

(No. 7427.)

“CORNUCOPIA” (S.S.).

The Merchant Shipping Act, 1894.

IN the matter of a Formal Investigation held at County Buildings, Glasgow, on the 22nd, 23rd and 24th days of February, 1911, before JOHN BOYD, Esquire, Advocate, Sheriff-Substitute of Lanarkshire, assisted by Captain G. L. LANGBORNE, F.R.G.S., Commander A. S. HOUSTOUN, R.N.R., and Mr. EDWARD C. CHASTON, Senior Engineer, R.N.R., into the circumstances attending the abandonment of the British steamship “CORNUCOPIA,” of Glasgow, in the Bay of Biscay, on or about 15th December last.

Report of Court.

The Court having carefully inquired into the circumstances attending the above-mentioned shipping casualty, finds for the reasons stated in the Annex hereto, that the abandonment and loss of the s.s. “Cornucopia” was due to the vessel having encountered exceptionally bad weather in the Bay of Biscay between the 12th and 15th days of December last. On the latter date at about 1 a.m., the vessel shipped a very heavy sea over the port side which did considerable damage to boats, deck-houses and ventilators, causing her to lurch violently, shifting the cargo to starboard, and giving her a heavy list; the water finding its way into the stokehold and through other damaged openings increased the list considerably. The steam pump, which had been working incessantly, was unable to cope with the water, it being frequently choked with small coal and ashes. The stokehold plates were washed up, and the firemen found it difficult to keep steam under these conditions. The exertions of the crew to trim the cargo being of no avail, the vessel lying in the trough of the sea with the sea continually breaking over her, all her boats being washed away or stove in, and darkness coming on, it was decided to signal the Norwegian steamer “Rask,” which was then in sight, for assistance. This was accordingly done. The “Cornucopia” was eventually abandoned about 5 p.m. on 15th December, the crew being taken off under very great difficulties by the “Rask’s” two lifeboats and conveyed to Gibraltar, where they were landed. The Court would like to draw the attention of the Board of Trade to the courageous conduct of the captain and crew of the “Rask” in coming to the assistance of the “Cornucopia” under such exceptional conditions. Further, the Court is of opinion that ships carrying coal cargoes of this description should use shifting boards in the stowage to minimise the risk of the coal shifting during heavy weather.

Dated this 24th day of February, 1911.

JOHN BOYD,
Judge.

We concur in the above Report.

GEO. LOY LANGBORNE,
A. S. HOUSTOUN,
EDWARD C. CHASTON (Eng.) } Assessors.

Annex to the Report.

This Inquiry was held in the County Buildings, 40, Wilson Street, Glasgow, on the 22nd, 23rd and 24th days of February, 1911. Mr. James Morton, writer, appeared for the Board of Trade; Mr. A. D. Wylie, writer, Glasgow, for the master; and Mr. T. G. Wright, writer,

Glasgow, for the second officer. The chief officer was not represented by a solicitor.

The “Cornucopia,” Official Number 85023, was a two-masted schooner-rigged single-screw steamship, built of iron in the year 1882 by Messrs. Osborne, Graham & Company, Sunderland, in the County of Durham, England, and was of the following dimensions, viz.:—Length, 251 feet; breadth, 34.2 feet; and depth in hold from tonnage deck to ceiling amidships, 24 feet. Her gross tonnage was 1,590.58 tons, and her registered tonnage 994.42 tons. She was fitted with compound direct-acting surface-condensing engines with inverted cylinders of 31 and 57 inches diameter respectively, with a stroke of 36 inches and of 140 nominal horse-power. She had one steel boiler having a working pressure of 95 lbs. to the square inch. The engines were constructed by Messrs. George Clark & Company, of Sunderland, when the ship was built, and a new boiler was fitted in 1896. The “Cornucopia” was previously registered at the Port of Sunderland. She was sold to Norwegian owners and named the “Astrid,” and afterwards purchased in 1900 by her late owners, the vessel then taking her original name, and was registered at the Port of Glasgow, Mr. Thomas Holt Hutchison, of 31, Hope Street, Glasgow, being designated managing owner by advice given under his hand received 22nd June, 1900. She was a spar-deck vessel with two decks laid, four iron water-tight bulkheads, two water ballast tanks, after peak tank and fore peak tank, giving a total water ballast capacity of 290 tons. She was single-bottomed from the engine-room watertight bulkhead forward for a length of 90 feet; there was also a well at the after end of the shaft tunnel, and she was provided with two bilge pumps fitted to the main engines and worked by levers, and also a steam donkey ballast pump, all of which could pump from the holds, ballast tanks, engine-room and stokehold bilges. She had also a bilge injection which could pump direct from the engine-room bilges. She had two cargo holds and four hatchways, and had a bridge deck amidships on which stood the wheelhouse and chart-room, there also being a wheelhouse aft. She steered by steam with a hand-gear connection on the bridge and aft. She carried four boats (two of which were lifeboats) with the necessary equipment, eight life-buoys and 25 life-belts. She had three compasses, viz., a pole compass before the bridge, one in the wheelhouse on the bridge (which was the standard compass and by which the courses were set and steered), and one in the wheelhouse aft. They were last adjusted in February, 1910, by Messrs. Dobbie & Sons, Glasgow. The vessel underwent a thorough overhaul, and repairs of her hull, machinery and boilers by the Ailsa Shipbuilding Company, Limited, in February, 1910, at a cost of £2,764 7s. 6d. and passed Lloyd’s special No. 3 survey, and when she left Swansea on her last voyage appears to have been seaworthy and well found in every respect. The “Cornucopia” left Swansea at 9 a.m. on the 9th day of December, 1910, in charge of Mr. Arthur Macdonald Joliffe, master—Certificate No. 017903. She carried a crew of twenty hands all told and no passengers. When she left Swansea she was practically upright and down to her load-line, having a mean draft of 20 feet 10 inches fore and aft, with a freeboard of 5 feet 2 inches. She was loaded at the South Dock, Swansea, with two lots of large anthracite coal from different mines—666 tons from Seven Sisters’ Colliery and 1,335 tons from Onllwyn Colliery, making a total of 2,001 tons. At a measurement of 42 cubic feet to the ton the cargo was stowed—according to the statement of the foreman trimmer (Edward James Lloyd)—as follows, viz.:—478 tons in No. 1 forward hatch, 596 tons in No. 2 forward hatch, 421 tons in No. 1 after hatch, and 506 tons in No. 2 after hatch. The lower holds were full within 2 feet of the beams. There was a space of 40 tons left in the forward part of No. 1 hatch between deck so that the vessel should not be loaded by the head. The lower bunkers and the two side pockets contained 280 tons of steam coal, the side pockets being quite full, but there was space in the lower bunkers; a further supply of 101 tons was taken at Swansea into the cross bunkers, leaving a space in them of about 40 tons. From the builders’ plan of the ship, supplied to the Court, calculating the cubic capacity of the cargo holds at 42 feet, and the stowage of the 2,001 tons in them at the same rate of measurement, a considerable discrepancy is shown,

resulting in a space of 289 tons in the fore holds and 106 tons in the after holds, against the 40 tons of space given by the trimmers, who also stated that some of the lumps of coal were 2 or 3 feet square, and that the whole cargo consisted more or less of large coal. This being so, the coal must have occupied more space than 42 cubic feet to the ton, and although properly trimmed would stow loosely and, consequently, be liable to shift in heavy weather. This evidently did occur, being the chief contributory cause of the disaster. The "Cornucopia" passed the Longships on 10th December, and experienced heavy gales from S.W. to N.W. with high seas. All went well up to noon on the 12th, when the ship was struck by a heavy sea, doing considerable damage to the after deck-house, and the boatswain had his shoulder dislocated. At the same time the eye of the steering rod broke, connecting the wheel chains on the starboard side abaft the bridge. The ship then fell off into the trough of the sea. The rudder was immediately steadied by relieving tackles fitted to the quadrant over the rudder head, and the hand gear shipped, in the space of twenty minutes. The vessel was then brought head to sea by slow and half-speed movements of the engine, the steering directions being indicated to the helmsman by whistle sounds given from the bridge. For the next two days exceptionally heavy weather prevailed, the vessel encountering a succession of hurricane gales from S.W. to N.W., which raised mountainous cross seas, and was, in the opinion of the master and other witnesses, the worst weather they had experienced for many years. During this period the ship made no progress, but was kept head to sea by slowly working the engines. The pumps were working satisfactorily, and there was practically little or no water in the bilges, but the vessel had a slight list of three or four degrees to starboard, due to the existing weather conditions affecting her on the port side. On the 15th December at 1 a.m. the ship, then heading N.W., was struck by a very heavy cross sea, the water coming over forward, and on the port side, causing the vessel to lurch violently and list about 30 degrees to starboard, a list which she never recovered, but gradually increased. The two starboard boats were washed away, and the port boats were stove in and rendered useless, the two forward ventilators and the fore-castle companion being also torn away from the deck, and the firemen's quarters flooded out, water finding its way below into the forward holds through the ventilator openings, and washing over the fiddle gratings down into the stokehold. The engines were stopped and never used again. The steam pump with a capacity of about 45 tons per hour was immediately put on. It was evident that the cargo and coal in the cross-bunker had shifted, as described by a fireman witness who was in the stokehold at the time, making a noise like thunder. The master, finding that the ship did not recover, took measures to rectify the list by sending all the available hands into the cross-bunker to trim the coal over to the port side, but this was an impossible task. No sooner was the coal taken to the higher side, than it slipped down again owing to the lurching of the vessel. They, however, succeeded better in the forehold, where boards were fastened to the stanchions and the lumps of coal lifted over them. All their strenuous efforts were of no avail, the ship continuing to increase her list owing to the water collecting in the bilges. It was found impossible to feed the fires, although life-lines were put up in the stokehold for the firemen to hold on by. The pump-suctions became choked with small coal and ashes, the water gained in the stokeholds and the pump was unable to control it. Eventually the stokehold plates were washed up. At 4 p.m. on the 15th a vessel appeared in sight, which turned out to be the Norwegian steamer "Rask." At this time the crew of the "Cornucopia" signed a petition to the master asking him to signal to this steamer to be taken off. This was accordingly done. The master being convinced that it was hopeless to save the ship, the boats being all washed away or rendered useless, the lee rail under water, and darkness coming on, he had no alternative left but to abandon her. At this time the weather was very bad, and oil was freely used to windward in order to break the force of the waves. Under very great difficulties the master of the "Rask" brought his vessel to the weather side of the "Cornucopia," and lowered a lifeboat in charge of the second officer with a crew of four hands, who succeeded by using oil to reach the lee side of the "Cornucopia" to within a short distance. Eleven of the crew were taken off after jumping into the water and being pulled into the boat by ropes. The remainder of the crew of nine men were taken off in a similar manner later, and were eventually landed at

Gibraltar on 20th December. The Court cannot speak too highly of the gallant and courageous conduct of the master and crew of the "Rask" under such trying circumstances in rendering such good service. With regard to the stowage of the coal, shifting boards were not used, as it is not customary to do so in vessels carrying coal cargoes, but the Court would strongly recommend that coal of this description consisting of large lumps, which do not stow closely, should be secured by the use of shifting boards. Had this been done in the present instance, the Court is of opinion that the "Cornucopia" would not have been abandoned and lost. On leaving Swansea the "Cornucopia," as already stated, was seaworthy in every respect, and although hopelessly crippled on the 15th December by the movement of her cargo, she kept afloat until the 20th as shown by the annexed deposition of the master of the "August Leffler," who made several unsuccessful attempts to save the vessel by taking her in tow. The master in his disposition states that the "Cornucopia" undoubtedly foundered.

At the conclusion of the evidence Mr. Morton, on behalf of the Board of Trade, submitted the following questions for the opinion of the Court:—

- (1) What was the cost of the vessel to her owners? What was her value when she sailed on her last voyage? What insurances were effected upon and in connection with the ship?
- (2) When the s.s. "Cornucopia" left Swansea on the 9th December last—
 - (a) Was she in good and seaworthy condition as regards hull and equipments?
 - (b) Were her steam and hand steering gears, including wheel chains and connections, in good condition and working order?
 - (c) Was the cargo properly stowed, trimmed and secured from shifting? Were proper measures taken by the master and officers to ensure that this was done?
 - (d) Had the vessel the required freeboard, and was she upright?
- (3) What was the cause of the failure of the steam-steering gear at or about noon of the 12th December last? Was the hand gear promptly shipped? Did the vessel receive any serious damage in the interval?
- (4) What was the cause of the damage sustained by the ship during the 15th December? Were prompt and proper measures taken to repair it, and prevent water getting below?
- (5) When did the vessel take a heavy list to starboard? What was the cause of it? Was every reasonable effort made to get her upright?
- (6) When and where was the vessel abandoned, and what was her condition and the condition of the weather and sea at that time?
- (7) Was the vessel prematurely abandoned?
- (8) Was the vessel navigated with proper and seaman-like care?
- (9) Was the abandonment of the s.s. "Cornucopia" caused by the wrongful act or default of the master, chief and second officers, or of any of them?

Mr. A. D. Wylie and Mr. T. G. Wright having addressed the Court on behalf of the master and second officer respectively, and Mr. Morton having replied on behalf of the Board of Trade, the Court gave judgment, and returned the following answers:—

- (1) The cost of the vessel to her owners in 1900 was £11,000. The value of the vessel when she sailed on her last voyage was about £8,000. She was insured for £8,500 (the owner taking 20 per cent of the risk), being £6,800 on the hull and £1,700 on the machinery. There was also an insurance policy for £800 on freight, of which the owner took £300.
- (2) When the s.s. "Cornucopia" left Swansea on 9th December last—
 - (a) She was in good order and in seaworthy condition as regards hull and equipments.
 - (b) Her steam and hand steering gear, including wheel chains and connections, were in good condition and working order.

- (c) The cargo was properly stowed and trimmed, but not secured by any special means from shifting. Proper measures were taken by the master and officers to ensure that the cargo was properly stowed and trimmed.
- (d) She had the required freeboard, and she was upright.
- (3) The cause of the failure of the steam-steering gear was the breaking of the eye of the iron wheel rod connecting the steering chains on the starboard side abaft the bridge. The hand gear was promptly shipped. The vessel did not receive any serious damage in the interval.
- (4) The damage sustained by the ship during the 15th December was caused by a very heavy sea breaking on board over the port side. The damaged ventilators were plugged up, and other prompt and proper measures were taken to prevent water from getting down below.
- (5) The vessel took a heavy list of thirty degrees to starboard about 1 a.m. on 15th December, caused by a heavy sea striking her. Every reasonable effort was made to get her upright.
- (6) The vessel was abandoned in about lat. 45° 50' N. long. 8° 34' W. She then had a list of about forty degrees to starboard. Her two boats on the starboard side were washed away, and the two remaining boats on the port side were stove in and consequently useless. The condition of the weather at this time was very bad, and heavy seas were continually breaking over her.
- (7) The vessel was not prematurely abandoned.
- (8) The vessel was navigated with proper and seaman-like care.
- (9) The abandonment of the s.s. "Cornucopia" was not caused by the wrongful act or default of the master, chief and second officers, or any of them.

JOHN BOYD,
Judge.

We concur.

GEO. LOY LANGBORNE, }
A. S. HOUSTON, } Assessors.
EDWARD C. CHASTON, }

Statement of Emil Lea, master of the Norwegian steamer "Rask," of the Port of Haugesund, Norway, made on board said vessel at Albert Edward Dock, River Tyne, on 19th January, 1911, before Mr. Coates, Deputy Receiver of Wreck, Newcastle.

The ship left Glasgow on the 9th December, 1910, bound for Barcelona with a cargo of coal. The weather was very stormy from the time of leaving, and from the 13th to 15th December the wind blew with hurricane force except for occasional intervals, when it moderated for a short time. The wind varied from S.S.W. to W.N.W. and W.S.W., and it would then turn back again to S.S.W. The seas were very heavy, and the worst I have ever met with in my twenty years' experience. At 11 p.m. on the 14th the wind blew a hurricane, and a huge sea, more like a tidal wave than anything, struck my ship. The rail of the upper bridge was broken, also the fore-castle rail. The skylights of the cabin were broken, and the cabin was full of water. In fact, the condition of the ship was so dangerous that all hands were called, as we feared the ship would go down. Oil had been poured overside from about 11 p.m., and it was continued during the night, and had it not been for the oil moderating the seas, she would undoubtedly have been lost. The seas were in all directions, but mostly on the bows. The engines were kept going slow, but no progress was made, the vessel merely drifting in the seas. On the morning of the 15th the wind moderated, and the crew were busy repairing some of the damage. At 10 a.m. a S.W. $\frac{1}{2}$ W. course was steered. About 4 p.m. that day a ship was sighted in the N.W. direction, about 4 or 5 miles distant (ship's position, lat. 46° 18' N. and long. 8° 38' W. at noon), showing signals. As no smoke was seen coming from the funnel, we judged that something was wrong. The course was altered to N.W., but a heavy sea from W.N.W. made approaching the ship a very difficult task. As we neared the ship we found that she was the "Cornucopia," of Glasgow, and the signals received were:

"Cargo shifted, and pumps choked. Unable to get water out of the holds." Finally at about 5 p.m. signals were received to take the men off. I told them to come on board my ship, and as I got near they told me they had no boats, the two they had left being broken. I lay to windward in the heavy sea, and it seemed impossible to get a boat launched, but as the oil which was being poured overside had lessened the seas, I decided to at least make some effort to save the crew of the ship. At that time the "Cornucopia" was lying helpless in the seas; and as we approached it was seen that she had a list of about 40° to starboard. Her hatches were down to the water's edge, and the seas were washing over her. She was rolling heavily. The daylight was beginning to fail. To take the "Cornucopia" in tow was an impossible task. The oil had a good effect in moderating the seas, and after waiting for an opportunity when the ship's position would allow it, the port lifeboat was quickly put out, and with the second mate and four hands (who were supplied with life-belts) proceeded towards the wreck. The sea was still very high, and the boat could not get close to the "Cornucopia," but a line was allowed to drift down from that vessel. This was picked up by the boat. The crew of the "Cornucopia" fastened themselves to a rope, in turn jumped overboard, and were pulled on board the lifeboat. Altogether 11 men were rescued by the first boat. I kept my ship to windward of the "Cornucopia," pouring out oil all the time to help the lifeboat. With very great difficulty we got the men on board the "Rask." The second boat which had been lowered in the meantime proceeded to the wreck, and rescued the remainder of the crew (nine men). I had to go round the stern of the wreck to pick up the second boat, which had left without a light. While coming up to leeward of the wreck we caught sight of the boat, and eventually managed with the greatest difficulty to get all the crew on board, and the boats hoisted up. The seas were running in all directions, the winds varying, but mostly from the W.S.W. The weather and sea were so bad that I was very thankful to God when we rescued the men successfully. After they were on board I looked round to see the "Cornucopia," but there were no signs of her. I then steered to the S.W. to see if she could be seen, and I reckon I passed within a quarter of a mile of the place where she was last observed, but nothing could be seen of her by either her master or myself, and we felt confident she had sunk as she was in a bad state when the crew left her.

I proceeded on my voyage at 9 p.m. The gale was as bad as ever, and it continued till the 18th. The crew were put ashore at Gibraltar on 20th December, at 8 a.m. The position, when the "Cornucopia" was last seen, was about lat. 45° 50' N., long. 8° 34' W. by dead reckoning. My vessel was badly damaged in the gale. The steering gear got loose, and it has been partly renewed, and the rudder taken off and repaired. The skylights had to be repaired as well as all the beams and hatches. A new lifeboat had to be obtained, and the compass on the upper bridge was also damaged by the heavy sea shipped at 11 p.m. on 14th December, and had to be repaired.

Extract from the Log Book of the Swedish Steamer "August Leffler" on a voyage from Theodosia to Helsingborg.

Saturday, the 17th December, at 9.10 a.m., in about lat. 45° 45' N., long. 7° 26' W., sighted a disabled vessel on port bow. Steered for the vessel, and found her to be the "Cornucopia," of Glasgow, with a heavy list, N.W. gale and high sea prevailing at the time. Port lifeboat was lowered, manned by the chief mate, chief engineer, and five hands. Chief mate managed to get on board and found her loaded with coal, abandoned, having water in the engine-room, cabin and fore-castle, and steering gear broken. On account of the heavy sea nothing could be done for the salvage of the vessel, and the lifeboat returned to the ship. Kept in the vicinity of the wreck. At 1 p.m. another attempt was made to get connection with the wreck, and the port lifeboat was lowered, but it was impossible to get on board on account of the rough sea. Sunday, 18th December, another attempt was made and connection was obtained with great difficulty by a 15-inch hawser, but in the act of turning the wreck to shape a course the hawser parted. Another attempt to tow was made later in the afternoon with a 4-inch wire, but this also parted. Operations were abandoned till the 19th December, when two more attempts were made to tow the vessel with a wire hawser

and coir hawser, the second mate and two men volunteering to go on board and steer the wreck, which was done. Commenced towing at 3 p.m. until 10 p.m. when both hawsers parted. Tuesday, 20th December, another attempt was made about 10.30 a.m., towing until about 12.10 p.m. when the hawsers parted again. It was then observed that the fore part of the vessel had settled deeper in the water, and on inspecting the wreck the fore peak was found to be full of water, 9 feet of water in the main hold and 7 feet in the engine-room. As there appeared to be no possibility of salving the wreck, which was then in a sinking condition, and the wind and sea increasing, continued our voyage at dusk. Nothing was salvaged except some preserves, valued at £2, for our

own use in consequence of detention. The loss we sustained during the attempt at salving consists of 90 fathoms 15-inch coir hawser, 90 fathoms 4-inch wire hawser, one coil of sail cloth, port lifeboat damaged, various smaller ropes, fenders and oars.

JOHN BOYD.
GEO. LOY LANGBORNE.
A. S. HOUSTOUN.
EDWARD C. CHASTON.

*(Issued in London by the Board of Trade on the
28th day of March, 1911.)*

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