteenth nothing was left of the factories save one small building, together with the church and the barracks.<sup>110</sup> With the burning of the factories, trade came effectively to a standstill, but the river steamers, or at least some of them, continued to carry on under increasing difficulties. About 10:00 P.M. on 22 December, the postal steamer *Thistle*, on her way from Canton to Hong Kong with the lorcha *Anonyma* in tow, was attacked near the Second Bar by about a hundred junks. Captain Weiland had the crew of *Anonyma* taken aboard the steamer and the lorcha cast adrift. He then ran the gauntlet between two fleets of junks, his vessel being frequently hit by their shot and three Chinese on board killed and two seriously wounded. On arrival at the Bogue, the wounded were attended to by one of the naval surgeons from H.M.S. *Nankin*. About a mile and a half further down, Captain Weiland met *Shamrock* and warned Captain Wood of the danger, and also hailed *Sir Charles Forbes* with a coal boat in tow. Both steamers anchored for the night off *Nankin*. Then *Shamrock*, being unarmed, returned to Hong Kong, while *Forbes*, being well armed, proceeded up the river next forenoon. Some fears were entertained for *Queen*, which had left Canton an hour after *Thistle*, but Captain Campbell, on being fired at, wisely put about and returned to Canton for the night.<sup>111</sup>

*Thistle* did not long survive this experience. About noon on 30 December, off Second Bar Creek, while on her way from Canton to Hong Kong, she was seized by some passengers, supposedly mandarin soldiers in disguise. They murdered all eleven Europeans on board, including captain, mate and engineers, as well as several Chinese, and steered the steamer to the village of Nam-kong-tow, where they drove the remaining Chinese ashore and set the steamer on fire. The villagers extinguished the fire, plundered the vessel, and towed her out to the mouth of the creek, where she was found in a sinking condition and towed to Hong Kong by H.M.S. *Barracouta*.<sup>112</sup> However, it would appear that *Thistle* may have been too badly damaged to be worth repairing, although she lay around Hong

<sup>109</sup> *SCW*, p. 147; *CM*, 25 December 1856.

<sup>110</sup> *SCW*, pp. 149-150.

<sup>111</sup> *CM*, 25 December 1856; *SCW*, p. 151. *Anonyma* was captured by the Chinese and later burnt by the British on 25 May 1857. *SCW*, p. 198.

<sup>112</sup> *CM*, 1 January and 8 January 1857; *SCW*, p. 154 and p. 163.

Kong for some time, her British registry not being closed until 24 January 1861, with the remark, 'taken by Chinese and burnt in 1857.' The capture of the steamer seems, from the account of Chinese survivors, to have been due to the failure of her owners and her captain to take the most elementary precautions for her safety, no guard of any kind being carried and no watch kept on the movements of her passengers.

*Fei Má*, of Lyall, Still and Co., appears to have been the last commercial vessel to remain on the Hong Kong-Canton route, but the *China Mail* of 15 January 1857 remarks, 'In our last issue we mentioned the intention of Captain Castilla to continue running *Fei Má* on the River betwixt this and Canton, but on his last trip [9 January 1857] he was so nearly taken by the Chinese that he is not likely to run such a risk again.'<sup>113</sup> And apparently he did not.

In view of the fact that foreign trade at Canton had ceased and foreign residents departed, Admiral Seymour did not feel justified in trying to hold his position there with the small forces at his disposal, and on 20 January withdrew from Dutch Folly Fort and Factory Gardens. Before leaving, the British set fire to the Chinese suburbs in the neighborhood of the factories, and after they left the Chinese burned the factory church and the barracks, so the final result was the destruction of a considerable part of Canton. Admiral Seymour fell back to the Macao Fort, which he strongly fortified as his advanced post with the intention of keeping open the channel south of Honan Island to the sea.<sup>114</sup> This meant abandoning Whampoa, which is on the channel north of Honan, and withdrawing the warships stationed there.<sup>115</sup> Following a warning of this intent, given by Sir Michael Seymour through Sir John Bowring, Thomas Hunt and Co. had abandoned their plant at Whampoa on 13 January 1857 and J. C. Cowper his plant there at about the same time, whereupon the Chinese moved in and destroyed all they could.

Under the foregoing circumstances, the merchant steamers formerly in service between Hong Kong and Canton had to find other employment. *Hong Kong* and *Sir Charles Forbes* were chartered by Admiral Seymour toward the middle of January and fitted out as gunboats to help in keeping navigation open on the Canton River,<sup>116</sup> their shallow draft making it possible for them to pursue the mandarin fleets of war junks up the creeks and into shallow waters where the large naval steamers dared not

<sup>113</sup> The attack on *Fei Má* occurred near where *Thistle* had been captured.

<sup>114</sup> *SCW*, pp. 168-170.

<sup>115</sup> *Ibid.*, p. 166.

<sup>116</sup> *CM*, 29 January 1857; *SCW*, p. 165.



venture. The former steamer was armed with four guns and manned by a crew of fifty from H.M.S. *Sybille* under Lieutenant E. F. Dent; the latter was armed with three guns and manned by men from H.M.S. *Nankin* under Lieutenant Curme.<sup>117</sup> In this connection, the *China Mail* remarked that, 'the chartering of river steamers would be a needless expense were the proper gunboats here, but we cannot expect the arrival of any of them for at least a month to come.' Figures are not available for *Sir Charles Forbes*, but *Hong Kong* was chartered for \$4,000 a month.

In February 1857, *Hong Kong* assisted H.M.S. *Hornet* under Commander Forsyth in destroying war junks in Tsychee Creek.<sup>118</sup> On 25 and 27 May, both *Hong Kong* and *Sir Charles Forbes* took part in the action in which Commodore C. G. J. B. Elliot in H.M.S. *Sybille* and Commodore Keppel (later Admiral of the Fleet Sir Henry Keppel) destroyed some forty mandarin junks in Escape Creek.<sup>119</sup> *Hong Kong*, under Commodore Keppel, was again in action on 1 June, when Admiral Seymour and Commodore Elliot, with a fleet that by now included the steam gunboats *Plover*, *Starling* and *Haughty*, destroyed between seventy and eighty armed junks in Fatshan Creek.<sup>120</sup> These expeditions represented the principal war services of *Hong Kong* and *Sir Charles Forbes*, as their charters expired in July, by which time a considerable number of gunboats had arrived in China.<sup>121</sup> The latter steamer was at once returned to her owners and resumed running between Hong Kong and Macao, while the former continued under charter, but only by the month.<sup>122</sup> On the night of 2 August, *Hong Kong* took fire through the spontaneous combustion of her coals. By the exertions of her own crew, assisted by a party from H.M.S. *Sybille*, the fire was extinguished before morning, but not before considerable damage had been done to the steamer's hull, requiring substantial repairs.<sup>123</sup> The owners took advantage of this occasion to have *Hong Kong* reboilered and thoroughly overhauled. By November the work was completed and on the twenty-seventh of that month, under Captain Gibson, she inaugurated a coastwise service between Hong Kong, Swatow and Amoy.

H.M.S. *Coromandel*, the former P. and O. *Tartar*, served as steam tender to Rear Admiral Sir Michael Seymour's flagship, and as such was

<sup>117</sup> Probably Lieutenant Charles T. Curme.

<sup>118</sup> *SCW*, p. 173 and p. 175.

<sup>119</sup> *Ibid.*, pp. 197-199.

<sup>120</sup> *Ibid.*, pp. 202-208; *CM*, 4 June 1857.

<sup>121</sup> Gunboats arriving included H.M.S. *Bustard*, *Forester*, *Opossum* and *Staunch*.

<sup>122</sup> *CM*, 16 July 1857.

<sup>123</sup> *CM*, 13 August 1857.

busily employed on the Canton River, her armament having been increased to five guns. In particular, she took part in the actions at the Macao Barrier, 4 January 1857, and at Fatshan Creek, 1 June 1857, and in the occupation of Honan on 15 December 1857, leaving Hong Kong for the north on 23 March 1858. Her draft of eight feet, while well adapted for service on the Canton River, restricted her activity on the Peiho, where naval operations were carried out largely by the shallow-draft screw gunboats. *Coromandel* continued, however, as a tender for Admiral Seymour and later for Admiral Sir James Hope, who succeeded Admiral Seymour in April 1859.<sup>124</sup>

Another merchant vessel taken up for military service was *Eaglet*, which Sir John Bowring, the British Superintendent of Trade, hired in January 1857 to act as a harbor guard at Hong Kong and to protect the boats which supplied the city's markets, N. T. Ellis, master in charge of the naval storeship *Minden*, being appointed to temporary command.<sup>125</sup> Prior to this, *Eaglet* had been running more or less regularly between Hong Kong, Swatow and Amoy with Siemssen and Co. as agents, a service to which she returned after a couple of months.<sup>126</sup> Later in 1857 she was renamed *Toey-wan*, after which John Burd and Co. of Hong Kong acted as her agents.<sup>127</sup>

*Ann*, likewise, was employed in the coasting trade, plying regularly between Hong Kong, Swatow and Amoy, while *Lily* was engaged in the same trade until early June 1857. After that, she seems to have been tied up, first at Macao and then at Hong Kong, until September, when she was sent on an expedition to Cochin China, returning in October.<sup>128</sup> She is known also to have been engaged in towing about this time. *Iron Prince* made occasional trips to the East Coast and to Formosa, while the little *Squirrel* was sent to Shanghai in August 1856, returning to Hong Kong in February 1857, after which she made at least one trip to Amoy in March 1857.

In an advertisement dated at Hong Kong on 23 February 1857, Douglas Lapraik stated that the 'screw steamer *Mirage* has undergone some alterations to make her more suitable for towing vessels, for which she is well adapted. Charges moderate.' There is nothing in the vessel's document to indicate that Lapraik owned her—he may only have chartered

<sup>124</sup> For the war services of H.M.S. *Coromandel*, see *SCW*, passim.

<sup>125</sup> *SCW*, p. 165.

<sup>126</sup> Details of the coastwise services in China at this period will be given in a later paper.

<sup>127</sup> *CM*, 22 October 1857. Whether or not John Burd and Co. were her owners, is not now known, as the documents of this steamer have been lost.

<sup>128</sup> *CM*, 17 September and 8 October 1857.

her from J. C. Cowper. But in any case this seems to mark the beginning of the enterprise that later developed into the Douglas S. S. Co.<sup>129</sup>

The P. and O. *Canton* was employed as a hospital ship,<sup>130</sup> and *Sir Jamsetjee Jeejeebhoy* as a transport.<sup>131</sup> By the fall of 1857, *Canton* was no longer needed by the military authorities, so she was placed in East Coast service, leaving Hong Kong for Amoy on 30 October 1857. *Sir Charles Forbes*, *Fei Má*, *Queen*, *Willamette* and *Spark* were all operated between Hong Kong and Macao. *Queen*, which, although British owned, was operating under the Portuguese flag, left Hong Kong for Macao at noon on 23 February 1857 on what turned out to be her final voyage. Chinese on board murdered Captain Wynn, his engineer, and Mr. Wier, late chief engineer of *Sir Charles Forbes*. A Mr. Claverly, a marine surveyor, was the only European survivor. Though wounded, he escaped by jumping overboard and was later saved. Some Portuguese female passengers and children and the Chinese passengers later reached Macao in safety by junk and reported that *Queen* had been set on fire and destroyed by the Mandarins at Chun-chune.<sup>132</sup> Parts of her machinery were later seen by the British naval forces during the war.<sup>133</sup> The *China Mail* criticized the owners of *Queen* for not having her properly manned and officered, and Captain Wynn for not adopting necessary precautions, although he had previously been warned of the danger impending over him, and that there could be no doubt whatever of the complicity of part of his crew in a projected attempt to take the steamer. In spite of this, the upper deck was deserted, except by the steersman, and the arms chest kept there left unguarded. The discovery shortly afterward of a plan to take *Lily* and *Willamette* by poisoning the officers at last awakened the owners and agents of all the river steamers to the necessity of discharging the Chinese employed on board, and the vessels were subsequently manned entirely by Europeans.<sup>134</sup>

Even without *Queen*, it appears that the traffic was insufficient for the number of steamers employed, rendering the service unprofitable. Certainly this was the case for *Willamette*, which had shown an average profit of \$2,027 per month when running to Canton, while she operated at a

<sup>129</sup> D. Lapraik had purchased the seagoing steamer *Hellespont* at auction on 11 August 1856. But he was never registered as owner, for he sold her later in the month to Jardine, Matheson and Co. and the ship was registered in the name of Robert Jardine at Hong Kong as No. 7 in 1856. *BD. ASNC, AMERICAN NEPTUNE, XVII* (1957), 213.

<sup>130</sup> *Illustrated London News*, 23 October 1858.

<sup>131</sup> P & O. Reports, 1 December 1856 (*CM*, 26 February 1857) and 31 March 1857 (*CM*, 6 August 1857).

<sup>132</sup> *CM*, 26 February and 12 March 1857.

<sup>133</sup> *CM*, 7 May and 11 June 1857.

<sup>134</sup> A. Heard and Co.'s circular, Hong Kong, 13 March 1857.

loss while running to Macao.<sup>135</sup> A severe gale at Macao on 30 September 1857 damaged *Willamette* and *Spark*, as well as *Cum Fá*, which was laid up there,<sup>136</sup> and it was some time before they were back in service. The postal steamers seem to have been laid up at Hong Kong since the early part of the war. A table in the *China Mail* for 23 April 1857 lists *Rose*, Captain Ricaby, and *Shamrock*, Captain Wood, in the name of J. F. Edger, who, as mentioned earlier, had been appointed receiver for Murrow, Stephenson and Co. *Thistle*, with no master given, is in the name of Captain Curry. This is presumably the master of *Willamette*, and the inference is that he had purchased the wreck of the unfortunate postal steamer as a speculation, as she had been advertised for sale by auction on 18 April 1857. It does not appear that she was rebuilt, at least under that name.

As of 7 August 1857, Sir Michael Seymour gave notice of a blockade of Canton, the immediate cause for this action being supposed to be a visit of the American steamer *Antelope* to Whampoa shortly before.<sup>137</sup> The *China Mail* was critical of the action, claiming that only the passage by Boca Tigris was blockaded and consequently the principal result was to divert trade from Hong Kong to Macao.<sup>138</sup>

On 21 April 1857, the Earl of Elgin and Kincardine left London as plenipotentiary with full powers for the settlement of all matters between Great Britain and China. To assist such a settlement, he was to have been supported by a considerable military force, but by the time he arrived at Hong Kong on 2 July, affairs in India had become so critical that the troops could not be spared and Lord Elgin went to India. Upon the improvement of the situation there, he returned to Hong Kong on 20 September and by the end of the year sufficient forces had been accumulated that on 29 December the city of Canton was taken by assault by British and French naval and military forces under Rear Admiral Sir Michael Seymour, Rear Admiral Rigault de Genouilly and Major General C. T. Van Straubenzee.<sup>139</sup> Thereupon the tide of war turned toward the north, particularly toward the Peiho, as was in the interest of both military and economic strategy. For, on the one hand, the Allies with their limited forces could not afford to be involved on too wide a front at any one time, while on the other hand, as the underlying cause of the war was the effort to promote trade, it was certainly desirable that not all avenues of commerce be closed at once.

<sup>135</sup> *ASNC*, AMERICAN NEPTUNE, XVI (1956), 169, where further references are given.

<sup>136</sup> *CM*, 8 October 1857.

<sup>137</sup> A. Heard and Co.'s circular, Hong Kong, 9 August 1857.

<sup>138</sup> *CM*, 10 September 1857.

<sup>139</sup> *SCW*, p. 271; *CM*, 31 December 1857.

In consequence, peace and commerce were rapidly restored in the vicinity of Hong Kong and Canton. On 18 January 1858, Admiral Seymour gave notice of the resumption of mail service between the two cities by means of naval vessels leaving Canton at 7:00 A.M. on Mondays, Wednesdays and Fridays; and Hong Kong at the same hour on Tuesdays, Thursdays and Saturdays. The time for the trip in either direction was estimated as twelve hours, which had been the time allowed for the 'postal' steamers but was considerably longer than that required by the larger river steamers of the period.<sup>140</sup> The blockade of Canton was removed on 10 February 1858, and the first commercial steamer to re-enter the river service was *Willamette*, which had been thoroughly repaired and on 11 February left Hong Kong for Canton, carrying (free of freight) five hundred bags of rice contributed by Parsee firms toward the relief of famine among the Chinese in Canton. Russell and Co. were now her agents.<sup>141</sup> *Mirage* and *Hong Kong* started towing on the Canton River that same month, foreign firms returned to Canton, the shipyards at Whampoa were reoccupied, and it was not long before regular steam shipping was re-established on the river. But this forms a new chapter in the history of steam navigation in China and will be treated in a subsequent paper.

This paper is based primarily on material at the Library of Congress, the Baker Library of Harvard University, and the Mariners' Museum, together with transcripts of ships' documents furnished by the Registry General of Shipping and Seamen, Cardiff. The author takes pleasure in acknowledging his indebtedness to these institutions and wishes to express his appreciation of the kind co-operation of their staffs.

<sup>140</sup> Advertisement in *CM*, 21 January 1858.

<sup>141</sup> The California S. N. Co., owners of *Willamette*, were evidently tired of their Chinese venture, for she was advertised to be sold at auction on 6 February (*CM*, 4 February 1858). Actually she was not sold until a few days later. Cf. *ASNC*, *AMERICAN NEPTUNE*, XVI (1956), 169.

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## APPENDIX I

## FINANCIAL STATEMENTS OF THE HONG KONG AND CANTON S. P. CO.

PROFIT AND LOSS ACCOUNT FROM 1849 TO 30 NOVEMBER 1855.<sup>142</sup>

Dr.

To loss on Block <sup>143</sup> of Steamer <i>Canton</i> :	\$ 18,319.44
To loss on Block of Steamer <i>Hong Kong</i> :	18,715.10
To cost of New Boilers and Fittings sold with steamers:	19,076.52
	<hr/>
	56,111.06
To Interest Account for Balance: <sup>144</sup>	27,695.95
To Fuel Account for Balance, consisting of Coals expended, but not credited during the agency of Mr. Carter:	14,380.59
To Engineer's Ship and Stores Account for Balance:	5,609.72
To Charges for Balance:	36,894.26
Disbursements of Steamer <i>Canton</i> :	141,150.47
Disbursements of Steamer <i>Hong Kong</i> :	144,529.59
To Coal Store Account for Balance:	10.18
To items in W. Pitcher's Account disputed by A. Carter, but not recovered, and amount lost by robbery on <i>Hong Kong</i> :	6,387.62
	<hr/>
	432,769.44

Cr.

By Freight, Steamer <i>Canton</i> :	\$ 80,400.20
By Freight, Steamer <i>Hong Kong</i> :	68,280.07
By Passage, Steamer <i>Canton</i> :	77,629.35
By Passage, Steamer <i>Hong Kong</i> :	66,579.50
By Annual Subscriptions:	14,153.00
By Mail Subscriptions:	7,304.00
By Differences of Exchange:	5,232.91
By net loss:	113,190.41
	<hr/>
	432,769.44

## OPERATING RESULTS TO 31 MARCH 1850.

Between 1 September 1849 and 31 March 1850, *Canton* made 73 trips at an average loss of \$50.00 per trip.

Between 1 October 1849 and 31 March 1850, *Hong Kong* made 51 trips at an average loss of \$85.00 per trip.

## RECONCILIATION OF CAPITAL ACCOUNT.

Paid-up Capital, 98 shares of \$1200 each:	\$117,600.00
Net loss from Operations:	113,190.41
	<hr/>
Available for Distribution: Total:	4,409.59
Per Share:	44.99

<sup>142</sup> From report of Lyall, Still and Co. as Agents, 30 November 1855. Heard Collection, Box 31. Amounts are expressed in Mexican dollars.

<sup>143</sup> Loss on Block was the difference between the cost of the steamer and the proceeds of her sale.

<sup>144</sup> On claims of Jardine, Matheson and Co. and the late L. Dent.

## APPENDIX II

*Official Numbers of Steamers Mentioned<sup>145</sup>*

<i>Ann</i> (1839)	32709
<i>Canton</i> (1848) (P. and O.)	32731
<i>Canton</i> (1848) (H.K. and C. S. P. Co.)	87/1849, London
<i>Carolina</i> (1849) (Am.)	P.E. 423, Philadelphia, 27.9.49
<i>Corsair</i> (1827)	39/1827, Glasgow
<i>Cum F�a</i> (1856) (Am.)	None
<i>Diana</i> (1823)	None
<i>Eaglet</i> (1854)	32716
<i>Fei M�a</i> (1856)	32745
<i>Firefly</i> (1846) (Am.)	None
<i>Forbes</i> (1829)	40983
<i>Hong Kong</i> (1849)	32713
<i>Iron Prince</i> (1845)	194/1845, Liverpool
<i>Jardine</i> (1835)	41/1835, London
<i>Lily</i> (1856) (Am.)	None
<i>Midas</i> (1844) (Am.)	P.R. 208, Boston, 13.9.44
<i>Mirage</i> (1855)	32736
<i>Queen</i> (1853) (Port.)	None
<i>River Bird</i> (1854)	P.R. 5, New York, 3.2.55
<i>Rose</i> (1855)	Document missing
<i>Shamrock</i> (1856)	32739
<i>Sir Charles Forbes</i> (1846)	41208
<i>Sir Jamsetjee Jeejeebhoy</i> (1849)	2/1849, Bombay
<i>Spark</i> (1850) (Am.)	None
<i>Squirrel</i> (1856)	32740
<i>Tartar</i> (1853) (later <i>Coromandel</i> )	50663
<i>Thistle</i> (1855)	32738
<i>Underwriter</i> (1854) (Am.)	P.E. 331, San Francisco, 19.11.55 (not earliest)
<i>Willamette</i> (1849) (Am.)	P.R. 80, Philadelphia, 2.8.50

<sup>145</sup> Official numbers, where known, are given. These will necessarily be British, as American vessels did not have official numbers at this period. Where a ship had no official number, number, date and place of the original document are given when possible.

## APPENDIX III

TECHNICAL DETAILS OF STEAMERS<sup>146</sup>

Name (Year Built)	Material	Type	Tonnage		Hull		Engine		Dimensions
			Gross	Net	Builder	Dimensions	Builder	Type	
<i>Ann</i> (1839)	Wood	scr.	238.97	154.10	Isemonger	117.3 x 19.7 x 13.3 NE 1853	Conley Summers	L.P.	29", 29" x 4.4'
<i>Canton</i> (1848) (P. & O.)	Iron	pad.	348.45	218.35	Tod	172.7 x 21.4 x 10.7	Tod	D.A.Tr.	66" x 5'
<i>Canton</i> (1848)	Wood	pad.	234.5	139.5	Pitcher	133.0 x 18.0 x 11.9	Harman	L.P.	38", 38" x 3.9'
<i>Corsair</i> (1827)	Wood	pad.	185.92/94	182	Wood & B.	135.11" x 20' x 12.6"	D. Napier	L.P.	14 1/2", 14 1/2" x 4'
<i>Eaglet</i> (1854)	Wood	pad.							
<i>Fai Ma</i> (1856)	Wood	pad.	192.54	121.30	Cowper	158.0 x 18.0 x 8.2	Thomson	St.	
<i>Hong Kong</i> (1849)	Wood	pad.	232.3	140.7	Pitcher	133.0 x 18.0 x 11.55	Harman	L.P.	38", 38" x 3.9'
<i>Iron Prince</i> (1845)	Iron	scr.	180.70	134.70	Hodgson	119.8 x 17.4 x 11.8	Hodgson	L.P.	22", 22" x 24"
<i>Jardine</i> (1835)	Wood			58.32/94	Hall	81.9" x 17.1" x 9.5"			
<i>Lily</i> (1856)	Wood	pad.	413		Cowper	179 x 22 x —	Harman	L.P.	38", 38" x 3.9'
<i>Mirage</i> (1855)	Wood	scr.	100.58	80.30	Cowper	87.0 x 15.0 x 7.3		1-cyl.	
<i>Queen</i> (1853)	Wood			137	Lamont				
<i>Rose</i> (1855)	Iron	pad.	105	74	Ross <sup>147</sup>	99.5 x 18.0 x 7.7		2-cyl.	
<i>Shamrock</i> (1856)	Iron	pad.	105	74	Ross <sup>147</sup>	99.5 x 18.0 x 7.7		2-cyl.	
<i>Sir Charles Forbes</i> (1846)	Wood	pad.	210.85	141.25	Mercantile	130.1" x 18.5" x 10.2"			
<i>Sir Jamesjee Jeejeebhoy</i> (1849)	Wood	pad.	126.27	82.23	Wadia	119.4" x 15.7" x 8.10"	Logan <sup>148</sup>	2-cyl. osc.	
<i>Squirrel</i> (1856)	Wood	scr.	59.52	46.22	Ross	99 x 12.5 x 7.5		2-cyl.	
<i>Tartar</i> (1853)	Wood	pad.	369	196	White	172.6 x 25.0 x 13.6	Summers		
<i>Thistle</i> (1855)	Iron	pad.	105	74	Ross <sup>147</sup>	99.5 x 18.0 x 7.7		2-cyl.	
<i>Willamette</i> (1849)	Iron	pad.	370.46/95		Harlan	155.6 x 28.2 x 9.0	Harlan <sup>149</sup>	Incl.	31", 31" x 7'

## APPENDIX III

*Full Names and Locations of Ship and Engine Builders*

Conley	Conley and Scott, Shields
Cowper	J. C. Cowper, Whampoa
Hall	Alexander Hall and Co., Aberdeen
Harlan	Harlan and Hollingsworth, Wilmington, Delaware
Harman	H. W. Harman, Northfleet, Kent
Hodgson	James Hodgson and Co., Liverpool
Isemonger	Thomas Isemonger, Littlehampton, Sussex
Lamont	Lamont, Hong Kong
Logan	Logan, Hong Kong
Mercantile	Mercantile Dock, Mazagon, Bombay (master builder not stated)
D. Napier	David Napier, Glasgow
Pitcher	William Pitcher, Northfleet, Kent
Ross	William Ross, Hong Kong
Summers	Summers, Day and Baldock (later Summers, Day and Co.), Northern Iron Works, Southampton
Thomson	J. and G. H. Thomson, Glasgow
Tod	Tod and MacGregor, Meadowside (Glasgow)
Wadia	Dhunjibhoy Rustomjee Wadia, Mazagon Mogul Dock, Bombay
White	Thomas White and Sons, Cowes, I. O. W.
Wood & B.	John Wood and James Barclay, Port Glasgow

*Abbreviations of Terms in Appendix III*

D. A.	Direct-acting	Pad.	Paddle (side-wheel)
Incl.	Inclined	Scr.	Screw (propeller)
L. P.	Low Pressure	St.	Steeple
Osc.	Oscillating	Tr.	Trunk

<sup>146</sup> Information has been taken from official documents, British or American, whenever possible, and material from these sources is characterized by the use of fractional tonnages. It has not been thought desirable to give all changes in tonnages or dimensions, since these changes are often slight, those data being preferred which are applicable as near as possible to the time of the steamer's service in China. Some, but not necessarily all, other sources of information are given in footnotes.

<sup>147</sup> May not have been the original engines.

<sup>148</sup> From engine plans of the Harlan and Hollingsworth Co. (at Mariners' Museum).