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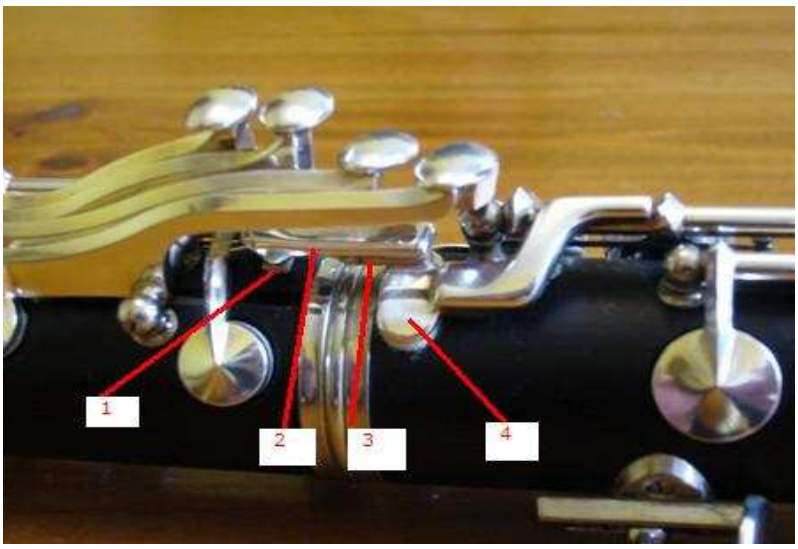
# Warming up and Assembly of the Clarinet (Nov 2020)

The most common cause of mechanical damage to a Clarinet is incorrect assembly - so check that your method of assembly does not put undue strain on the mechanism.

## Choosing the best method of assembling the instrument

Before deciding which is the safest (and easiest) way for you to assemble your Clarinet you must examine the correspondence between the upper and lower bridge keys. Refer to photos A and B below. If the bridge keys have been manufactured correctly, and the upper bridge key has a heel cork (1), then when bottom joint is twisted onto the top joint, the lower bridge key (4) should slide underneath the upper bridge key (2) without damaging the regulation cork (3).

A) Aligning bridge keys – notice the lower bridge key slides under the upper bridge key




B) Bridge keys fully aligned: Notice that the 'spine' of the upper bridge key (1) is in alignment with the 'spine' of the lower bridge key (2)

If your bridge keys *do* correspond correctly as described above then you can use either one of the two methods described below – the first method is primarily for people who have a strong grip, whereas the second method is for people with a weaker grip. The first method avoids any pressure being placed on the mechanism at all, whereas the second method ensures pressure is put on the mechanism in the manner least likely to cause damage.

If the bridge keys on your Clarinet do not correspond as described (and therefore the lower bridge key will scrape off the regulation cork rather than slide under it) then use the second method described below.

## Assembling and warming up the mouthpiece and barrel (same for both methods)

Before fully assembling a Clarinet it is best to warm up top half of the instrument (*do not warm the instrument by blowing into it* – this will just cause condensation problems as well as initially distorting the tuning and is the prime cause of water leaking from pads).

1. Grease the mouthpiece tenon cork if necessary, and insert the mouthpiece into the barrel with a twisting motion. If the barrel has a Maker's emblem (or alternatively any form of identifying marking) align this with the back of the mouthpiece, so that mouthpiece and barrel are always used in same alignment – this helps maintain the 'drainage path' that condensating water can safely follow down the bore of the instrument without running into the tone-holes and onto the pads.

2. Hold the barrel and mouthpiece in one hand and the top-joint in the other hand for 4 or 5 minutes to warm each part (which will help prevent condensation when the instrument is first played).

## Method 1 – for players with a strong grip (and correct bridge key correspondence)

1. Ensure the top joint lower tenon is adequately greased with cork grease (new tenon corks need greasing each time whereas older corks gradually become impregnated with the grease and require re-greasing only occasionally).

2. Grip the bottom-joint in your right hand at the tenon end avoiding touching any of the keys.

3. Grip the top-joint in you left hand - grip at the tenon end avoiding touching any of the keys.

4. Carefully twist the bottom joint onto the top-joint tenon (in a clockwise direction *away* from you) - if you are holding the joints correctly (and the bridge keys correspond correctly) then the lower bridge key should slide under the upper bridge key; while still holding the two joints align them so that the 'spines' of the bridge (ring) keys are in a straight line.

5. Ensure the bottom joint tenon is adequately greased with cork grease.

6. Grip the middle of the bottom-joint with your left hand so that fingers 1 & 2 arch over the long side levers and each press in the centre of a ring key. Grip the bell with your right hand and twist onto the bottom-joint tenon (if the bell has a Makers emblem align this with the front of the instrument).

7. Fit the reed to the mouthpiece using the ligature - make sure the reed is on evenly so that the arc of the reed tip matches the mouthpiece tip (see below).

10. Ensure the top-joint upper tenon is adequately greased with cork grease.

11. Grip the very top of the top-joint (just below the tenon) and twist the barrel (with mouthpiece and reed attached) onto the top tenon until the reed is in line with the thumb keys. Note this does require a very strong grip so instead you may want to try step 9 in method 2 instead.

10. Wipe your fingers free of grease before playing the instrument (otherwise grease will be transferred from your finger tips into the open tone-holes of the ring keys).

## Method 2 – for players with a weaker grip (or incorrect bridge key correspondence

1. Ensure the top joint lower tenon is adequately greased with cork grease (new tenon corks need greasing each time whereas older corks gradually become impregnated with the grease and require re-greasing only occasionally).

2. Grip the bottom-joint in your right hand so that your palm rests on the bottom two adjacent keys holding them shut (see photos below).

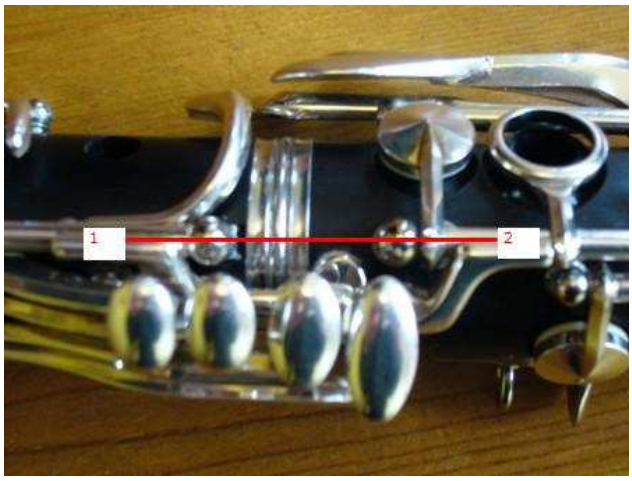
A) Locating the palm above the bottom two keys. B) Gripping the bottom joint with the right hand.

3. Grip the top-joint with your left hand so that the side with no keys is resting on your palm and your first and second fingers are holding the ring keys down (to raise the upper bridge key), your thumb should rest on the body of the instrument next to the trill guide.

4. Carefully twist the bottom-joint onto the top-joint tenon (in a clockwise direction *away* from you) - if you are holding the joints correctly then the lower bridge key should slide under the upper bridge key; while still holding the two joints align them so that the 'spine' of the ring keys are all in a straight line.

Lower bridge key sliding under upper bridge key.

'Spines' of ring keys aligned.



5. Ensure the bottom joint tenon is adequately greased with cork grease.

6. Grip the middle of the bottom-joint with your left hand so that fingers 1 & 2 arch over the long side levers and each press in the centre of a ring key. Grip the bell with your right hand and twist onto the bottom-joint tenon (if the bell has a Maker's emblem align this with the front of the instrument).

7. Insert the mouthpiece into the barrel with a twisting motion (if the barrel has an insignia align this with the back of the mouthpiece).

8. Fit the reed to the mouthpiece using the ligature - make sure the reed is on evenly so that the arc of the reed tip matches the mouthpiece tip.

9. Ensure the top-joint upper tenon is adequately greased with cork grease.

10. Grip the middle of the top-joint with your left hand with the first and second fingers on the ring keys (as in step 3 of this method) then rotate your hand 180 degrees so that the upper tenon is pointing towards your right hand; grip the barrel (with mouthpiece and reed attached) with your right hand and twist it onto the upper tenon of the top-joint until the barrel is fully home and the reed is in line with the thumb keys.

11. Wipe your fingers free of grease before playing the instrument (otherwise grease will be transferred from your finger tips into the open tone-holes of the ring keys.

## The Clarinet – dis-assembling the instrument

On balance, when the Clarinet is at home, it is best to leave it assembled and on a stand (as long as there is no danger of it being knocked over by a pet or young child). Swabbing out the Clarinet is a more effective method of removing water from the bore than leaving the instrument on a stand, but the damage caused by constant assembly and dis-assembly is significantly greater. Another advantage of leaving the Clarinet assembled is that it removes the chore of assembly which can be a barrier preventing practice.

To dis-assemble the instrument:

1. Remove the reed from the mouthpiece and put the reed in its holder; remove the mouthpiece from the barrel and place a mouthpiece mop in the mouthpiece to soak up any moisture; put the ligature back onto the mouthpiece and then fit the mouthpiece cap on (this routine will prolong the life of the reed and help prevent deposits forming in the mouthpiece, however if this 'chore' prevents the player practicing then leave the reed on the mouthpiece).

2. If your 'pull-through' has a long enough cord then swab out the barrel, top-joint, and bottom-joint of the instrument whilst all still assembled. Make sure the pull-through is stretched out (not all bunched up) before pulling it through or it may get jammed in the top-joint, also pull the cloth down through the instrument from barrel to bell which is *the direction the water flows* (if the cloth is pulled *against* the direction the water normally flows it is more likely to alter the drainage path the water usually follows and that might make the water drain into a tone-hole rather than around a tone-hole and onwards out the bell).
If your 'pull-through' does not have a long enough cord to swab through the barrel, top-joint, and bottom-joint of the instrument whilst all still assembled, then swab each part out after the instrument has been dis-assembled (remember to swab down through each part *in the direction the water flows*)

3. Reverse the steps of the assembly method you used *except* when taking the top-joint and bottom-joint apart – at this stage you must twist the bottom-joint in the same clockwise direction away from you (to prevent the bottom-joint side levers snagging with the top-joint keys).

4. Place the parts of the Clarinet in the case and if possible leave the Clarinet to 'air' with the case lid open for a few minutes to prevent the case trapping moisture.

If the instrument has to be packed away often without being left to air then place 'pad savers' in the top and bottom joints (and a mouthpiece mop in the mouthpiece if the reed is removed) - they will soak up the moisture left in the instrument so protecting the bore and the pads.

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