

(No. 1236.)

"CALLIOPE" (S.S.)

The Merchant Shipping Acts, 1854 to 1876.

IN the matter of the formal Investigation held at Cardiff on the 12th and 13th of January 1882, before H. C. ROTHERY, Esquire, Wreck Commissioner, assisted by Captains CASTLE and FORSTER, as Assessors, into the circumstances attending the foundering of the steamship "CALLIOPE," of London, and the loss of the lives of 27 of those on board, on the 19th or 20th of October last, off the coast of Portugal, whilst on a voyage from Odessa to Bremerhaven with a cargo of barley.

Report of Court.

The Court, having carefully inquired into the circumstances of the above-mentioned shipping casualty, finds, for the reasons annexed, that the loss of the said vessel "Calliope" was due to her having been overladen, as well as insufficiently provided with shifting boards for the voyage in question.

The Court further finds that Mr. Thomas Baker, of Cardiff, the managing owner of the said late vessel "Calliope," is responsible for her having been so overladen, and accordingly condemns him in the sum of one hundred pounds (100*l.*) *nomine expensarum*.

Dated this 13th day of January 1882.

(Signed) H. C. ROTHERY,  
Wreck Commissioner.

We concur in the above report.

(Signed) GEORGE H. FORSTER, } Assessors.  
JOHN S. CASTLE, }

Annex to the Report.

This case was heard at Cardiff on the 12th and 13th of January instant, when Mr. Muir Mackenzie appeared for the Board of Trade, and Mr. Vachell for the managing owner of the "Calliope." Five witnesses having been produced by the Board of Trade and examined, and the depositions of one witness taken at Odessa, and of three witnesses taken at Constantinople, having been put in and read, Mr. Muir Mackenzie handed in a statement of the questions on which the Board of Trade desired the opinion of the Court. Mr. Vachell having then produced two witnesses, addressed the Court on behalf of his party, and Mr. Muir Mackenzie having been heard in reply, the Court proceeded to give judgment on the questions on which its opinion had been asked. The facts of the case are as follow:—

The "Calliope," which was an iron screw steamship belonging to the Port of London, of 1,449 tons gross and 1,062 tons net register, and which was fitted with engines of 95 horse-power, was built at Waterford in the year 1861, and at the time of her loss was the property of Mr. Thomas Baker, of Cardiff, and a number of other gentlemen, Mr. Thomas Baker being the managing owner. She left Odessa on the 4th of October last, bound to Bremerhaven, with a crew of 22 hands all told, 6 passengers, and a cargo of barley. What was the amount of the cargo on board, and what the extent of her freeboard, are points on which the evidence is somewhat conflicting, and which will have to be very carefully considered by the Court. Before she got across the Black Sea the vessel took a slight list to starboard, and accordingly, on her arrival at Constantinople on the morning of the third day after leaving Odessa, the crew were employed, with the assistance of some labourers from the shore, to retrim the cargo; and on the same evening she left for Malta, where she arrived in about 5 days afterwards. Having there replenished her stock of coal, she proceeded on her voyage, reaching Gibraltar in about six days. After passing the Straits she continued her course to

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the northward, and on the 19th or 20th was between the entrance to the Tagus and the Burlings, the wind at the time blowing a moderate gale from the west to W. by N., with a heavy sea on the port quarter, when she took a heavy list to starboard. On the following morning the weather was worse, and accordingly, at about 10 a.m., the captain hove her to; but the weather having moderated a little, at about 3 p.m. he again proceeded on his course. At 10 p.m. they were obliged again to heave the vessel to, and at 1 a.m. on the following morning, the links of the wheel chains having broken, the vessel took a heavy list to port. At 3 a.m. the port lifeboat was carried away, and at 5 a.m. there was an alarm that the vessel was going down by the head, upon which the captain ordered the engines full speed ahead and the helm to be put hard-a-port. At this time Fitzpatrick, the only survivor, finding, as he has told us, that she would not answer to her helm, made for the starboard lifeboat, but was soon afterwards washed out of her, and seeing, while he was in the water, the top of the chart-room floating past him, he swam to it, and got upon it. Whilst there he saw first a steamer and then a sailing vessel pass, but without observing him. During the night he lost consciousness, but in the day time he regained it; and after remaining in this state for some four days, lashed to the top of the chart-house, he was picked up by a Spanish fishing boat, and taken on shore, and has been since sent home to this country by the British Consul.

These being the facts of the case, the first question upon which our opinion has been asked is, "Whether, when the owners caused ballast tanks to be fitted in the vessel, proper measures were taken to ascertain how far these affected her stability." In order to answer this question it will be necessary that we should know something of the history and of the construction of this vessel. It seems that she was originally built in the year 1861 by the Neptune Iron Works Company, of Waterford, for Messrs. Malcolmson Brothers, the eminent steamship owners of Portlaw, near Waterford, and was launched with the name of the "Avoca." Mr. Horn, the manager of the works at that time, and under whose superintendence the vessel was built, but who is now a ship designer and consulting engineer at Liverpool, has brought in the original plans of the vessel, and from them, and especially from the plan of the midship section, it will be seen that the vessel was, as Mr. Horn has told us, a first class ship, and built beyond the requirements of any of the classification societies. It appears that the plates on the garboard strake were  $\frac{1}{8}$ ths thick, on the bilges  $\frac{1}{8}$ ths, higher up  $\frac{3}{8}$ ths, and that the stringer plates were  $\frac{1}{8}$ ths. The other parts of the vessel were of corresponding strength, and she had iron bulwarks 5 feet 3 inches high. In 1863 her name was changed to the "Uruguay," and in 1868 she was purchased by the Liverpool, Brazil, and River Plate Steam Navigation Company, of Liverpool. After this she passed through the hands of various owners until the year 1877, when her name was changed to the "Calliope," and Mr. Thomas Baker, of Cardiff, and others, then became the owners. It seems also that when she was originally built she had a pair of heavy low pressure engines, which were right aft, forward of which were three holds separated from one another by iron water-tight bulkheads. Upon the main deck also she had three erections, which are described in the register as a poop, with a capacity of 41.37 tons, a round house of 65.49 tons, and a spar deck enclosed of 54.34 tons, making a total of closed in spaces on deck of 161.20 tons. In 1872, however, these three separate deck erections had been formed into one long poop extending from the taffrail forward for 150 feet, serving not only as a cover to the engine room compartment aft, but affording accommodation for the engineers and others. It contained also some cargo space, and the total capacity of this long poop was, as appears from the certificate, 302.15 tons. In the year 1877, on her coming into the possession of Mr. Thomas Baker and others, the ballast tank to which reference has been made was put into her. It commenced at the fore-part of the main hold, and extended some 90 feet aft, and was about 5 feet high in the after-part, tapering down to 3 feet forward, and capable of containing, we are told, from 250 to 270 tons of water. In 1879 the old

engines, which were 155 horse power nominal, were taken out, and two new compound inverted engines of 95 horse power were put into her.

This being so, let us now see what effect these various alterations would probably have had upon the vessel's stability. First, the water-ballast tank being 90 feet long, 5 feet high aft, and 3 feet forward, would tend to raise the cargo, and consequently its centre of gravity. Secondly, the removal of the old engines of 155 horse power nominal, which were seated in the bottom of the vessel, and the substitution for them of smaller compound inverted engines of 95 horse power, would also tend to raise the centre of gravity. Thirdly, the conversion of a portion of the poop into space for cargo would, when that space was filled, still further raise the centre of gravity. On the other hand, Mr. Baker has told us that he took care to reduce the rigging, and to take off all the superfluous weight he could. How far this might have counteracted the effect produced by the alterations to which I have referred, it is not possible for us to say. One fact, however, seems clear, that whereas Mr. Horn has told us that when they built her she was a good, strong, substantial vessel, neither too crank nor too stiff, Mr. Baker has said that, when they had her, she was a "moderately crank vessel." That this too was so may perhaps fairly be inferred from the fact that, on her last voyage out from Cardiff to Naples, with a cargo of 1,457 tons of coal, besides of course bunker coal, she shifted her cargo; that she again shifted her cargo in crossing the Black Sea within three days of her leaving Odessa, and subsequently, as we shall presently see, before she foundered, she again shifted it first to starboard and then to port. There seems, therefore, every reason to think that the alterations that were made in her did affect her stability. Whether, however, they did or did not, it does not appear that any measures were taken by the owners to ascertain how far it did so.

The second question which we are asked is, "Whether, looking to the construction of the vessel, and the height of the water-ballast tank, the load-line of the vessel was placed in a position such as to give her sufficient freeboard, especially for a winter voyage with a grain cargo?" We were told by Mr. Baker that the load-line had been placed at 2 feet 6 inches below the level of the main deck at the side; and although Mr. Vachell said that he thought Mr. Baker did not go quite to that extent, there can be no doubt of the fact, for the official log-book, as well as the ship's articles, give it at that height for several successive voyages; and what, therefore, we are now asked is, whether, if she had been sunk down to her load-line, she would have had sufficient freeboard for a winter voyage across the Bay of Biscay with a grain cargo? It seems that the vessel's hold was 21.1 feet deep; a freeboard, therefore, of 2 feet 6 inches, or 30 inches, would give her less than 1½ inches of freeboard for every foot depth of hold. Now Mr. Horn has told us that, as originally built, he considers that she ought to have had a freeboard of not less than 4 feet 5 inches, or about 2½ inches, to every foot depth of hold. This, I may observe, is very nearly the amount of freeboard which Mr. Martell, a gentleman of great authority on such matters, would give her; for I find that a vessel with her dimensions would have a co-efficient of fineness of .67, and with a depth of hold of 21.1 feet she ought, according to Mr. Martell's tables, to have had a freeboard of 4 feet 7 inches, 2 inches more than Mr. Horn would give her, or about 2⅓ inches of freeboard for every foot depth of hold.

It was said, however, that since Mr. Horn had built her she had had certain additional closed-in spaces erected on the main deck, which would add to her spare buoyancy, and it may be well therefore to see what these are. Originally, as we have seen, the closed-in spaces on her main deck had a total capacity of about 161 tons, but on her last voyage the total capacity of all the closed-in spaces on deck was about 310 tons, making a difference of about 149 tons. It was admitted, however, by Mr. Horn that the whole of these 149 tons would not count for spare buoyancy. On the other hand, we find from her displacement scale that the difference of her displacement at 4 feet 5 inches and 2 feet 6 inches would be 350 tons, all of which, being under the tonnage deck, would count for spare buoyancy. It is idle, therefore, to say that these 350 tons taken from the spare buoyancy by sinking the vessel from 4 feet 5 to 2 feet 6 would be compensated by the additional 149 tons of closed-in spaces above the deck. If, then, Mr. Horn's and Mr. Martell's estimates of the freeboard which the vessel ought to have had originally, apart from her deck erections, be correct, a freeboard of only 2 feet 6 inches

with those deck erections would be wholly inadequate, more especially for a winter voyage across the Bay of Biscay. It was said, however, by Mr. Vachell that the vessel, having left Odessa on the 4th of October, would in the ordinary course have arrived in this country before the end of October, and that this, therefore, could not properly be regarded as a winter voyage. But I am told by the assessors that vessels crossing the Bay of Biscay in the month of October are very likely to encounter heavy gales of wind, more so perhaps than later in the year, and that experience shews that at that time of the year heavy gales are of frequent occurrence in the North Atlantic. This voyage, then, being to all intents and purposes a winter voyage, the assessors have no hesitation in saying that a freeboard of only 2 feet 6 inches for this vessel would be wholly insufficient.

The next question which we are asked is, "Whether, when she started on her voyage, she was overladen, and whether the freeboard was or was not sufficient, having regard to the voyage on which she was bound?" And, first, let us inquire what was the amount of cargo which the vessel had on board. Mr. Baker has brought in three bills of lading shewing a total of 12,500 cwt-werts, weighing 92,412 poods, and taking the poed at 35½ lbs., this, he said, would give about 1,464 tons. On the other hand, we have a certificate dated the 4th of October last, the day on which the vessel left Odessa, and which was handed by the master to the British Consul in accordance with the Carriage of Grain Act, 1881, previous to the departure of the vessel, and which bears the master's signature, and in this certificate it is stated that the vessel, when she left Odessa, had on board 9,324 quarters of barley, of which 9,024 were in bulk and 300 in bags. Now 9,324 quarters of barley would, at 114 quarters to 21 tons, which is the relative proportion given in Stevens on Stowage, be equal to 1,717½ tons, a very different amount to that stated by the owner, namely, 1,464 tons. Nor is there anything unreasonable in supposing her to have had as much as 1,717 tons of barley on board, for I find on reference to the list of cargoes which this vessel is stated to have carried between December 1879 and the time of her loss, and which has been given in by Mr. Baker himself, that in December 1879 she carried from Odessa to Havre a mixed cargo of grain weighing 1,733 tons, and that was a winter voyage. Again, in May 1880, she carried from Odessa to Marseilles a cargo of grain weighing 1,779 tons. The list, too, shows her to have carried frequently cargoes of about 1,800 tons, and once as much as 1,940 tons. There is therefore nothing unreasonable in supposing that she had on board on this occasion as much as 1,717 tons of barley; on the contrary, what would be very unreasonable is that she should have had only 1,464 tons on board when she was quite capable of carrying and often carried very much heavier cargoes. We shall therefore hold that her cargo on this occasion consisted of 1,717 tons in accordance with the captain's certificate, the more so as there is no evidence that we have all the bills of lading before us.

And now let us inquire what freeboard this vessel had when she left Odessa. According to the certificate handed in by the master at Odessa, and to which I have already referred, her freeboard on taking her departure was 3 feet, and it is added that in salt water she would rise 3 inches, making 3 feet 3 inches, by which, I presume, he means when she got into the Atlantic, for the Black Sea is partially salt. Taking then her freeboard at 3 feet, which it is alleged she had on leaving Odessa, that, on a depth of hold of 21.1 feet, would give 1.7 inches, or less than 1½ inches of freeboard for every foot depth of hold, which, in the opinion of the assessors, would be wholly inadequate. But is it quite certain that she had that? I find it stated in the same certificate that the vessel's draught on leaving Odessa was 19 feet 6 inches forward and 22 feet 6 inches aft, giving a mean of 21 feet. Now the total height of the vessel from the bottom of the keel, allowing 10 inches for the depth of the keel, to the top of the main deck at side would, by the midship section produced, be 23 feet 3 inches; so that, if the master's statement is correct that she drew on leaving Odessa 21 feet as a mean, her freeboard then could have been only 2 feet 3 inches, and adding the 3 inches which it is said she would rise on getting into the Atlantic, would give us a freeboard of 2 feet 6 inches, which we may call the owner's freeboard, and with which, according to him, she would be quite safe. That this too may have been her condition is to a certain extent confirmed by the evidence of a man named Paolo Vella, a stvedore, who assisted to retrim the cargo at Con-

be wholly inadequate, and the cargo was stowed across the Bay of Odessa by Mr. Vachell that the vessel arrived in this country on the 4th of October, would be that this, therefore, as a winter voyage, that vessels crossing the Bay of Odessa in October are very likely to be more so perhaps than in other months, and the evidence shews that at that time of frequent occurrence of heavy weather, then, being to all intents and purposes a winter voyage, the assessors would be wholly inadequate.

When asked is, "Whether, she was overladen, or was not sufficient, which she was bound?" as the amount of cargo Mr. Baker has brought a total of 12,500 cwt. and taking the pood at about 1,464 tons. On the certificate dated the 4th of the vessel left Odessa, the master to the British Carriage of Grain Act, of the vessel, and which is in this certificate it is the left Odessa, had on board of which 9,024 were in 324 quarters of barley, which is the relative quantity in Stowage, be equal to that stated by the certificate. Nor is there anything to have had as much as for I find on reference to the vessel is stated to have and the time of her loss, Mr. Baker himself, that from Odessa to have a cargo of 1,733 tons, and that was in 1880, she carried from Odessa a cargo of grain weighing 1,779 tons, and once as much as she was quite capable of carrying much heavier cargoes. The cargo on this occasion was in accordance with the captain's certificate there is no evidence that we are asked us.

As to the freeboard this vessel according to the certificate of Odessa, and to which I refer on taking her draught added that in salt water she was 3 feet 3 inches, by which she got into the water partially salt. Taking into account which it is alleged she had a depth of hold of 21.1 feet, less than 1 1/2 inches of freeboard, which, in the opinion of the assessors, would be wholly inadequate. I find it that the vessel's draught was 6 inches forward and 21 feet. Now the depth of the keel, to the top of the keel, by the midship section, so that, if the master's certificate drew on leaving Odessa, then could have been 3 inches which it would be getting into the Atlantic, 6 feet 6 inches, which would be quite safe. That this is to a certain extent a man named Paolo Vella, who trimmed the cargo at Con-

stantinople, and who tells us that at that time the disc was under water; he says, indeed, 6 inches under water, but whether he means on the side on which the vessel had a list it is not possible to say. But it was said that the vessel has during the last two years often had much larger cargoes in her, and consequently much less freeboard than she had on the last occasion, and that once she had as much as 1,940 tons of ore on a voyage from Porman, near Carthage, to Cardiff, and that she carried it safely; the only reply, however, that we would make to that is, that the owner must have been extremely fortunate not to have had the vessel founder sooner, for judging from the vessel's midship section she must, with 1,940 tons of ore on board, besides the coal in her bunkers, have had her main deck level with, if not beneath, the level of the water. On the whole we have no hesitation in saying that this vessel, when she started from Odessa, was overladen and had not sufficient freeboard, having regard to the voyage on which she was bound and to the season of the year.

The fourth question which we are asked is, "Whether the cargo was stowed in accordance with the requirements of sections 4 and 5 of the Carriage of Grain Act of 1880, and Official Notice, No. VIII., issued by the Board of Trade; and especially whether the shifting boards were properly fitted throughout the ship wherever the grain was carried?" It seems that in the course of last summer Mr. Baker instructed Messrs. Mordey and Carney, of Newport, shipbuilders and ship repairers, to prepare a set of shifting boards for the vessel, so that she might be capable of carrying a cargo of grain in conformity with the provisions of the Carriage of Grain Act, 1880. These gentlemen accordingly prepared a number of shifting boards, which, we are told, were put on board the vessel, and which were in a condition to be erected whenever required; but they were not actually fitted in their places. According to Mr. Mordey there were shifting boards provided sufficient to fit the fore, main, and after holds with divisions down the centre, extending from end to end and from deck to keelson; in addition to which there were boards to form thwartship bulkheads in the main and after holds. In the poop also, or rather in the part of it which was capable of containing cargo, sufficient shifting boards were provided to form three longitudinal divisions one on each side of the hatchways, and one down the centre. Assuming then all these to have been put on board, what we have now to consider is, whether they were or were not erected prior to the loading of the cargo and the departure of the vessel from Odessa. On this point the evidence is of the most meagre character, there being no evidence from Odessa on the point, and all on board having perished except Fitzpatrick, who seems to have been only in the after-hold assisting the carpenter to put up the shifting boards. According to his evidence the shifting boards in the after-hold extended from the keelson to the beams and running down the centre from end to end, and with a thwartship bulkhead across the middle. He also told us that he saw some beam filling pieces put up in that hold, although he could not speak with certainty to their having been all put up. He told us also that in the poop there were two lines of shifting boards put up, one on each side of the hatchways, but that they did not come up to within 2 feet of the upper deck beams, and that there was not any central line of shifting boards put up. Of this he was quite positive, and the very clear and proper way in which he gave his evidence induces us to place full reliance on what he said. And now let us see in what position this leaves the vessel, so far as her shifting boards are concerned, confining our attention simply to the after-hold and the poop. We are told that there were in the after-hold two hatchways, one about eight feet square, the other from 18 to 19 feet long and about 9 feet broad, the hatches of which were all off. We will assume that the shifting boards in the after-hold were all fitted, and that they extended from end to end, and from keelson to the deck, with filling pieces between the beams, and that in the poop above it and communicating with it by the hatchways there were two rows of shifting boards running from end to end of the compartment, but not in continuation of the shifting boards in the lower hold, but one on each side of the hatchways. There would then be two spaces in the main deck, respectively 8 and about 18 or 19 feet long, and from 8 to 9 feet broad, where there were no shifting boards to prevent the grain on the one side of the hold from travelling over to the other side as the ship heeled over; and in the poop, there being a space of about two feet between the shifting boards and the beams, there would be nothing

to prevent the grain from either side passing into the central compartment, and from the central compartment to either side, according as the vessel heeled over to one side or to the other.

And here it may not be unimportant to observe that there is a passage in the master's certificate given in by him at Odessa, which appears strongly to confirm Fitzpatrick's statement that there were two tiers of shifting boards in the poop, one on each side of the hatchways, dividing the poop into three compartments. The passage to which I refer is that where he says that the cargo was placed in fifteen separate compartments. Now these fifteen compartments would seem to have been made up as follows:—Assuming the bulkheads and shifting boards to have been put up as already stated, we should have in the fore-hold 2, in the main and after holds 4 each, which would make 10 compartments; then we were told that a portion of the grain in bags was put into the lazarette, and another portion, also in bags, in the lower lazarette, thus making 12; and if the poop were divided into 3 compartments by two lines of shifting boards, one on each side of the hatchways, that would make the 15 required; whereas if there had been also a central line of shifting boards in the poop, dividing it into 4 compartments, that would have made 16 compartments, which is one more than the captain has stated. The way then in which the shifting boards were fitted in the poop and after-hold was, in our opinion, not in compliance with the provisions of the Carriage of Grain Act, 1880, or with Notice No. VIII., issued by the Board of Trade with reference to vessels coming with grain from the Black Sea, which require that there shall be longitudinal shifting boards from end to end, and from top to bottom of each of the holds, so as effectually to prevent the cargo from shifting from one side to the other of the vessel, which was not the case, so far at any rate as the after-hold and the poop were concerned. As to how the shifting boards were fitted in the fore and main holds, we have no positive information; but we give the owners the benefit of the doubt, and assume that they were properly fitted, there being no evidence to the contrary.

This then brings us to the fifth question, which is, "What was the cause of the vessel having a list to starboard upon her arrival at Constantinople?" The cause no doubt was that the cargo shifted to starboard, and which, as we have seen, it would readily do by passing over the tops of the shifting boards in the after-hold in the way of the hatches, and in the poop for their whole length. And that the cargo did shift between the Black Sea and Constantinople is clearly proved by the fact that labourers were employed from the shore to assist in retrimming it.

The sixth question which we are asked is, "Was the cargo properly and efficiently retrimmed, and was she when she left Constantinople too deeply laden?" The list which she had on her arrival at Constantinople was not serious, and we have no doubt that the cargo was properly and efficiently retrimmed before she left that port. That she was then also too deeply laden we have equally no doubt, as she had still the same cargo on board as when she left Odessa, and had only been lightened to the extent of three days' consumption of coal, which, we are told, would be about 30 to 33 tons, or about 2 inches, which would still leave the load line under water.

The seventh question which we are asked is, "What was the cause of the cargo shifting to starboard on the 20th October, and afterwards to port on the 21st?" Mr. Vachell stated that there was no evidence that the cargo shifted at all, and in proof thereof he referred to the evidence of the master and mate of the "City of Exeter," who said that they met the "Calliope" about 8 or 9 miles to the southward of Cape Rocca, and that at that time she was standing to the northward with her fore and aft canvas set, and that she was then in good trim. But it is not pretended that the cargo ever shifted until the vessel was between the Tagus and the Burlings, and some 30 miles to the north of where she was when she met the "City of Exeter." There is also the evidence of Fitzpatrick, who told us that he went down into the poop and saw that the cargo had gone bodily over to starboard, and we have no reason to think that he was not speaking the truth.

The eighth question which we are asked is, "What was the cause of the vessel foundering?" Mr. Vachell said that the cause of the vessel foundering was probably due to the fore hatch having been washed off by the sea, thus letting the water down into the fore-hold and sinking the vessel by the head, and that it was not in any way owing to the shifting of the cargo. And in

that opinion we are disposed to concur; indeed, Fitzpatrick told us that the last that he saw of the vessel was the stern of the vessel out of water and the propeller spinning round. But what was it that caused the fore hatch to be washed off? It seems that the vessel had a long poop, some 150 feet long, forward of which was what is called the fore well, which was about 100 feet long, the fore part of it being for a short distance decked over, but open at the after part. On this part of the deck were two hatchways, a main hatchway from 19 to 20 feet long by 9 feet broad, and a fore hatchway about 6 feet square. Now Fitzpatrick has told us that for a long time before the vessel foundered there was a large quantity of water in this fore well, washing about with great force, and although there may have been ports in the side, we are told by Fitzpatrick that there was always a great quantity of water in this well. This, in the opinion of the assessors, is quite sufficient to account for the tarpaulins being washed off the fore hatchway, in which case the hatches would float away, and the water would then pour down into the fore hold and sink the vessel. At the same time it should be observed that it was the overloading of the vessel which caused the damage, for had she not been so deeply laden, the vessel would no doubt have cleared herself much more quickly, and there would not have been this large body of water constantly washing about in the well.

The ninth question which we are asked is, "Whether any one, and if so, who is to blame for the casualty?" It is a painful thing to have to censure those who are gone, and who have had no opportunity of giving their account of the disaster. Judging, however, from the evidence that has been laid before us, we cannot but think that this casualty was in great part due to the master not having seen that the shifting boards were properly and efficiently put up. That they were not so there can in our opinion be no doubt, and it was to that circumstance that the cargo shifted, which threw the vessel on her side and caused the water to come upon her deck. He is also to blame for having loaded her to the extent he did. But he is not, in our opinion, the only person to blame for this casualty. Mr. Baker, the managing owner, told us that he knew his vessel was moderately crank, and, being a shipmaster, he knew or ought to have known that the more deeply she was laden the higher would be her centre of gravity and the more crank would she become; and yet by keeping the load-line voyage after voyage and year after year at 2 feet 6, he permitted, if indeed he did not sanction, the putting of enormous cargoes into her. Sailors, and, indeed, other persons, seem to imagine that the load-line is a Government mark, a kind of warrant of the seaworthiness of the vessel if she is not loaded beyond that point; and in a case which recently came before me, and where the vessel had clearly been grossly overladen because the load-line was not immersed. There could not be a greater mistake; the owner puts the load-line where he pleases; but it is no proof that the vessel can be laden with safety down to it. In our opinion Mr. Baker was greatly to blame for allowing the load-line to remain at 2 feet 6 inches, and thus giving an apparent sanction, if not authority, to the master to load her down to that point.

It was said by Mr. Vachell that the owner would be a loser by the casualty, for that the vessel was only insured for 16,000*l.*, and the freight for 1,000*l.* As, however, her register tonnage was only 1,062 tons, and her proper carrying capacity about 1,600 tons, this would make about 15*l.* a ton on her register tonnage, and about 10*l.* a ton on her carrying capacity, and I am

told by the Assessors that at that price you could buy a first-class vessel new. It does not therefore appear to us that Mr. Baker will have been much damaged by the casualty, if he receives the amount of his insurances.

At the conclusion of the proceedings Mr. Muir Mackenzie asked, on behalf of the Board of Trade, that Mr. Baker should be condemned to pay the costs. In reply it was said by Mr. Vachell that Mr. Baker, like many other owners, had placed the load-line high, because seamen, when they go on board a ship, are satisfied if they see the load-line well out of the water, but that if it is near to the water they would raise objections, and that the fact that the load-line was put at 2 feet 6 inches does not shew that he ever intended that she should ever be loaded to that depth. Mr. Baker, however, must have been well aware, from the weight of the cargoes which she carried, that she must have been repeatedly sunk to and even beyond her load-line, more especially when she had in her the 1,940 tons of ore, besides bunker coal. It was said also, that the position of the load-line must have been frequently seen by the Board of Trade officers when she was in port, but that they had never interfered with her. The answer, however, is, that they would have no right to do so, the owner having a right to put the load-line where he pleases, and there is nothing to shew that they ever saw her going out of or coming into port sunk down to or below her load-line. As Mr. Vachell truly observed, the Board of Trade can take no notice of the position of the load-line, but only of the amount of the actual freeboard. Looking at all the facts, and seeing the large number of cases of overloading which are continually occurring, we think that we are bound to use our best endeavours to stop it; and that the most effectual course for this purpose is to condemn the owners in costs, where it appears to us that they have been cognisant of the fact, or have been guilty of great neglect. We shall, therefore, condemn Mr. Baker, as the managing owner of the vessel, in the sum of one hundred pounds towards the cost of these proceedings.

(Signed) H. C. ROTHERY,  
Wreck Commissioner.

We concur.

(Signed) GEORGE H. FORSTER, } Assessors.  
JOHN S. CASTLE, }

In the matter of a formal investigation held at Cardiff, on the 12th and 13th days of January 1882, before HENRY CADOGAN ROTHERY, Esquire, Wreck Commissioner, assisted by Captain CASTLE and Captain FORSTER, as Assessors, into the circumstances attending the loss of the British steamship "CALLIOPE," of London.

The Court orders that Thomas Baker, of Cardiff, the managing owner of the said late vessel "Calliope," do pay to the Solicitor to the Board of Trade the sum of one hundred pounds (100*l.*) on account of the expenses of this investigation.

Given under my hand this Thirteenth day of January 1882.

(Signed) H. C. ROTHERY,  
Wreck Commissioner.