

exercised, because none on board either ship knew how it was to be done . . .

But nevertheless, Hutchinson was so keen on Swivel Gun Carriages that he 'was induced to think this carriage worthy the notice of the managers of our Royal Navy, therefore I got a nice model with a gilt gun, etc. made, and a friend to present it to Lord Anson, then at the head of the Admiralty, and was ready to give a report of it, but my well meant endeavours were disregarded, for I never heard or saw anything further of my gun and carriage afterward.'

One hopes that his suggestions had a bearing on the introduction of swivel guns in time to be decisive factor in Rodney's victory over de Grasse at the Saints in 1782; and that his gilt model gun may have been known to Sir Charles Douglas, Rodney's Captain of the Fleet, who is credited with this, and other, reforms.

Hutchinson's interest in reflecting mirrors, lighthouses, and tides is evident from several pages devoted to these topics. The Port of Liverpool gained four lighthouses in 1763, all fitted with reflecting parabolic mirrors, three years after Hutchinson became Dockmaster. He claims that 'the losses have been very few in comparison to what they were before the light houses were Built'.

Finally, in his conclusion, which is an exhortation to religious observance (clearly much honoured in the breach!):

'For the first fifteen years I was at sea, in different trades, I never saw any religious duty publicly performed on board except that in an East India Ship, for two or three Sundays, when we draw near the Cape of Good Hope, we had prayers, which ceased after we passed the Cape. Indeed that great Company, or their Managers, are highly blamable in shamefully rating these large ships at 499 tons, in order to avoid the expense of a Clergyman.'

J. F. Allan

The formal entry for the book is as follows

HUTCHINSON, William

A |treatise |on |practical seaman/ship; |with |hints and remarks |relating thereto: |de/signed to contribute something towards fixing rules |upon |philosophical and rational principles; |to |make ships, and the management of them; |and also |navigation, in general, more perfect, |and |consequently less dangerous and destructive |to |health, lives, and property. |By William Hutchinson, Mariner, |and dock master, at Liverpool. |Printed, |and sold for the author at all the principal seaports in Great-Britain |and Ireland, 1777.

4^o xiv, 213p. 11 plates