The Shock of the Old

Photograph: Sandy Miller

Part 27: With Strings Attached

Updating his little Victorian-style lugger with carbon spars, Moray MacPhail also simplified boom reefing and sheeting systems.

Unlike gaff or Bermudan rigs, the lug rig is set up using the downhaul rather than the halyard. So if a standing lug rig is fitted with a boom – rare on working craft – then a gooseneck would prevent the boom moving. With the forward end of a standing lug boom terminating at the mast, the usual thing is to use a crutch there which is free to slide up and down the mast. It can then be tensioned using the downhaul. With a balanced lug boom where the forward end projects ahead of the mast, if left to its own devices the boom would go well forward of the mast. So there are a number of options open to us.

You can have a crutch on one side of the boom which is fine but means that it is not easy to adjust the position of the boom along the mast, which as we've noted previously is a plus for this rig. An alternative is a square lashing which is adjustable but fiddly to fit and prone to jamming. If the downhaul is attached to the boom at the mast, then you may be able to get away with no attachment to the mast as long as the downhaul is set tight, though a square lashing or crutch is often still present.

Best though, for adjustability, simplicity and speed, would be to use the system devised by Australian designer Mike Storer for his Goat Island Skiff – and so known as a 'bleater'! A line is looped around the boom just aft of the mast, and then taken forward to the front end of the boom – see Figure 1 across the page.

With this arrangement you can move the position of the boom along the mast and also the attachment point of the downhaul is not forced to be at the mast. For example. it can be a little aft of the mast, so increasing the vanging effect of the downhaul in its ability to influence sail twist – see Figure 2 across the page.

It may be possible to make both the bleater and the downhaul adjustable as you are going along. Indeed, on Lymington scows where both a downhaul – forward of the mast – and a kicking strap – aft of the mast – are employed that is effectively what happens. In any event the lower end of the downhaul – and the kicker if fitted – must end close to the mast to allow the sail to rotate easily.

As for the downhaul itself, my experience of sailing *May* so far seems to indicate that the 2:1 purchase I have at the moment doesn't really cut it, so next season I'll need to increase it.

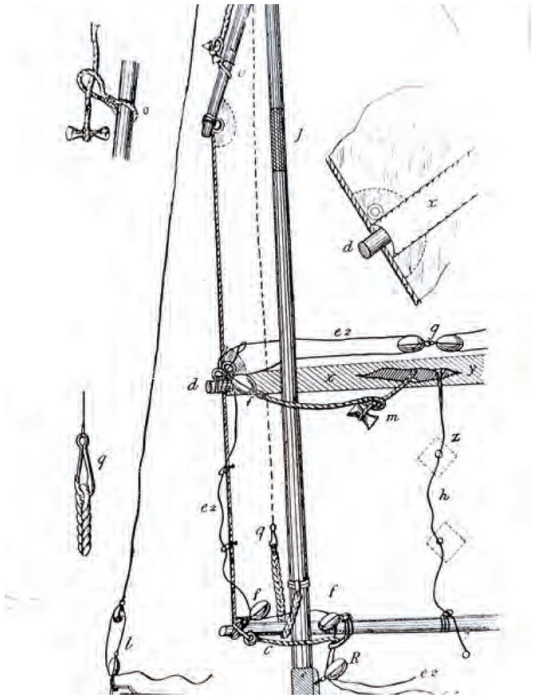
What about reefing?

Inevitably, the Victorians had many cunning schemes for both the main –

Above left: *Figure 1 – A 'bleater 'rigged to prevent the boom going forward also allows the boom height to be adjusted freely.* **Right:** *Figure 2 – The downhaul – still a work-in-progress – fitted aft of the mast to reduce sail twist.* **Below:** *Figures 3a & 3b – The 1880s canoeists did like to complicate things but their roller furling battened mizzen anticipated the gear fitted to modern yachts.*

Figure 3a - and the mizzen – Figure 3b. These arrangements derived from the need to alter sail while sitting in the centre cockpit of a sailing canoe, combined with the 19th century love of mechanical gizmos – rather as we seem to have the same affinity for electronic gizmos in the 21st. I note that this sort of arrangement doesn't feature in modern sailing canoes, plus we are talking about the sort of boats you can move about in. We can safely head for a simpler solution.

A loop in the luff cringle hooks over the forward end of the boom.



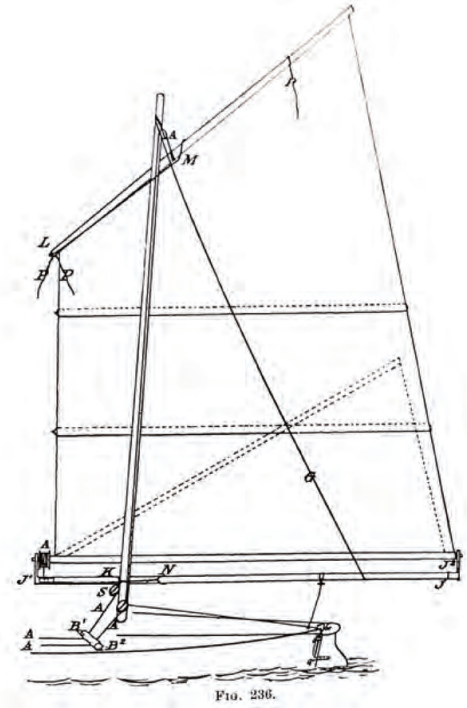


Fig. 236.

Above left Figure 4*: It is simple enough to drop a loop over the front end of the boom.* **Figures 5a – above right – and b & c below:** *The after reef pendant led through the leech cringle around the boom and back through the same side of the sail. Then aft to the cleat. When tensioned the bunt of the sail falls clear.*

If you are feeling salty a grommet could be made up, if not a simple knotted loop, though a reef knot isn't the right thing here; a sheet bend serves better – see Figure 4.

A short pendant needs to be arranged so that it tensions the leech both aft and around the boom. It is possible to have a pendant attached to the sail, which is passed around the boom and then led aft and tied off. If trying to do this while afloat it can be rather fiddly to be tying knots and later untying them. So I am currently using a Clamcleat fixed to a line at the after end of the boom. To put in a reef, this line is led through the leech cringle around the boom, then back through the cringle the same way – so as not to trap the bunt of the sail – and then aft where it can be tensioned in the cleat. Figures 5a, b and c show the idea. Ignoring tying off the reef points – which I usually don't do – I reckon to get a reef in or out in a minute, even when afloat – see Figure 6.

For simplicity I also opted to have no battens, and I sized the sail so that it can drop neatly into the cockpit for rowing. With the yard and boom roughly the same length, sail and spars stow neatly into a bag complete with sail when trailing. In my case the mizzen sail, spars and boomkin also all wrap up into a bag – see Figure 7.

I appreciate the irony that having spent decades designing, making and selling metal fittings for traditional rigs, I am now working on one which is all sticks and string. But I had not looked properly at the potential of lug rig; I've learned this rig is a triumph of simplicity – it is light, cheap and effective. It has always been around but has really benefitted from the recent attention paid to it by Mike Storer and others.

In keeping with the point of this whole series we can take the ideas

of 19th century sailors and by using materials available to us now create a really great rig. This comes at just the right time with the increased interest in this type of craft over the past few decades. In short it's a super rig for small boats, but why not for larger ones? After all some of the Scottish craft using dipping lug were up to 70' (21m) long with sails up to around 1800 sq.ft (167m²). And the large luggers seen around the UK and French coasts set clouds of sail, but always as a boomless standing lug. One answer comes from John Leather in his book *Spritsails and Lugsails:*

"A well cut and set balance lug will stand flatter than a dipping or standing lug sail and the tack downhaul being made fast a distance aft of the forward end of the boom reduces the possibility of the boom lifting in a breeze, and of the sail bellying out. However, the balance lug is not easy to handle in squally weather as the tack cannot be triced up or the peak rucked down, as in a gaff sail, and it cannot be brailed up like a spritsail or a boomless standing lug. It has to be lowered into the boat to be reefed. These were sufficient reasons to condemn it for use by working craft and it remains a pleasure sail....The author's own – balance lug rigged – dinghy is a 10' (3m) ex-West Mersea One Design class about 45 years old and although the same size as his first boat, provides as much fun as any of the seventeen larger, cruising and racing craft which have been owned in between."

I hope to follow his example with my own small boat. For larger craft you can still go down the route of dipping or standing lugs, though that is an unusual choice these days. More commonly the choice for traditional rig is gaff, which is what future episodes in this series will deal with, starting with the gaff itself.

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Above Figure 6: *The reef tucks in neatly and quickly.* **Below** *Figure 7: Nearly all the rig packs away neatly: blue bag for mainsail, yard and boom; black one mizzen sail, spars and boomkin. The mainmast becomes the ridge pole for the boat cover.*