

No. 1344 Survey held at Workington

Date Jan<sup>y</sup> 1853 to Jan<sup>y</sup> 1854

on the Ship "Invincible"

Master Graham

Tonnage Old 764 Built at Workington

When built 1854

By whom built Peile, Scott, & Co

Owners Bushby & Co

Port belonging to Workington

Destined Voyage Workington to Liverpool & thence to Calcutta

If Surveyed while Building, Afloat, or in Dry Dock while building

Length aloft 74 0 Feet. 0 Inches. Extreme Breadth 30 0 Feet. 0 Inches. Depth of Hold 20 0 Feet. 0 Inches.

**Scantlings of Timber.**

Room and Space	Inches.	Inches.	Inches.
Floors.....sided	13 1/4	Moulded	15
1 <sup>st</sup> Foothooks.....	11 3/4	"	12 1/2
2 <sup>nd</sup> Ditto.....	10 3/4	"	10 1/2
3 <sup>rd</sup> Ditto.....	10	"	9
Top Timbers.....	9 1/2	"	6
Deck Beams N <sup>o</sup> <u>25</u> Average Space <u>4</u> <u>7</u>	9	"	9 1/2
Hold Beams N <sup>o</sup> <u>28</u> Average Space <u>4</u> <u>6</u>	13	"	13 10 1/2
Keel.....	14 1/2	"	14 1/2 16
Keelsons.....	15 3/4	"	15 11
Carphs of Ditto <u>8 feet for Keelson</u>			
and 6 feet for <u>Keelson</u>			

**Thickness of Plank.**

Outside.	Inches.	Inside.	Inches.
Keel to Bilge.....	4	Limber Strakes.....	5 1/2
Bilge Planks <u>4</u> <u>strakes</u> .....	5 1/2	Bilge Planks <u>4</u> <u>strakes</u> .....	5
Bilge to Wales.....	4	Ceiling in Flat.....	3 1/4
Wales.....	5 1/2	Ditto Bilge to Clamp.....	3 1/4
Short Hoods.....		Hold Beam Clamps.....	7 x 5
Topsides.....	4	Deck Beam Ditto.....	5 x 4
Sheer Strakes.....	4 1/2	Ceiling 'twixt Decks.....	2 3/4
Plank Sheers.....	4	Hold Beam Shelves.....	
Water-Ways.....	9 1/2 x 12	Deck Beam Ditto.....	
Upper Deck.....	4		

**Size of Bolts in Fastenings, distinguishing whether Copper or Iron.**

	Copper Inches.	Iron Inches.		Copper Inches.	Iron Inches.
Keel-Knee, and Deadwood abaft	1 3/4		Transoms and throats of Hooks ..	1 1/2	
Carphs of Keel.....N <sup>o</sup> . 11	1 5/16		Arms of Hooks .....	1 3/16	
Floor Timber Bolts .....			Bolts thro' Bilge & Limber Strakes	1 5/16	
Keelson ditto .....	1 3/16		Butt End Bolts .....	1 5/16	
			Lower Pintle of the Rudder ....	3 1/2	
			Hold Beam .....	1 3/16	
			Deck Beam .....	1 3/16	

**Timbering.**—The Space between the Floor Timbers and Lower Foothooks in this Vessel is 4 Inches. The Space between the Top-timbers is 6 Inches. The Stem, Stern Post, consist of English Oak the Transoms, Aprons, Knight Heads, Hawse Timbers, and Deadwood, of English & African Oak and are free from all defects.

The Floors consist of English Oak The First Foothooks of African and Eng. Oak Timber. The Second Foothooks of Eng. & Afr. Oak The Third Foothooks of English & Afr. Oak The Top Timbers of Eng. & Afr. Oak

The Shifts of the first and second Foothooks are not less than 4 10 N. B. When less than prescribed by the Rule, state how many. The rest of the Shifts of the Frame are 5 feet

The Frame is well squared from the first Foothook Heads upwards, and is free from sap, and from thence downwards, the frame is well squared

The ~~alternate~~ Frames are all bolted together to the Gunwale. N. B. If not, state how bolted. The Butts of the Timbers are all close together; their thickness not less than 1/3 of the entire moulding at that place.

The Frame is cross chocked with a Butt at each end of the chock. The Main Keelson is Greenheart & Eng. Oak and free from all defects. The False Keelson is Greenheart

The Deck Beams consist of African Oak The Hold Beams of African Oak The Knees of Iron

**Planking Outside.**—From the Keel to the Height defined in Note to Table 2, the Plank is American Elm

From the above named Height to the Light Water Mark American White Oak

From the Light Water Mark to the Wales Greenheart and African Oak

The Wales and Black-strakes are Greenheart and African Oak The Topsides African Oak

The Sheer-strakes Greenheart & Afr. Oak and Plank-sheers African Oak The Water-ways African Oak & G. Oak

The Decks Yellow Pine State of New and good

The Shifts of the Planking are not less than 6 Feet 0 Inches. N. B. If less than prescribed by the Rule, state whether general or partial, and if partial, in what part of the Ship. The Planking is wrought three between

**Planking Inside.**—The Limber-strakes are Greenheart the Bilge Planks Greenheart

The Ceiling, Lower Hold, African Oak & Greenheart Between Decks African Oak

Shelf Pieces Greenheart Clamps Greenheart

**Fastenings.**—To Hold Beams Iron staple lodging knees to every beam, and 20 pairs of iron hanging rider knees, extending to bilge keelsons, and fastened with 1 1/2 inch bolts, and 1 1/2 inch clench

Deck Beams Pell's patent lugs, and an iron hanging knee to every beam

Number of Breasthooks 4 of English Oak 14 of Pointers One pair of wood & 1 of iron Crutches 1 of iron

Butts End Bolts are of Yellow Metal in the Bottom, and one Bolt in each Butt End through and clenched.

Bilge and Limber Strakes are bolted through and clenched. Treenails of Loose & African How Made Circular

General Quality of Workmanship very superior

We certify that the preceding is a correct description of the above-named Vessel,

Builder's Signature Jonathan Hill

Surveyor's Signature Richard North

\* In the deadwood American Elm is used to a height not exceeding 14 above the rabbet of the keel

6410-4801414



Her Masts, Yards, &c. are in good condition, and sufficient in size and length.

She has SAILS.			CABLES, &c.		ANCHORS, and their weights.		
N <sup>o</sup> .				Fathoms. Inches.		N <sup>o</sup> .	Weight.
2	Fore Sails,	Chain	.....	300 1 $\frac{3}{8}$	Bower, .....	2	Probnay pakeut
2	Fore Top Sails,	<del>Chain</del> Stream Cable	.....	75 1		1	32-1-
2	Fore Topmast Stay Sails,	Hawser	.....	90 10	Stream, .....	1	
2	Main Sails,	Towlines	.....	4 $\frac{1}{2}$			
2	Main Top Sails,	Warp	.....	6	Kedge, .....	2	4-0-2 2-2-0

and generally two complete All of good quality.

Her Standing and Running Rigging is sufficient in size and good in quality.

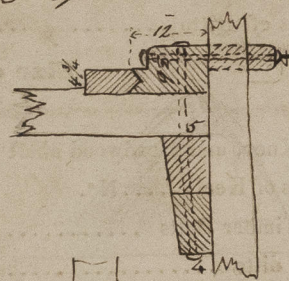
She has one Long Boat and a yawl, pinnace, and gig

The present state of the Windlass is good, Capstan good, Rudder good, Pumps 2 of metal & 2 bilge pumps

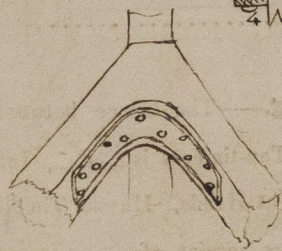
### General Remarks—Statement and Date of Repairs.

This vessel has a pair of bilge keelsons extending from wake of Foremast to that of Mizzen Mast fastened with a  $\frac{15}{16}$  I.M. through bolt in every floor and a short iron bolt in every futtock - scarphs 6 feet long - The garboard stakes are 12 square, bolted together with  $\frac{1}{8}$  iron bolts, 2-6 apart.

The adjoining sketch of the upper deck clamps and Waterways shows the system of vertical fastening adopted by Mr Fell - The hold beam clamps and the wales are likewise fastened vertically.



The breasthooks are worked as pointers with broad iron plates in the throats as shown in the annexed sketch.



There are four pairs of diagonal iron riders let into the frame, and extending from the gunwale to the turn of the bilge.

Each hold beam has a shifting iron pillar,  $2\frac{3}{4}$  diam and every upper deck beam is similarly fitted with a  $2\frac{3}{8}$  pillar.

This vessel is flush, having merely a raised Quarter deck. From the wales upwards, she is fastened with Yellow Metal bolts, to the exclusion of iron and treenails; and below with Yellow Metal and treenails to the entire exclusion of iron.

In August last there was some correspondence between Mr Fell and the Committee relative to some step-butting (though with very long shifts) which had been discovered in her planking; and in a letter dated 4<sup>th</sup> Aug<sup>r</sup> from the Committee, it was said that this shifting of plank "will not militate against her claims, in other respects, to classification". The means, proposed by the Builder and approved of by the Committee, for strengthening the ship have been carried out in an efficient manner, and I may add that the building of this ship, both as regards the quality of the materials employed, and the general character of the workmanship, is of a most superior description.

If Sheathed, Doubled, Felted, or Coppered Yellow Metal over paper When last done 1854

I am of opinion this Vessel should be Classed 13 A1

The Amount of the Fee.....£ 5 : 0 : 0 is received by me,

Special .....£ 35 : 18 : 0

Certificate (if required) .....£ : : to be sent to this office

Committee's Minute 13 Jan 1854

Character assigned 1 for 13 G

Richard Abertell



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