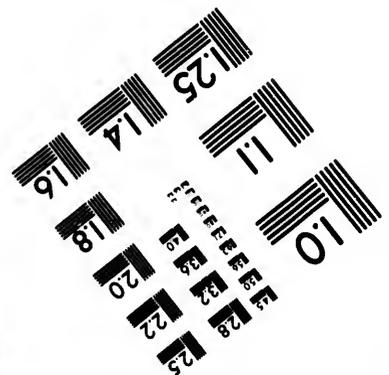
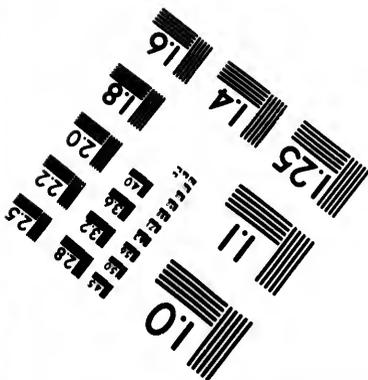
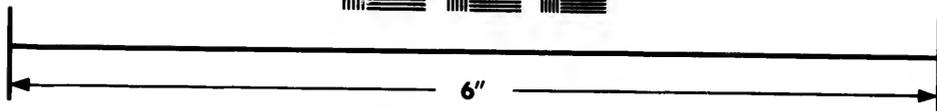


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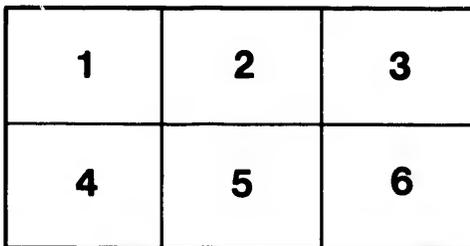
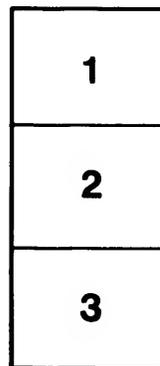
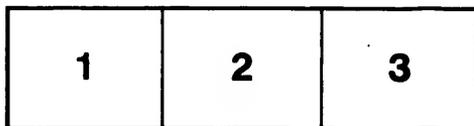
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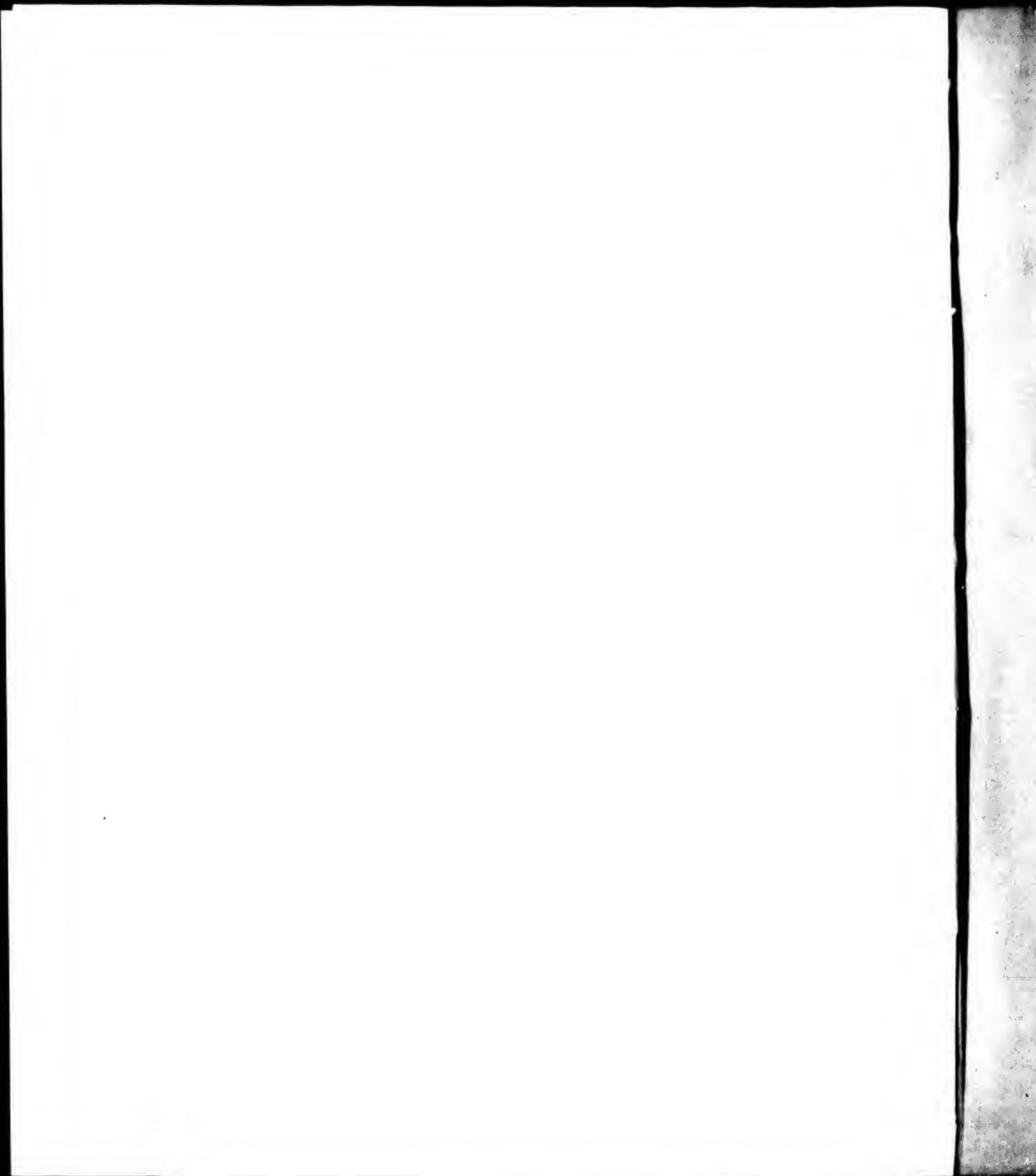
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EXPLANATION AND ANSWER

TO

MR. JOHN BRAITHWAITE'S

SUPPLEMENT

TO

CAPTAIN SIR JOHN ROSS'S NARRATIVE

OF A

Second Voyage in the Victory,

IN

SEARCH OF A NORTH-WEST PASSAGE.

BY

SIR JOHN ROSS.

TO THE EDITOR OF "THE TIMES."

Nov. 13, 1836.

SIR,
I OBSERVE that Mr. John Braithwaite has published a pamphlet which he unwarrantably designates "A Supplement to Captain Sir John Ross's Narrative of his late Voyage," &c., but which is only a supercilious attempt to exculpate himself. As it is not my intention to enter into any controversy, I request, through your widely circulated journal, to acquaint Mr. Braithwaite, my Friends who desire it, and my numerous Subscribers, that they may have, *gratis*, a complete refutation of every assertion he has made, by applying at the Office for the Publication of my Works, No. 156, Regent Street.

I am, Sir, your obedient Servant,

JOHN ROSS, Captain R. N.

PUBLISHED BY

A. W. WEBSTER, 156, REGENT STREET.

EXPLANATION AND ANSWER

TO

MR. BRAITHWAITE'S SUPPLEMENT.

I CONFESS it is with reluctance I recur to the subject of the Steam Machinery supplied to me by Messrs. Braithwaite and Ericsson; not that I find any difficulty in refuting every assertion made by the former, in his supercilious attempt to make it appear that the failure of the machinery which he supplied to me was not to be attributed to him; but because it is painful to me to be forced to expose the disreputable practices resorted to by those in trade, who had acquired a fair character, and had thereby induced unsuspecting individuals to put confidence in their integrity.

The feelings of contempt which Mr. Braithwaite's "Prefatory Notice" have naturally excited are not unmixed with pity, because it is lamentable to perceive a tradesman, even of the second class, descending to such unbecoming language as Mr. Braithwaite has made use of, while it is to me a source of regret that he should have taken offence at what I was bound to relate in justice to myself; but more especially to prove that steam, which I still firmly believe ought to be employed in the Arctic regions, had not, on the late occasion, a fair trial; and it will be seen that the facts which I then thought unnecessary to publish, or which I then suppressed out of kindness to the manufacturer, will not ameliorate his case; and if Mr. Braithwaite is offended at my want of courtesy, I can only assure him that he would have been still more so, had I made that communication which he seems to think he had a right to expect.

Mr. Braithwaite begins by giving a partial account of my introduction to him; I say *partial*, because he has omitted to state what I told him at the first interview, namely, that I wanted steam machinery for a particular service; and his reply was, that the boiler on his principle, which he showed me then at work, was *fully tried*, and fit for *any service*; on which I told him, that if his invention was good, the test to which it would be put must fully establish its efficiency; but if not, the reverse would be the effect. The conversation alluded to, respecting "war purposes," took place long subsequent to our first interview, and was in consequence of my having presented him with a copy of my publication on the subject, and was always mentioned as a secondary object, which it really was; nor did Mr. Braithwaite ever require to know what the Victory was intended for, or seem to care any thing about it. The secret of the expedition was kept solely at the desire of Sir Felix Booth, and there can be no doubt that if his boilers had been made of good materials in a "substantial and workmanlike manner," it would have been immaterial for what service they were wanted; and the fact that more than one-half of the boilers was actually above the water-line, when fixed on board, is sufficient to prove that they were not required to be below it.

I have now arrived at a point at which I must disclose a fact, that I am grieved to say may entail discredit on the individual, if not on the profession he belongs to. It was agreed, in the presence of Sir Felix Booth and Mr. Thom, that a contract should be drawn out for *copper boilers* and machinery to be furnished by Mr. Braithwaite to me for a stipulated sum. On the following day, when the deed was to be executed, it was discovered by me, that Mr. Braithwaite, in copying the original sketch, had left out the word *copper*, and on my mentioning this, Mr. Braithwaite said, "There is no occasion to write it out again on that account, as none but copper boilers shall ever go out of our manufactory." Witnesses to this being present I did not insist on it. In vain did I go to the manufactory to learn how the *copper boilers* came on, but the answer was, "they are a-making in the country." At last two *iron boilers* arrived from Birmingham! and when I complained of their being iron, instead of copper, the reply was, "They were not made at our manufactory, neither was copper stipulated in the contract!" I was indeed mortified at the discovery, but could only blame myself for putting confidence in the unworthy manufacturer. It was then too late, the season was too far advanced to have new ones made of copper, and hoping that the iron material

was good I put up with the *imposition*. Mr. Braithwaite is under a mistake when he asserts, that I purchased an old steam vessel, and wished him to fit engines on a novel construction, &c. The contract with him was made and executed, before I left London to look for a steam vessel to fit *his*, not *my* construction of machinery. The contract was signed on the 9th of October; and it was not until the 2d of November, 1828, that I returned to London, having purchased the *Victory* at Liverpool fourteen days before, and fitted her there with Mr. Robertson's paddles, in order to try their efficacy. The old engines being removed, Messrs. Braithwaite and Ericsson came on board on the 18th current, and inspected the *Victory*, when they highly approved of her, having found in her engine-room more space than was required for their machinery; and although the exact construction of the paddle-wheels was not told to them, because the ingenious inventor had not then secured his patent, it was fully explained that they were to be hoisted out of the water at pleasure, to which they made no objection. I must now declare, that neither the unwarrantable alterations in the boilers, engines, condensing apparatus, or any part of the machinery, were ever done at my request; and that every assertion made by Mr. Braithwaite to that effect is incorrect. With regard to the coupling keys, Mr. Braithwaite must be labouring under a want of recollection, when he says that their breakage was insignificant; for when that happened, the engine and paddle-shafts were completely unconnected, and consequently useless; but I am ready to admit, that the engine might have worked if it had no paddle-wheel to turn, which was actually the case whenever the key broke. The next ten pages are chiefly occupied by a laboured but erroneous disquisition on the paddle-wheels, by which he makes his last struggle, in an attempt to show that it was owing to those that the failure took place. It is, fortunately, quite unnecessary for me to follow Mr. Braithwaite through his tedious categories, although they could all be refuted, in order to convince the public of the consummate folly and fallacy of his assertions; for I have only to state the undeniable fact, that the paddle-wheels on Mr. Robertson's plan were immersed within one foot of the axis, on the voyage from Liverpool to London, and did actually impel the *Victory* at the rate of eight to nine miles per hour, when she had a common single engine of only thirty horse power. For the express purpose of trying whether paddles on that construction would impel the vessel when deeply immersed, she was loaded and brought down in the water by putting an extra quantity of coals on her deck, after her hold was full, when the axis of the paddle-wheels was within less than one foot of the water; that

the vessel was then made fast to the quay at Liverpool, and the engine then on board her, made the paddles steadily perform no less than thirty-three revolutions in one minute for more than an hour ; that on the same voyage the Victory beat her sister vessel, the Harriett, which (when she had the old paddles) used to beat the Victory, and that she passed the Dublin Steam Packet, which happened to sail at the same time, making her passage entirely by steam in four days from Liverpool to London with the above-mentioned paddles. That subsequently, when the new paddles were fitted, Messrs. Braithwaite and Ericsson's machinery, even in its imperfect state, did actually propel the Victory at several times for some minutes, and on one occasion for *half an hour*, at the rate of six miles per hour, and the speed only decreased because the steam could not be kept up. It was therefore positively proved that it could not be the construction of the paddle-wheels, or from their great immersion that the failure took place ; neither could it be from the paddle-boxes, which were never altered, and which are both unfairly described by Mr. Braithwaite.

The Victory, when deepest, never drew more than 7 feet 8 inches, which was 7 inches more than with the old engine ; but this increased depth was occasioned by the weight of Messrs. Braithwaite and Ericsson's machinery being double what they had calculated it at, and promised it should be ; but their calculations and their promises were unfortunately, equally fallacious.

I would now pass from the paddle-wheels, having shown that they were not in fault, but it is a duty I owe to Mr. Robertson to state, that the floats of his paddle-wheels were diagonal, and that they therefore did not lift on entering, nor depress on leaving, the water. The paddle-box *above the axis*, instead of being, as usual, circular, was indeed like a chest, in order to admit the whole paddle-wheel when raised, and then to contain it *above* the water line ; but if Mr. Braithwaite means, that *below* the axis of the wheel, or below the water line, the paddle-box was of that or any other construction calculated to impede the free ingress or egress of the water, he obliges me to say that he is incorrect : the object which Mr. Robertson had in view, namely, to construct a paddle-wheel that would not either lift or depress the ship, when she was so deeply laden as to immerse the paddle-wheel to within one-sixth of its diameter, has been fully accomplished, which I can testify from actual experience, even by using Mr. Braithwaite's machinery, bad as it

was, which he makes out to be perfect by words and figures, but which could never stop or "take up" the acknowledged leaks of his bad iron boilers, even with the joint assistance of "malt dust;" although in addition Mr. Ericsson actually did put in dung and potatoes. I must now bring to the recollection of Mr. Braithwaite, that on our passage to Woolwich, when he attributed the want of speed to the deep immersion of the paddle-wheels, I offered to unload the vessel so as to lighten her to her original draught, by putting her stores and provisions on board the hulk, in order to satisfy him that he was mistaken; but this he strongly objected to, undoubtedly because it might lead to my withholding the last payment.

Passing over all Mr. Braithwaite's unbecoming vituperation, I come to the 13th page, where he "particularly" adverts to what he calls each distinct charge.

First—"The machinery was execrable"—why? He says, because I told him the machinery was intended to propel a vessel constructed for war-purposes. I ask, Ought not this consideration to have induced Mr. Braithwaite to have made his machinery of the best material and workmanship, and fit for any service? Ought not a vessel, intended for "war-purposes," be able to stand every other test? But the truth is, that she was really intended for "war-purposes," in order to continue important experiments which I had begun, and they would have been continued, had not Mr. Braithwaite deceived me; first, by being a month later than he promised in completing the machinery; and, secondly, by giving me a wretchedly defective engine, totally unlike that which I originally contracted for. And, with regard to expense, I have also great reason to be dissatisfied, which will be evident when I inform my readers that, taking the whole distance which the machinery actually propelled the ship, the cost was about £100 per mile! And with regard to the opinion which those who inspected it entertained, I shall simply refer to Mr. Braithwaite's own letter (which I received in Scotland) dated 8th of June, 1829, of which the following is a copy:

"In your letter of Saturday you kindly promised me to hear from you more in detail, which will give me infinite satisfaction, and enable me to defeat the stupid prejudice existing against high-pressure steam navigation, and enable me to deny the infamous assertions that have been made, the authors of which are as yet undiscovered.

“ One assertion I have fortunately some clue to, and which will enable me to recover damages for injury sustained, as I have, or rather shall have, proof of some proprietors of steam-vessels withholding an order for boilers, in consequence of a party pledging himself to the inefficiency of our plan.” In short, every one that I heard express an opinion before we sailed, considered it an “ utter failure ;” but still I had hopes, if the boilers did “ take up,” that I might obtain a speed of three miles per hour.

Secondly—“ Captain Ericsson and myself are charged with gross negligence.” Here I must inform the public, that at the time Captain Ericsson was most wanted he did not appear for *six weeks*, and I was informed that he was in Holland. Does Mr. Braithwaite put into comparison the inconvenience of his passing *three “ whole nights”* on board the Victory, with the anxiety and trouble which his negligence and delay in fitting the engine occasioned ; not to speak of the additional expense *to me*, occasioned by his having “ a great number of men at work till the Victory was ready for sea,” doing the work indeed which ought to have been completed a month before ?

Thirdly—“ The coupling-keys of the main shaft.” This I have explained before, and therefore have only to reiterate, that when the coupling-keys broke, the paddle-wheels were completely disengaged from the engine, and they of course stopped, although the engine continued to work. They gave way on our passage to Scotland ; and the following extract of a letter from Mr. Braithwaite, dated 6th June, 1829 (after being informed by me of the circumstance) will set the subject at rest :—

“ I have only time to say how deeply I regret the accident, and that you should not have been provided with spare keys ; but really one would have imagined it almost impossible they should have given way. I have sent you four, and request you will make me your debtor for the carriage of them. Hoping to have a favourable report of the engines, &c.” The fact is, that the workmanship was condemned by the inspecting engineer from Portsmouth before we left the Union Dock.

Fourthly—“ The external leakage of the boiler.” The leakage of the boilers was so great, at the time Messrs. Braithwaite and Ericsson left the Victory off Margate, that it took the whole of the crew to replace it by a force pump, not with *distilled*, but with

sea water, which, owing to the leakage, it became imperative to use. Nevertheless, the leaks never took up, but got worse and worse; and when the boilers were taken to pieces, it turned out that a great number of the rivet-holes had cracks from them to the edge of the iron; and I need only refer to the report of the engineers for further information on the subject:

“ We hereby certify, That the boilers and machinery have had a fair and impartial trial, and that every thing has been done that could be to render it effective, without success. We are also of opinion, that the engines and boilers are so defective in power, and so bad in material and workmanship, that it would be a useless expenditure of fuel to persevere any longer in attempting to work them.”

August 26, 1829.

(Signed) ALEX. BRUNTON, 1st Engineer.

ALLAN MINNES, 2d Ditto.

GEO. M'DIARMID }
Wm. THOM } Witnesses.

N. B. The first engineer was a workman with Braithwaite and Co., and highly recommended, and was engaged at very high wages.

Suffice it to add, that the boilers were manufactured in the country (that is, at Birmingham), and that they were both unsound and ill-designed.

Fifthly—“ The internal leakage.” I can only say that the tube alluded to was never made red hot by the neglect of any one, unless it was when Mr. Braithwaite and Captain Ericsson were trying it before we sailed, nor would the effect have been as he states had that happened.

Sixthly—“ Wearing of the bellows.” I can only say that it was fortunate that I had plenty of leather for repairing them, although, being a new invention of the manufacturers, they were warranted not to want repair for six months; because, after we left the ship, the leather was wanted and made use of to make boots and shoes for the men, which indeed was the only good the bellows or the leather ever did us.

Seventh—"The cylinders were not of a sufficient size." On this subject I have only to remind Mr. Braithwaite, that he forgot to deduct the loss of power by the engines having the immense bellows to blow, which was at least equal to one-fourth.

Eighth—"Want of speed in the ship." The Victory, as I have already proved, did not draw three feet more than she should have done; the increase of seven inches was occasioned by the additional weight of the machinery; and the ship having been *actually* impelled both by the former and latter engine so fast, proves that the vessel was not impeded, nor was the power of the engine absorbed by the deep immersion of the paddle-wheels, nor by the confined construction of the paddle-boxes, which were the same as when the ship was built; but the failure in speed afterwards was entirely owing to the leaky state of the boilers, and their ill-contrived plans, or deviations from the original plan.

Mr. Braithwaite represents that the expedition lately under my direction has failed; of this the public will judge; but I submit that my humble endeavours, through the intervention of Divine Providence, have been crowned with complete success. I have indeed said that, had the machinery been good I should have advanced to a position that would have been fatal to us all. And when I call to my recollection that Mr. Braithwaite wickedly permitted me and my devoted companions to proceed on such a voyage of peril, with the *baleful* assurance that "the machinery was good, and that the boiler would 'take up,' and propel the ship five miles an hour," when he must have been aware that the whole was an *utter failure*, I am justified in exclaiming, Wonderful are the ways of DIVINE GOODNESS, who can turn such cold-hearted misdoings to his own merciful and benign purposes!

