

War Office March 31, 1795

Sir

Captain Truxton who is appointed to command one of the frigates of the United States has presented a copy of his book entitled "???" Instructions and examples relating to the latitude and longitude &c" with an appendix on the masting of ships for each of the other captains of the navy of the united states which he has requested we transmit to them. One for you accompanies this letter.

I also enclose to you a copy of a letter from Capt Truxton containing some remarks on an English book which I lately received and put into his hands. He wishes that the subject of masting &c of ships might engage the attention of the gentlemen in particular who are engaged in our Navy and that they would compare his principles and proportions with the dimensions of the masts and yards prescribed by Mr. Steel, the author of the English book, before mentioned and that their observations might be communicated with a hope that these may lead us to some useful improvements.

Approving of his object, I have now suggested the same for your consideration and request that you will favor me with such observations as shall occur to you on the subject proposed.

I am, Sir

Your most obt servant

Timothy Pickering

PS It may be well to consult the constructor and other gentlemen acquainted with the subject that your observations may be the result of the fullest information and examination of which the case will admit

Hon^{ble} Cob^r Pickering
Secretary of War

Philadelphia 25 March 1795

Sir

I have received the books intituled the [seaman's] and practice of rigging and seamanship &c which you did me the honor to send me a few days ago. I have only had time to run over them in a cursory way but if you will be kind enough to leave them with me for the present I will take them to Baltimore and at my leisure there examine them with attention and if I find anything new or worth communicating will commit the same to paper and make the most early report to you. From what I have seen hover in these books there appears nothing more than a collection of different numbers on various subjects relaying to Marine affairs but in a [] particular examination of them it is possible many matters may be found well worth our investigating with attention as I conceive nothing to be of more consequence in the equipment of a ship of war than her being well masted and spar'd. I have examined what Mr. Steel, the author of the collection in question, says on that subject and have made out two setts of the principal spars agreeable to the principles he has laid down, the one for our forty four gun frigates, and the other for the thirty six guns. They are here enclosed and marked **A**. I am of opinion that candid and competent judges where they

compare to Mr. Steels dimensions, with those laid down by me in the book I have lately published will consider mine better adapted for our ships of war than his, and I think the author of this collection also, produces arguments to prove it in his second vol Chap VII, Page 273. The correct height for the masts of ships is still a problem which remains to be solved for the builders; the most skillful of them have not paid attention enough to the solutions and determinations which are contained in the works of the late Mr. Ranger(?) on that subject it seems on the contrary, as if they had endeavored to deviate as much as possible from the true principles, in that respect, by raising the mast a great deal more than they were formerly although they were already much too high, as the learned author I have just mentioned has asserted and experience confirmed by respected observations ahs convinced me of this truth[] "that as soon as a ship inclines her velocity diminished in proportion as her inclination increases, this principle has been verified on different vessels, and at different times by several officers and in various oblique courses." I do myself the pleasure to send you four of my books – one for the war office and one for each of the ships to be built at New York Boston and Portsmouth, New Hampshire. The ships here, and those to the southward, I shall furnish each with one. I think, Sir, it would be well to take the opinions of Capt^s Nicholson, Talbridge in [continues on page 6]

in writing and requested their observations on {keel} and my dimensions as also the opinion of these respective builders, Capt Barry and Mr. Humphreys being on the spot, can be consulted at any time. As I have quoted a part of Mr. Steele's remarks on masting which is against his own system, I submit to you whether a copy of the sums on this letter had not better be sent to the above gentlemen.

I propose calling on you in a day or two, regarding some alterations necessary to be made for the better [??] of the Navy Yard.

I have the honor to be V~ (Signed Thomas Truxton)

A

The whole length of the masts and spars of our 44 gun frigates, according to Mr. Steels method

Main Mast	109 1/6 feet	Bowsprit	65 1/2 feet
Fore "	97	Gib boom	46 3/4
Mizen "	93 1/2	Spanker boom	69 1/6
Main top mast	65 1/2	gaff	113 1/8
Fore " "	58 1/2	Main Yard	97
Mizen " "	49	Fore "	86 3/4
Main Top gallant mast	32 3/4	Cross jack yard	60 1/2
Fore " " "	29	Main topsail "	69 1/6
Mizen "	24 1/2	Fore " " "	60 1/2

Mizen topsail yard	46 1/6 feet	Fore Top g ^t yard	36 3/4 feet
Main top g ^t yard	41 1/3 "	Mizen D ^o	27 3/4

The whole length of ditto for our 36 gun frigates of the same

Main Mast	101 3/4 feet	Spankerboom	64 3/4 feet
Fore D ^o	96 3/4	Gaff	40 1/3
Mizzen D ^o	87 1/4	Main Yard	90 1/2
Main top mast	61	Fore D ^o	79
Fore D ^o	54 3/4	Cross jack yard	56 1/2
Mizzen D ^o	45 3/4	Main topsail D ^o	64 1/2
Main top G ^t mast	30 1/2	Fore D ^o	56 1/2
Fore D ^o	27 1/8	Mizzen D ^o	43
Mizzen D ^o	22 3/4	Main Top g ^t Yard	38 1/2
Bowsprit	61	Fore D ^o	34
Jib boom	43 1/3	Mizzen D ^o	25 3/4

NV The mizzen top mast and the top gallant mast are here calculated with common heads only and not for poles

Copy _____ Stag _____