

# Rigging, Handling and Maintenance Notes

# CORNISH COBLE

Designed by Roger Dongray in  
conjunction with Cornish Crabbers Ltd.

L.O.A. (inc. sprit)	19'0"	5.79M
L.O.D.	16'6"	5.03M
L.W.L.	13'3"	4.04M
Beam	6'0"	1.83M
Draught (plate down)	3'6"	1.07M
Weight	600lbs	272kg

## Sail Areas

Mainsail Area	98sq.ft.	9.10M <sup>2</sup>
Jib Area	33sq.ft.	3.07M <sup>2</sup>
Total Sail Area	131sq.ft.	12.17M <sup>2</sup>



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# CORNISH CRABBERS LTD.

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## CORNISH COBLE

### A General Look Around the Boat

Before rigging and sailing the Coble for the first time, it is worth the owner having a look around the boat generally to understand the concept of the design and its "built-in" facilities.

Under the hull the central keel running from the stem, which develops into twin skegs aft, is brass bound to prevent damage when beaching and drying out. The twin aft skegs help to ensure that the Coble remains upright when aground.

Under the foredeck and side decks, there are three buoyancy chambers with access to each via inspection hatches. The hatch for the forward chamber, set in the foredeck, means that the compartment can be used to store the anchor warp if the Owner wishes. Apart from these three buoyancy chambers, additional foam buoyancy is sited under the after deck.

Forward and aft lockers are provided for general stowage and the aft locker which can be fitted with a padlock, is large enough to accommodate a stowed outboard motor.

Drainage of the deck area generally is via scuppers sited amidships and the decks are cambered towards these scuppers.

The cockpit well is fitted with non-slip floors under which there is a shallow bilge area. These floors are in two sections either side of the centreboard case and it will be found useful to raise the forward sections to drain or sponge out the bilges when the Coble is afloat.

The hull is fitted with a drain bung in the transom which is useful for removing bilge water from under the cockpit floor and the after locker area, when the boat is beached or on its trailer. Please ensure the drain bung is screwed in tightly before launching the Coble.

The oars are stowed neatly either side of the centreboard case and when required for use, the blades should be eased back a couple of inches so that each oar can then be slid forward clear of the centreboard case moulding, then lifted out aft end first, by allowing the blade ends to enter the forward stowage locker.

A removable rowing thwart is provided which also serves as a comfortable crew position in lighter winds. However, when the wind strengthens, or with a crew of four or five aboard, Owners may find that it is more comfortable to stow this thwart away, leaving the cockpit well clear.

The shaped timber centreboard, when in the fully retracted position for beaching, mooring or trailing, can be retained with a brass pin locking the grab handle fully forward. The pin should

obviously be removed for sailing.

The rudder assembly is designed with a lifting blade for ease of beaching and the cranked tiller is designed so that its arc of travel is limited by the gunwales, so that there should be no conflict between the rudder blade and the outboard propeller when the engine is properly sited.

### Preparation for Rigging

When each Coble leaves our Works, the mast is already dressed with standing and running rigging so that apart from removing any packing material, the spar is ready for raising.

Other items of rigging eg. sheets, bobstay and sail lacings will be found packed together and stowed in a locker.

Before attempting to raise the mast for the first time, ensure that the Coble is reasonably level (either on the road trailer or on level ground) and that she is safe to climb aboard. On subsequent occasions, it is possible to raise or lower the mast with the boat in the water as the Owner will, after the first raising operation, know the correct positions for shroud adjusters to obtain the desired mast rake etc. Hoisting of sails on the other hand, is much easier done with the boat in the water and head to wind, either at a pontoon, on a mooring or at the water's edge,

### Raising the Mast

Having removed any packing material, lay the mast down the centre of the boat with its heel just forward and to starboard of the mast step and with the bowsprit hole upwards. The head of the mast will now be projecting over the mainsheet horse.

Check that the loops at the masthead for shrouds, forestay and halyards are all bedded down neatly over the brass crosspin; sort out the shrouds and attach them to the internal chain plates with the clevis pin provided, trying the fourth hole up initially.

Shackle the forestay to the eye on the starboard side of the stemhead, then reeve this through the single pulley block on the lower end of the wire forestay and finally reeve it through the single pulley block on the port side of the stemhead and lead the tail back on the port side of the mast step, but leave it loose (see Figure 1).

Next, place the timber block in the angled mast step in its forward position so that the space for the mast heel is created at the aft end of the step. This timber block should have its chamfered end forward and downward and should be secured from jumping out by means of the shockcord provided on the step.

Standing in the Coble ahead of the thwart and to port of the centreboard case, grasp the mast with both hands (with the right

hand nearest the masthead). By adjusting the points at which the mast is held, it is possible to raise the head and control the position of the heels that it enters the space at the aft end of the step, behind the timber block. Once the heel is in position, continue holding the mast with the right hand, forward against the tension of the shrouds whilst hauling on the forestay lanyard with the left hand until the forestay becomes taut. The mast is now safe and both hands can now be used to belay the forestay lanyard as tightly as possible on the cleat provided on the port side of the step.

### Fitting the Bowsprit and Adjusting Mast Rake

The bowsprit can now be placed in position with the "dowel" at the heel of the bowsprit fully entered into the hole on the forward face of the mast, and with the body of the sprit seated in the notch provided in the stem moulding, bordered by the forestay lanyard assembly.

The mast can now be checked for rake (and the Coble is designed to have pronounced aft mast rake), by measuring the distance between the forward face of the mast just above the bowsprit heel and the extreme forward edge of the moulded stem when viewed from above (See Figure 3). Ideally this distance should be 49.3/8" (1255mm). If the distance is less, the clevis pin positions at the shroud plates should be dropped one notch by easing the forestay lanyard to facilitate this, after which the forestay lanyard should be re-tensioned and the rake measured again. Conversely, if the rake measurement is too great in the first instance, the shroud clevis pins should be raised a notch. Finally, the Coble should be viewed from ahead to check that the mast does not lean to port or starboard. It is unlikely that the mast will be out of vertical but this could be caused by uneven bedding down on the loops at the masthead, in which case the loops should be snugged.

The bobstay can now be fitted to the bowsprit by shackling one end to the bow eye and the other end, by means of the stay adjuster, to the brass lever fitted in the end of the sprit. The stay should be set up fairly tightly by moving the clevis pin as necessary within the stay adjuster. (See Figure 1).

### Bending on the Mainsail

The mainsail should now be attached to the yard using the lacings provided on the sail or in the rigging pack. First lace the throat cringle to the eye at the lower (untapered) end of the yard. The throat cringle should be laced as closely as possible to the eye (Figure 4) and the tail of the lashing used to hold the cringle snugly against the yard, then tied off.

The peak of the sail should then be laced with medium tension to the eye at the outboard (tapered) end of the yard, pulling out the sail with medium tension and finishing off again by lacing through the peak cringle and around the yard as shown in Figure 4. Finally, the eyes of the sail between the throat and peak cringles can be laced along the yard using marlin hitches (Figure 4)

without over-tensioning this lacing. The object of the lacing operation generally is to ensure that the head of the sail is held smoothly and regularly to the yard so that no creasing or sagging of the sail is apparent when the Coble is sailing.

### Attachment of the Mainsheet and Tack Downhaul

For full sail without a reef, the mainsheet and its associated blocks should be attached to the traveller on the mainsheet horse and to the clew of the sail as shown in Figure 5. Next, the tack downhaul should be set up as shown in Figure 2. with the downhaul tail rove through the clam cleat on deck, to starboard of the centreboard case. However, both mainsheet and downhaul should be left loose and uncleated until the mainsail is fully hoisted.

### Hoisting Sails

Position the yard with the peak end over the mainsheet horse and the throat end to starboard of the mast with the sail loose and ready for hoisting. Next, uncleat the main halyard and bring the galvanised ring (or mast traveller) with its associated hook down the mast so that the strop on the yard can be introduced to the hook. If there is any breeze, it is now preferable to turn the Coble more or less head to wind after which the yard can be raised by hauling on the main halyard whilst keeping the luff of the sail under control by hand, so that the yard rises peak end uppermost. Continue hauling on the halyard until the yard is fully raised when the splice above the hook will be hard up against the block at the masthead, then cleat the halyard. At this point the tack of the sail will be some 20" above deck and the luff can be placed under medium tension by hardening the tack downhaul as shown in Figure 2.

The jib can now be raised by shackling the tack to the outhaul rope which runs around the pulley attached to the bowsprit through and back to the jammer on the side of the bowsprit. The jib sheet can be attached using an overhand knot at the clew cringle (See Figure 6). making sure that the two sheets so formed are of equal length. The sheet tail should then be rove through the jib fairleads making sure that one sheet passes around the forestay.

The jib can now be hoisted with maximum tension on the halyard, which should be cleated off to port of the mast near the heel. The hoisted sails should now appear as shown in Figure 3.

Having hoisted the jib and belayed the halyard, the Owner can if desired slacken off the forestay by releasing the forestay lanyard and then bringing back the wire stay to the mast, tucking the lower end behind the lanyard cleat and gently re-cleating the lanyard. This has the advantage, particularly in light winds, that the jib will tack more smoothly as the sheets and clew of the sail will not be impeded by the stay. In stronger winds however, it will be found that the jib will tack quite easily with the stay in its active position and the Owner may prefer the stay to be in operation for maximum support of the rig.

### Fitting the Rudder and Outboard Motor

The Coble rudder assembly is designed with a lifting or pivoting blade to enable the boat to be sailed into the beach with the Owner retaining rudder control until literally the last moment. The blade is held down by a shockcorded lanyard which is attached to the tiller approximately half way along its length. It follows that when setting off from the shallows, it is best not to hook on the lanyard until deeper water is reached but on the otherhand, the Owner should always take care to make only gentle movements of the tiller and thus the rudder, when the blade is in the up position to avoid strain on the rudder stock.

When the tiller is inserted into the rudder stock and retained in position by the pin provided, it will be noted that the forward end of the tiller does not clear the gunwales of the Coble and thus the arc of available movement is restricted. This arc is quite sufficient for all sailing and steering and the limit imposed by the gunwales ensures that the rudder blade should not come into contact with the propeller of the outboard motor when the engine is properly sited.

The Coble is designed with the Mariner standard shaft 2hp, 4hp or 5hp outboard motors specifically in mind. These units have slender drive legs, give sufficient power to the boat and are light enough to have no adverse effect on the weight distribution within the Coble hull. When mounting the outboard (normally to starboard on the rudder) make sure that the engine is sited as far from the rudder as possible with the drive leg and propeller as far forward as possible where there is a choice of shaft angle provided on the engine. In this position the propeller of the outboard should remain clear of the rudder blade providing the latter is fully down and this is important when manoeuvring under power (see later). Having clamped on the outboard and checked that it is clear of the rudder, the motor can be tilted up and the leg held hard against the counter with the shockcord loop and hook provided. Use of this loop rather than the engine's own tilt clip ensures that the propeller and outboard leg are kept reasonably clear of the water whilst the Coble is being sailed.

### **SAILING THE COBLE**

#### Getting Underway - Full Sail

With the main and jib hoisted, rudder and centreplate in position, outboard motor tilted up and the crew ready, the Coble can now be sailed. The boat will soon prove to have more response than her traditional rig may at first suggest and an Owner with basic dinghy sailing knowledge will have no difficulty in putting the boat through her paces whether close-hauled, tacking, reaching or running. It will be found that the Coble will sail very close to the wind indeed, but attention must be paid to correct sheeting of the headsail and full control of the mainsail to gain maximum performance.

As the mainsail is designed as standing lug, the luff of the sail always remains to starboard of the mast. On any particular angle to the wind, the helmsman should quickly adopt the habit of checking the shape of the main generally and making adjustments to tension of the tack downhaul in particular to remove any diagonal creases which may occur from either between the peak and tack, or between the throat and clew. For example, when sailing in a reasonable breeze close-hauled, it is quite likely that unless adjustment is made to the downhaul a crease will occur between throat and clew. Hardening on the tack downhaul will remove this crease and the sail can be made to set with an absolutely smooth curve. On turning away from the wind onto a reach, unless the downhaul is eased out as the mainsheet is eased, there will be a tendency for a crease to occur between the tack and peak.

The mainsheet should be set up as shown in Figure 5. The bottom block incorporates a jammer and the angle of this jammer can be adjusted to suit the Owner's preference and to enable quick release. When sailing the traveller should be allowed to run more or less full length of the mainsheet track down to leeward so that the mainsail adopts a good aerofoil shape.

#### Reducing Sail Area - Reefing

First, attach short lanyards to the reefing cringles of the mainsail in the luff above the tack, and in the leach above the clew. These lanyards can be left in position permanently so that they are always available for reefing.

In practice, it is probably better to lower the mainsail whilst putting in the reef.

Now, tie the tack cringle tightly and firmly to the luff reefing cringle using the lanyard, and similarly tie the clew to the leach reefing cringle.

Having secured the cringles so that a new tack and clew are formed, it is merely necessary to roll up the foot of the sail neatly and tie off the reefing points to secure this roll, before re-hoisting the mainsail. On hoisting, the new foot of the sail should be more or less the same height above deck as that at full sail. In other words with the reef in, the yard will have been lowered by the depth of the reef. Thus the angle of the mainsheet to the mainsail will remain correct.

#### Reducing Sail Area - Single Sail Rig

The Coble can be sailed effectively under mainsail only and will remain very well balanced providing the mast is moved forward to compensate for the loss of the jib. The mainsail-only rig is particularly useful for single-handed sailing whilst it is also a useful arrangement for heavy weather.

To change to the single sail rig, first lower the mainsail and the jib (remembering to re-tension the forestay if this has been tucked away). Standing to port of the centreboard case, the forestay can now be eased slightly to facilitate removal of the bowsprit. Clearly the sprit must be pushed forward slightly for the "dowel" to be freed from the mast. As soon as the sprit is

free, the forestay can then be temporarily belayed again whilst the sprit is retracted into the boat and either stowed on deck with the bobstay drawn up tight, or un-shackled and removed altogether.

To move the mast forward, stand again to port of the centreboard case and remove the mast step block, releasing the shockcord retainer. Un-cleat the forestay lanyard and holding this lanyard firmly and under tension in the left hand, push the heel of the mast forward gently with the right hand so that it travels down the sloping mast step to the forward position. The mast step block can now be re-inserted behind the foot of the mast to lock it forward and the shockcord retainer refastened. Finally, haul on the forestay to achieve maximum tension and firmly cleat the forestay lanyard.

It will be seen that because the mast step slopes downwards, the mast moves bodily forward so that more or less the same mast rake is retained and of course there has been no need to adjust the shrouds.

Before re-hoisting the mainsail ready for sailing, rearrange the tack downhaul so that its tail passes through the forward cheek block on the starboard side of the mast step. The pull of the downhaul is then still vertical to the sail. The single sail rig is now ready for use.

#### Procedures after Sailing

On returning to the mooring or beach after a sail, it is better to pack the jib away neatly in its sail bag but there is no need to remove the mainsail from the yard unless the Coble is to be left for a considerable period (many weeks) before being sailed again. The normal procedure either at moorings or after the Coble has been brought ashore, is for the mainsail to be bunched fairly neatly to the yard and for the yard to be placed more or less amidships with its throat end close to the mastgate, and the peak end under the mainsheet horse. Having showed away the rudder, tiller and raised the centreboard (locking it up with the retaining pin) all these items and the mainsail can be protected from the weather by use of the internal boat cover. This cover is particularly useful at moorings as it avoids rain water filling up the cockpit well. The yard acting as a ridge pole for this cover, makes sure that water will drain off onto the side decks and in turn through the drainage scuppers.

#### Mooring the Coble

If the Owner intends to keep the Coble permanently at moorings, there is an advantage in having the primary mooring attachment from the bow eye using an arrangement such as is shown in Figure 7. With this arrangement, the boat will lie very comfortably in rough weather whilst chafe against the bobstay is eliminated.

#### Using the Outboard Auxiliary

The siting of the outboard motor in the well and the arrangement for tilting the outboard leg as high as possible whilst sailing has been discussed earlier. The following additional points may be

found useful with regard to operation of the outboard:

(1) It is far more comfortable to steer the Coble under power using the boat's tiller (and with the rudder blade fully down). The Coble will respond well under power providing the engine is set up correctly. Most outboards have a friction device somewhere on the shaft to make the outboard's own steering arrangement stiffer. Indeed, when this friction is increased the engine will be held firmly in the desired position.

To trim up the engine, engage forward gear and medium revs. Leaving the boat's own tiller free to move, adjust the outboard's tiller or steering arm to a position where the boat progresses straight ahead without tendency to veer to port or starboard. Having found this position, tighten up the friction adjustment so that the engine remains on this alignment, after which, any adjustment to course can be made with the boat's own tiller.

(2) The manoeuvrability of the Coble under power can in some sea conditions be improved if the centreplate is lowered but it should always be borne in mind that if the engine is mounted to starboard of the rudder, the Coble can be steered to port on a tighter turning circle than she can be steered to starboard, as the engine thrust is offset.

#### ROUTINE ADJUSTMENTS

##### 1. Sails

The lacings holding the mainsail of the Coble to the yard may need re-tensioning after the first few outings, the object being to avoid any creasing or puckering along the head and even tension of the sail to the yard.

##### 2. Centreboard

The timber centreboard should remain in any given position when the boat is under way; indeed medium hand pressure should be necessary on the centreboard handle to move the board upwards or downwards. This slight resistance to movement is provided by a friction pad on the aft face of the centreboard and the pad itself is adjustable.

It is quite possible that after the first outing or two, the centreboard is found to move too easily to the extent that when it is placed fully down, it tends to ride up of its own accord when the boat is under way. In this case, friction needs to be increased by screwing down each of the two screws holding the friction pad, as shown in Figure 8. This adjustment should be carried out when the boat is afloat and the two screws should be tightened half a turn at a time until sufficient friction is achieved for the board to stay where it is placed when the blade is fully retracted into the hull, and friction pad and screw adjustment are clearly visible through the slot at the top of the centreboard case.

The centreboard pivot bolt will not need adjustment unless slight leakage is detected from the bolt assembly into the bilges after the board has been used several times. Should this occur, the bolt

and nut should be tightened up, say half a turn which should eliminate any leakage.

\* A routine check should be made on all the standing the running rigging at least once a Season to make sure that all parts are in full working order.

\* From time to time during the Season, it is also worth opening the inspection hatches into the buoyancy chambers and removing any condensation which may be found by sponging out.

\* CORNISH CRABBERS LIMITED are only too pleased to help should Owners wish to obtain advice on maintenance generally. It is often easier to telephone for such information.

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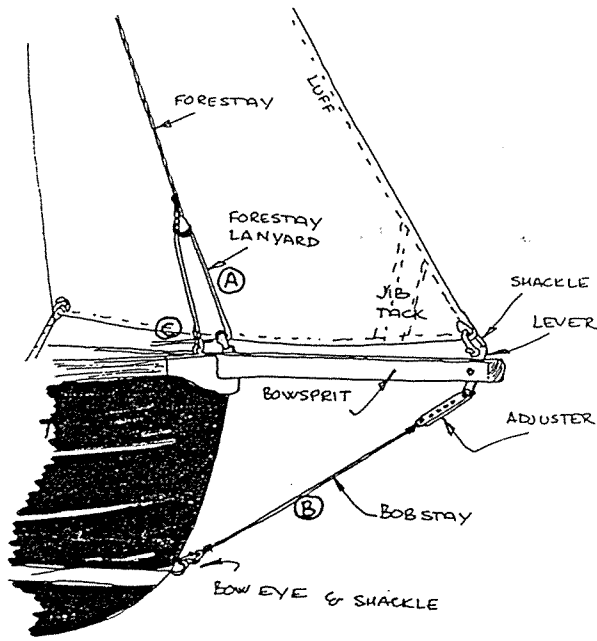


FIG 1.

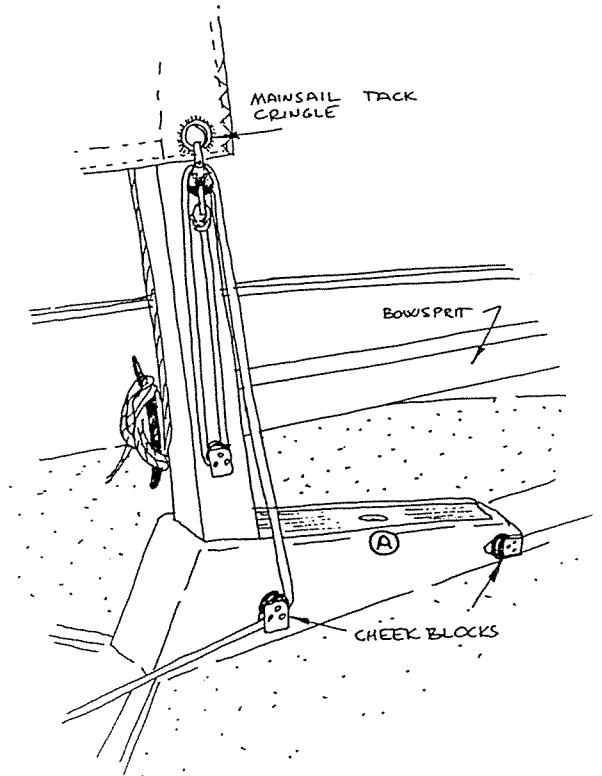
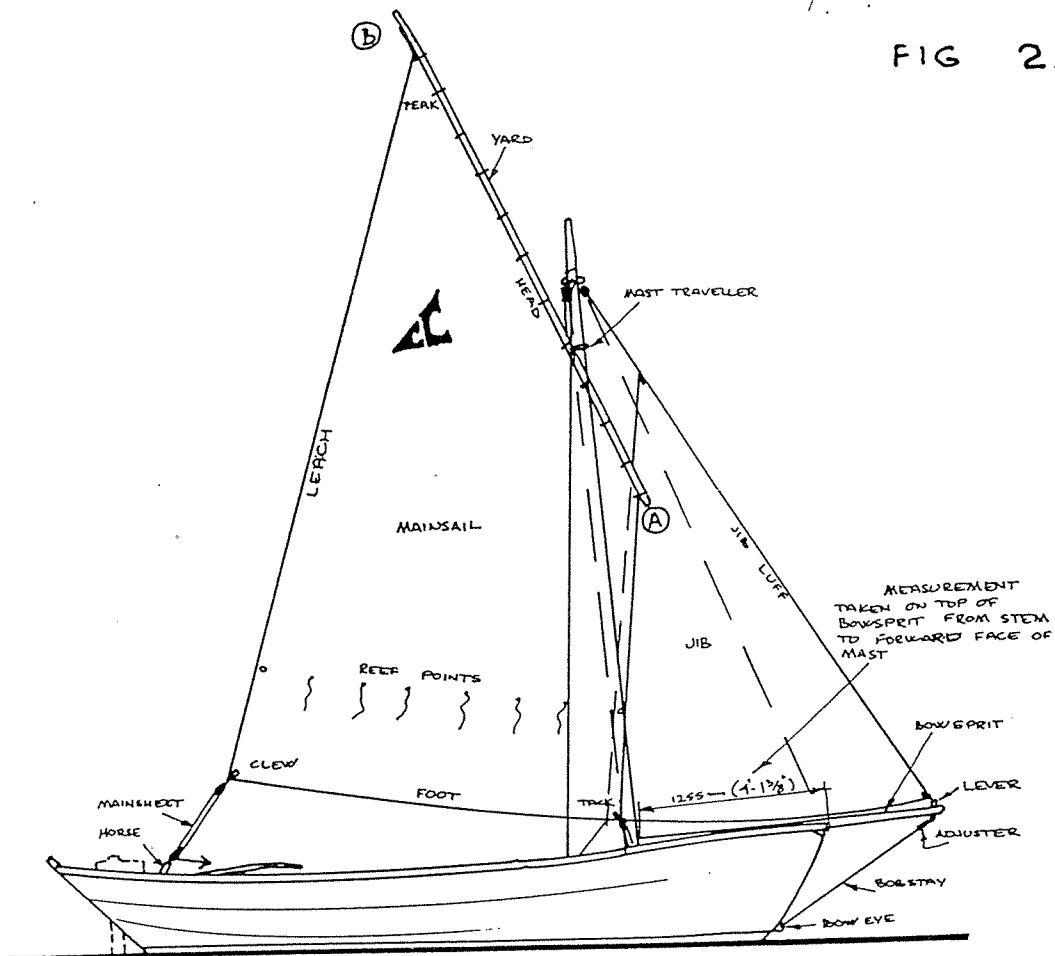
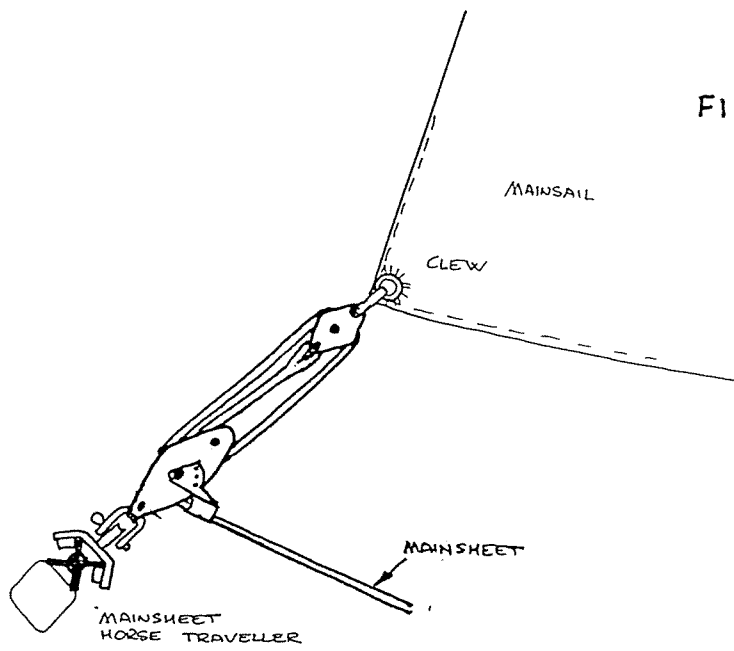
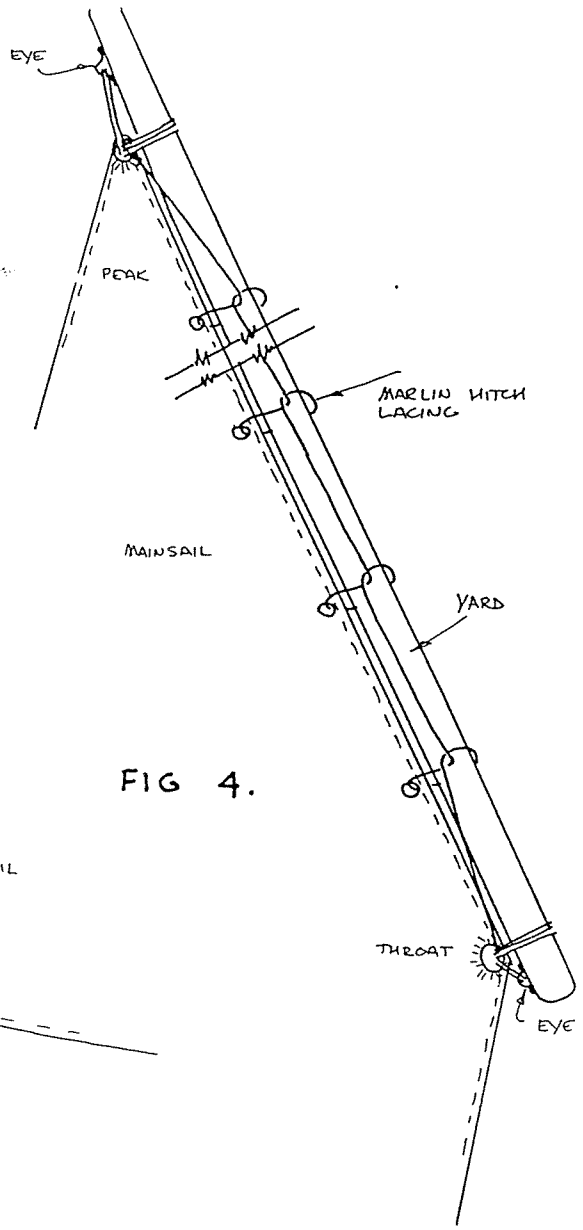


FIG 2.





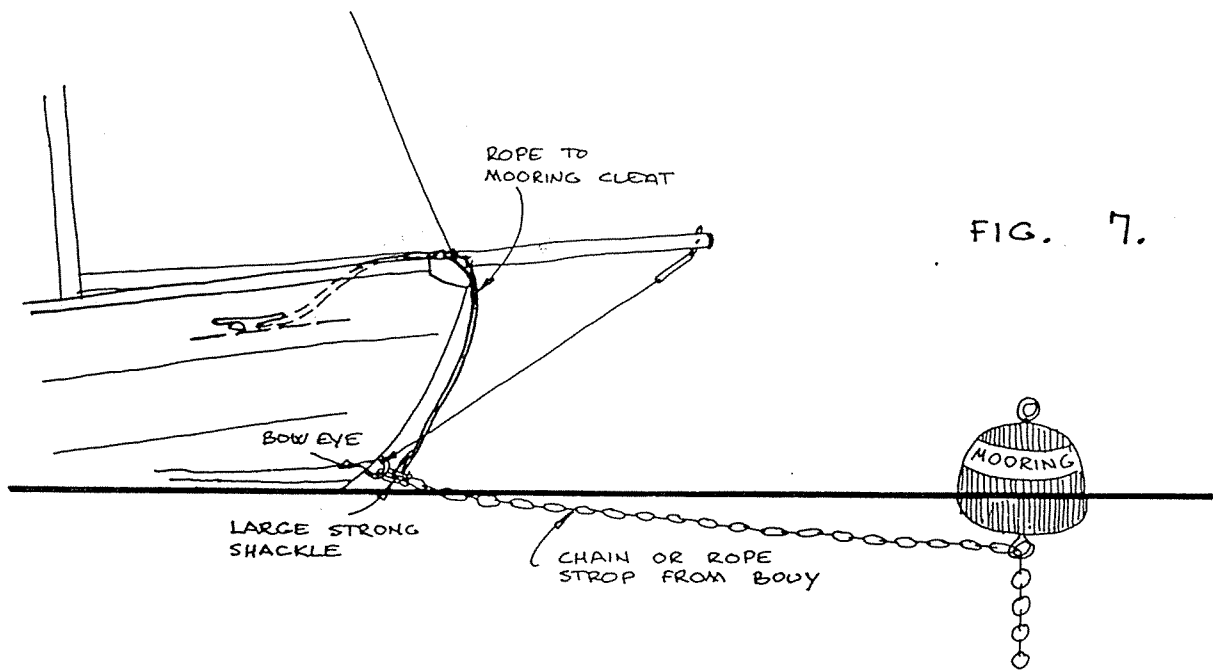


FIG. 7.

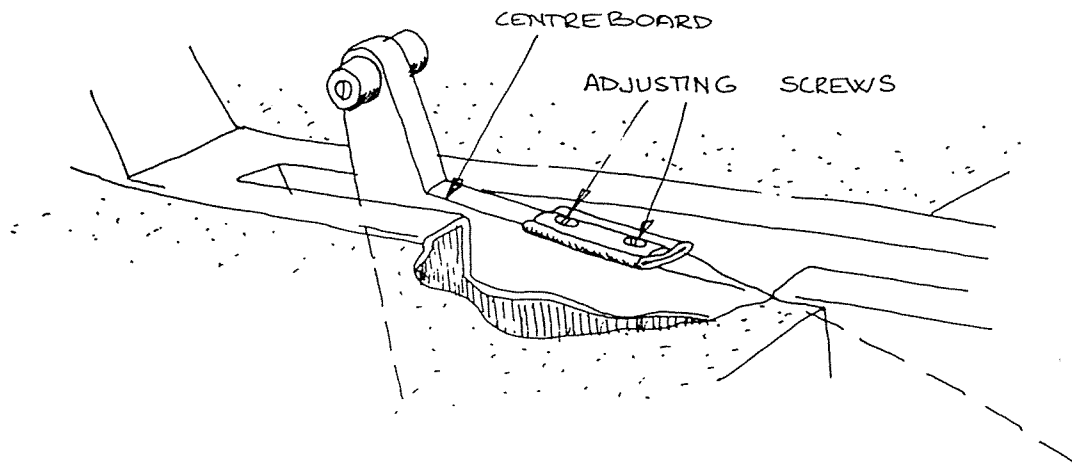


FIG. 8.

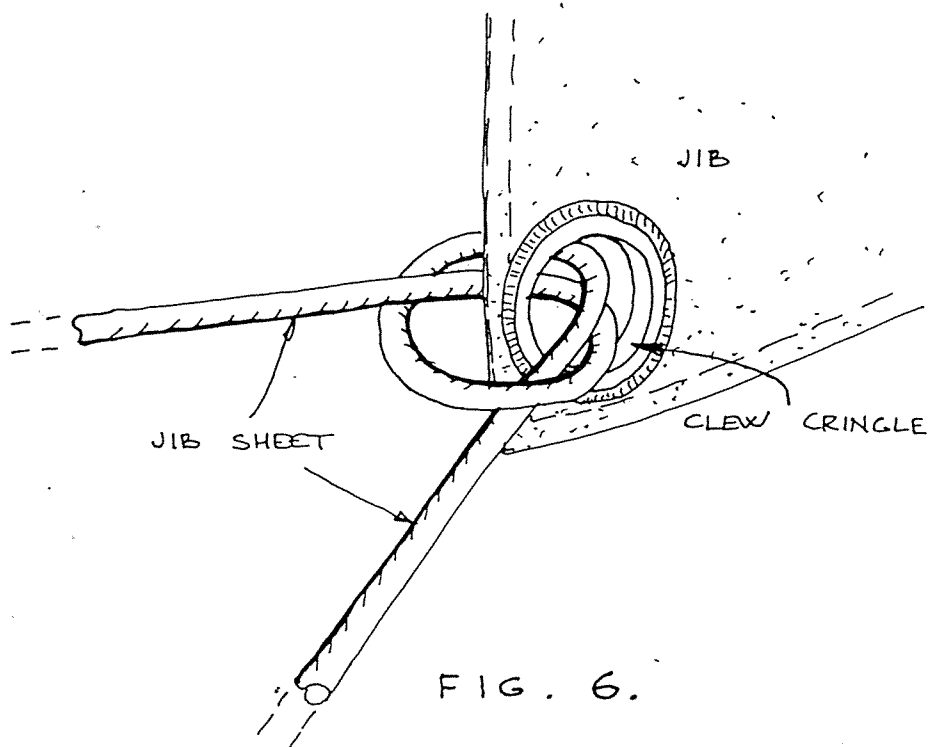


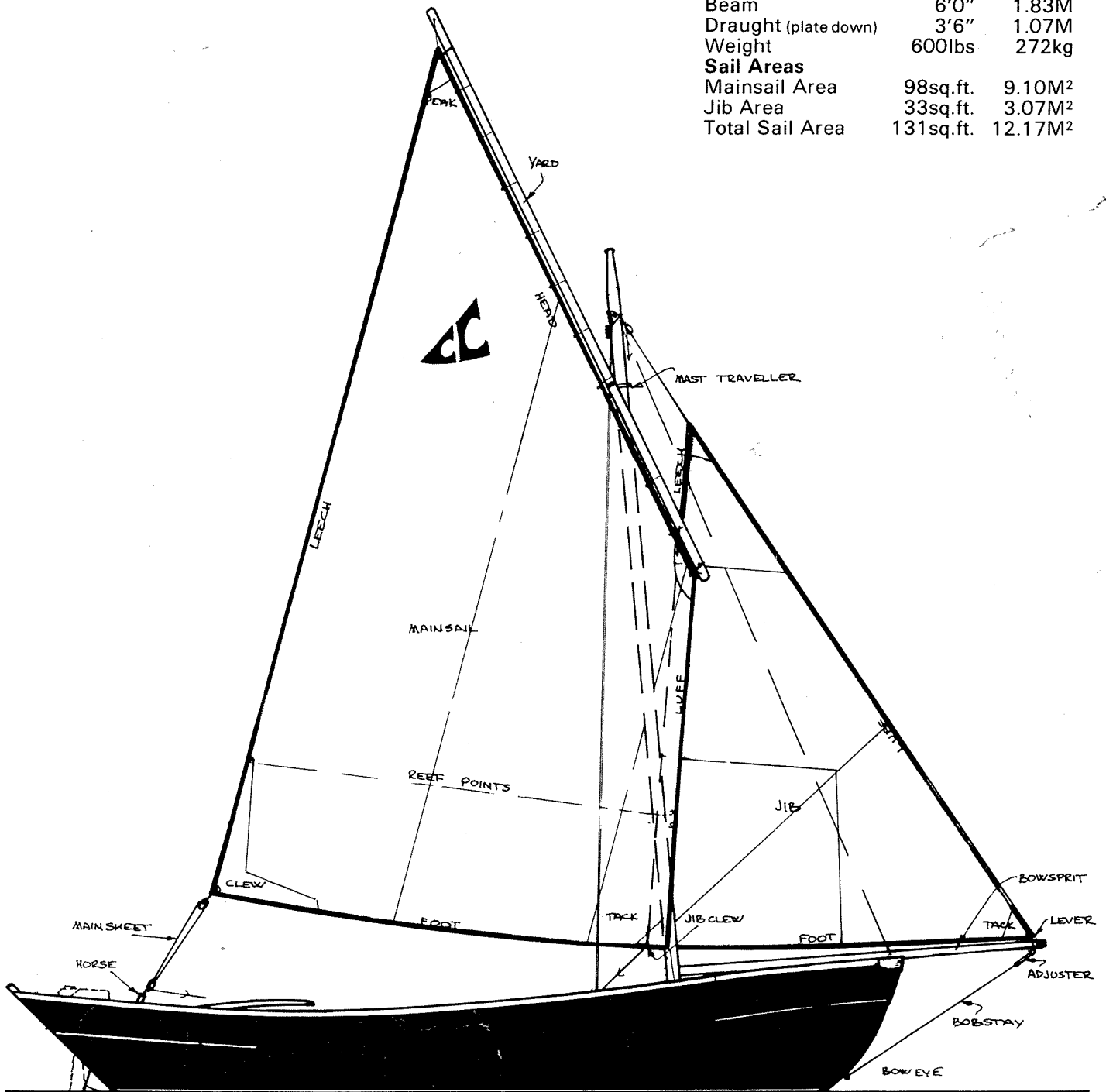
FIG. 6.

# Rigging, Handling and Maintenance Notes

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