

Topping Lifts

By Ted Walsh

One member wrote in asking what were some of the options for rigging topping lifts, as the topping lift on his boat provided little mechanical advantage. As with almost any kind of traditional rigging, there are many versions of topping lifts. Although there may be other, possibly better options out there, I have illustrated some variations with which I am familiar.

The job of the topping lift is to lift the combined weight of boom, sail, and gaff so they clear the boom gallows or crutch. They also hold the boom at the best angle to prevent it from fouling in other tackle while raising or lowering the sail. On a small boat this is not such a big job, and the traditional solution is a lift fixed to the end of the boom and run through a single whip at the masthead.

On a larger craft, two issues conspire to make this a more difficult evolution. One is that on a topmasted vessel the masthead whip is most often lower than it is on a polemasted vessel.

This means that the angle from masthead to boom end is significantly flatter reducing the amount of mechanical advantage. The other factor is simply that a bigger rig means more weight to lift. One way to improve mechanical advantage is to fix the end of the topping lift at the masthead and not at the boom. The topping lift ends in a single block short of the boom. A fixed line runs

up from the boom-end through the block at the end of the topping lift and back down through a sheave

let into the boom. This line runs inboard along the boom and can be set and cast off from the

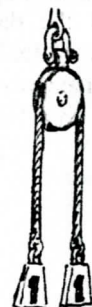
cockpit rather than the base of the mast. Likewise it is made fast to the boom.

This is a very traditional, tried and true method for rigging a topping lift. However, it can still be problematic if you have a really large boat or a small crew.

Another version, which was particularly popular after the First

World War, utilizes twin lifts

sometimes called lazy-lifts as they include the lazy-jacks in their make up. In this version two lifts run from the main-sheet bail on either side of the sail and gaff to a single block for each lift under the spreader, trestle or hounds, and then down to the deck. About halfway up each lift hangs a short sling with a wooden thimble or lizard at the bottom end of the sling. The lazy-jack runs from the boom up through one thimble then down around the boom and back up through the other thimble and finishes back at the boom.



Single Whip

Topping Lift

Twin Lifts

There are several advantages to this system. One is that the angle of the lifts are less flat because the topping lifts end at the mainsheet bail rather than the end of the boom, improving the mechanical advantage. The other is that you can place a crewmember on each topping lift, effectively doubling the applied muscle. Another advantage is that the gaff and mainsail are less likely to run afoul of your topping lifts because even when fully lowered they lie between the two lifts.



Luff Tackle

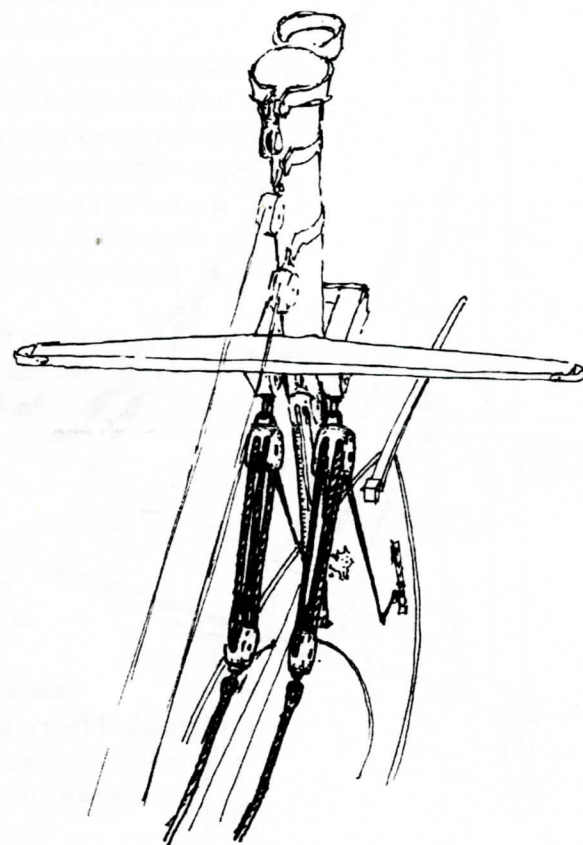
The disadvantages to this system become apparent with really large rigs. It is possible for the weight to exceed the strength of two of even the strongest crewmembers. In this case one solution is to fix the end of the topping lift to a luff tackle on deck. This gives a mechanical advantage of

three-to-one to each lift. The problem is that when the lifts are slack you now have a luff tackle thrashing around at the base of the mast. This can be a hazard when going forward or tending halyards. Still, the system works well and does not add weight aloft. I have seen this system used on English Pilot Cutters where it is common, but on this side of the Atlantic, I have rarely seen it.

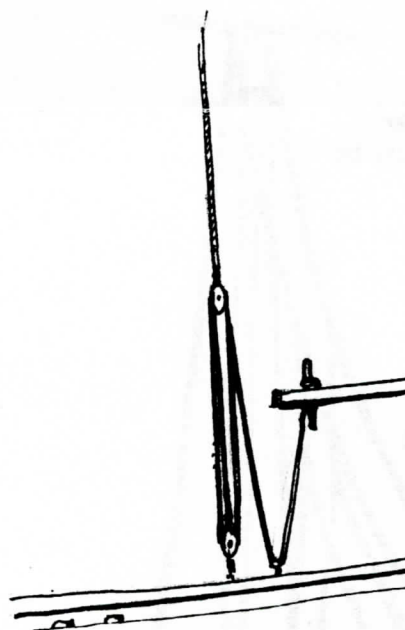
The last version with which I am familiar is much more common to the mainsails of fishing schooners than sloops, although John Alden called for it in the rigging plan of *Aimee*, built in 1905 by Wilbur Morse (see J.A. design #8).

This version places the luff tackle at the masthead with the lower, single block, placed so that it is below the gaff when the sail is fully set and above the gaff when a reef is taken in. The result is that you still have a three-to-one advantage on each lift and a clear deck. There is the trade off of more weight aloft and in theory more sail

chafing. We went to this rig on the *Black Star*, and I like it because we have a 32' boom with 620' of mainsail and it makes it possible for me to take the boat out with only one other person on board to take the helm. I can't say I have noticed any chafing and considering the combined weight of boom, mainsail, and gaff, I can't say the



Luff Tackle at the Masthead



Luff Tackle on Deck

additional weight of two double blocks aloft has been noticeable.

To paraphrase the old adage: every problem may have a solution but every solution has its problems. The choice of topping lift on your vessel is a question of fitting the type of lift to the type of sailing you do, the size of the vessel, and the number of crew that you typically have. Also, all of us have idiosyncrasies, what we're used to, and that too becomes an important part of the mix. If the system you have works, then I certainly would not mess with it; for anyone else, I hope these illustrations are helpful.