

(No. 1272.)

## "SPARTAN."

The Merchant Shipping Acts, 1854 to 1876.

In the matter of the formal Investigation held at Westminster, on the 22nd of February 1882, before H. C. Rothery. Esquire, Wreck Commissioner, assisted by Captains Hight and REES and C. W. MERRIFIELD, Esquire, as Assessors, into the circumstances attending the abandonment of the British sailing ship "SPARTAN," of Swansea, on the 18th of January last, whilst on a voyage from Bull River, South Carolina, to Birkenhead.

## 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 "Spartan" was due to the position of the heavy dead weight cargo in the hold, which caused the vessel to labour and strain very heavily and to make water, but that the master and crew did all in their power to save the vessel, and that they were justified in abandoning her when

The Court is not asked to deal with the master's certificate, or to make any order as to costs.

Dated the 22nd day of February 1882.

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

We concur in the above report.

(Signed) EDUARD HIGHT, T. B. REES,  $\mathbf A$ ssessors. C. W. MERRFIELD,

## Annex to the Report.

This case was heard at Westminster on the 22nd day of February instant, when Mr. Middleton appeared for the Board of Trade, Mr. Bucknill for the owners of the "Spartan," and Mr. Robinson Smith for the master. Seven witnesses having been produced by the Board of Trade and examined, Mr. Middleton handed in a statement of the questions upon which the Board of Trade desired the opinion of the Court. Mr. Bucknill and Mr. Robinson Smith were then heard on behalf of their respective parties, and Mr. Middleton having replied for the Board of Trade, the Court proceeded to give judgment on the questions on which its opinion had been asked. The facts of the case are as

The "Spartan," which was a barkantine belonging to the port of Swansea, of 307 tons gross, and 294 tons net register, was built at Bideford, in Prince Edward's Island, in the year 1873, and at the time of her loss was the property of Mr. Joseph Alfred Nicholson, of Swansea. She left Cardiff on the 10th of August last with a crew of 9 hands all told, and a cargo of coal bound to Para, in Brazil; and having there discharged her cargo proceeded in ballast to Coosaw in the Bull River, South Carolina, where she took in a cargo of 532 tons of phosphate rock, with which she sailed on the 13th December last. From the time, however, of leaving, the vessel seems to have made rather more water than usual, which continued to increase, so that on the 17th they had to pump her out every two hours. From the 2nd of January the pumps had to be attended to every hour until the 13th, when they fell in with a gale of wind, which blew away some of the sails, and obliged them to cut away the foremast to prevent the vessel falling into the trough of the sea. From this time she began to make so much water that it was found necessary to keep the pumps continually at work, and to jettison a portion of the cargo; and although after this the weather moderated somewhat, the water continued to increase, and on the 18th the vessel had become unmanageable. At about 7.20 p.m. of that day the lights of a vessel,

L 367. 1042. 150.—3/82. Wt. 203. E. & S.

which afterwards proved to be the "Anglesey," were observed, and on signals being made to her she bore down to them; and as the "Spartan's" crew were by that time completely exhausted by the continuous pumping, it was determined to abandon her, which they accordingly did, and got on board the "Anglesey." from which they were subsequently landed at Falmouth. The "Spartan," when she was abandoned, was, we are told, in about latitude 40° 54' North, and longitude

32° 16' West.

These then being the facts of the case, the first question upon which our opinion has been asked is, Whether when the vessel left Bull River she was in a good and seaworthy condition?" It appears that the vessel was built in the par 1873, in Prince Edward's Island, of soft wood, and was originally classed A1 at Lloyd's for seven years. In 1879, however, she was remetalled and caulked throughout, and in 1880 some six or seven extra iron knees were put into her on each side, and thereupon she got an extension of her class for two years making nine years in all. Thus then we have a Prince Edward's Island vessel, built of soft wood, nearly off her class, and which had been last caulked and re-metalled in 1879. Immediately on getting to sea she begins to make water, which gradually increases, so that at first they have to pump her every two hours, then every hour, and at last continually; and there is the evidence of her crew that before they left her the water was coming in through the seams of the deck and round the coamings of the hatchways. Under these circumstances, whilst we are not prepared to say that she was in so unseaworthy a state that she ought not to have gone to sea at all, we are of opinion that she was not in so thoroughly good and seaworthy a condition that a very heavy cargo could with safety have been put into her.

The second question on which our opinion is asked is, "Whether the cargo shipped was a safe and proper cargo for the ship to carry?" The cargo which this vessel had on board was what is commonly called phosphate rock, large quantities of which are now, we are told, annually exported from the Bull River in South Carolina to this country. It seems that the attention of the Board of Trade had been drawn to this trade by the very large number of vessels with this cargo on board that had gone down, no less than 19 having foundered and 10 been reported as missing since the beginning of 1876. Accordingly, in the middle of last year, Messrs. Wyllie Teacher and Gordon, who are said to be the largest importers of the article into this country, having been applied to for samples of the phosphate rock exported from Bull River, sent two kinds, one of which they described as "land rock," the other as "river rock." These samples were thereupon forwarded to Dr. Dupré, one of the first analytical chemists of the present day, for a report which whether there was anything in the rock which would be likely to endanger the safety of the ships in which it might be carried; his attention being more specially directed to the point whether it was capable of absorbing any large quantity of water so as to add greatly to the weight of the cargo. Dr. Dupré accordingly analysed the specimens, and the report which he then made is now before us; in addition to which Dr. Dupré has attended and given evidence, and what he tells us is that the so called phosphate rock consists chiefly of phosphate of lime, with portions of carbonate of lime and other substances; and with reference to the point to which his attention had been more especially directed he stated that whilst the land rock would absorb about 7 per cent. of water the river rock, of which, it seems, the cargo of the "Spartan" consisted, would take only about 4 per cent., those percentages differing somewhat from the percentage given in his report of June last, Dr. Dupré having discovered a slight error in his original calculations. He added, that there was nothing in the nature of the rock which would, in his opinion, render it a dangerous cargo for a vessel to carry, there being, he said, few cargoes which would not absorb a much greater amount of water; for instance, sugar, salt, grain, wood, and most other articles. We have, therefore, no reason to think that the cargo which the "Spartan" had on board was not a safe and proper cargo for a ship to carry.

The third question which we are asked is, "Whether

the cargo was properly stowed?" We are told that a platform was constructed in the hold from the cabin to the forecastle bulkhead, resting upon the main and sister keelsons, and standing about 3 feet 6 inches above the bottom. On this the phosphate rock, which had been broken up into small pieces for the purpose of being dried, the largest being about the size of a man's fist, whilst a great deal of it was in powder, was laid. It was shot down the main and after hatches, and was then trimmed forward under the fore hatch, and the fact that the vessel on her departure drew 13 feet 7 inches forward and 14 feet aft sufficiently shews that she was properly trimmed. It seems that she had in her no less than 532 tons of the phosphate rock, or about 80 per cent. above the registered tonnage, and looking at its heavy dead weight character it may well be a question whether it ought not to have been placed on a somewhat higher platform. It is well known that nothing tries the strength of a vessel so much as a heavy dead weight cargo near the bottom; the higher, indeed, it is placed, provided always that it is not placed so high as to make the vessel unstable, the better; and we are disposed to think, seeing the great weight of the cargo which she had in her, and its character, that it would have been better if she had had a higher platform than 3 feet 6 inches. In this respect only does the cargo appear not to have been properly stowed.

The fourth question upon which our opinion is asked is, "Whether, having regard to the nature of the cargo, the vessel had sufficient freeboard?" We are told that she had a freeboard, when she left, of 3 feet 5 inches, and if so, we are not disposed to say that it was insufficient. Taking the usually received authorities on the amount of freeboard which a vessel should have, we find that, according to Mr. Martell's Tables, a vessel of the dimensions of this vessel would have a co-efficient of fineness of 63, and consequently, with a depth of hold of 14.90 feet, the freeboard should be about 3 feet 6. According, however, to Mr. Rundell, another high authority, 2 feet 10 to 3 feet would be a sufficient freeboard, and according to another scale of freeboard, which we understand is much in use amongst Board of Trade surveyors, 3 feet would be a proper freeboard. No doubt, with the heavy deadweight cargo which she had in her, a higher freeboard than usual would be desirable; still, with a freeboard of 3 feet 5, we are not disposed to say that it was not sufficient.

The fifth question upon which our opinion is asked is, "To what extent are the Court of opinion that this cargo absorbed water, and what difference would this have made in the weight of the cargo, supposing that none of it had been jettisoned?" According to Dr. Dupré, the greatest quantity of water which this cargo could have absorbed, supposing that the whole of it had been completely saturated, was 4 per cent., or about 21 tons. He told us, however, that it took a very long time, some weeks, to saturate it completely, and although the master said that he had dug down some 3 or 4 feet into the mass and found it wet, it has not been fully proved that the whole of the cargo was wet; but even if it had been, it would not have added greatly to the weight in the hold, seeing that we are told that a portion of the cargo was jettisoned.

The sixth question which is put to us is, "What was the cause of the vessel making so much water between the 12th and 18th of January?" The witnesses say that, before they left her, the water was coming in through the decks, the waterways, the topsides, and the coamings of the hatchways; that there was also a leak aft, near the stern post, and according to the able seaman Lewis Jones, one at the bows. Now there can be no doubt that the heavy dead-weight cargo, which this vessel had on board, and its position in the hold, would cause her to labour and strain very heavily. Seeing then that she was originally only a soft-wood vessel, that she was nearly off her class, and that she had not been caulked for between two and three years, we have here quite sufficient to account for her leaking as she did.

In answer to the seventh, eighth, and ninth questions, we have no doubt that every effort was made to save this vessel, that she was navigated with properand seamanlike care and skill, and that she was not prematurely abandoned. With a vessel which had become unmanageable, and which required the pumps to be constantly worked to keep her affoat, it was high time to leave her; and if they had not been fortunate enough to fall in with the "Anglesey" when they did, there would have been some risk of their going down with her.

The tenth and last question upon which our opinion is asked is, "Whether the master and mate are, or either of them is, in default?" With the mate we have no fault to find, and the only blame that can be imputed to the master is for having taken in so large a dead weight cargo, and for not having stowed it sufficiently high. He stated that on a previous verage he had carried a larger cargo than on the last occasion. that he had shipped 545 tons of this phosphate rock and had turned out 538; but that voyage commenced on the 10th of May and terminated on the 14th of June, and was therefore a summer voyage; whereas this last was a winter voyage. The fact, too, that a vessel may have once before carried a heavier cargo, and arrived safely at her port of destination, is no proof that she can safely do so at some future time, when she has become anolder vessel, and is nearly off her class. It is a mistake which owners frequently make. As regards, too, the stowage, no doubt the keelsons would afford a good firm base on which to rest the platform, and it was on that account probably that the master selected them for that purpose. Looking, however, at the amount and character of the cargo, it would undoubtedly have been better had he raised his platform somewhat higher. On the other hand, we can hardly expect from a master of a little vessel like this that scientific knowledge which would enable him to say what height of platform exactly such a cargo should have. We are therefore not disposed to deal with his certificate; at the utmost it would amount only to an error of judgment, for which we never deal with a man's certificate.

The Court was not asked to make any order as to costs.

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

We concur.

(Signed) EDUARD HIGHT, T. B. REES, C. W. MERRIFIELD, In the W H as

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