

CLAMPS / CRAMPS FOR
WOODS

This mobile revision pdf is based on detailed work found in the **EQUIPMENT AND PROCESSES** section. Tap on the green link button below to go to the complete website section



Tap the blue button to view a selection of 'clamping' techniques, covered by this Revision PDF



CLAMPING WOODS

1. G-CRAMP

1. HANDSCREW CLAMP

3. SASH CLAMP

4. F CLAMP

5. CAM CLAMP

6. BENCH HOLDFAST

7. WOODWORKING VICE

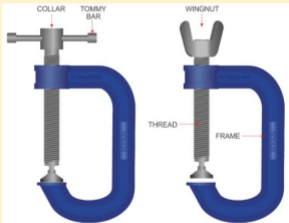
8. ECCENTRIC CAM - T BOLT LOCKING SYSTEM

THE G CRAMP

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G Cramps are an essential tool in the workshop and they come in a range of sizes and are generally used for clamping work securely to a surface/workbench top. They can also be used to hold parts together whilst glue is drying.

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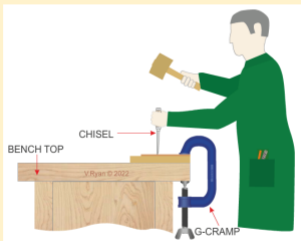


TYPICAL USE OF G CRAMP

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The diagram below, shows a G Cramp used to secure wood, when using a chisel. The G Cramp prevents the wood from slipping, helping to keep the procedure safe. This is essential as chisels are very sharp and if the wood were to move, the chisel could slip, causing a serious accident.

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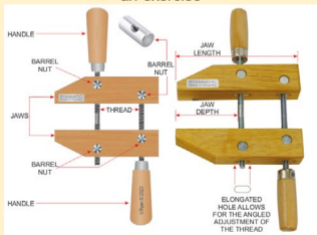
THE HANDSCREW CLAMP

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The handscrew clamp can apply even pressure across the length of its jaws, making it far superior to many modern, cheap clamps.

Also, the jaws can be adjusted to hold tapered material. The 'wood' jaws are unlikely to damage the surfaces of the materials being clamped together, unlike the jaws of many other clamps.

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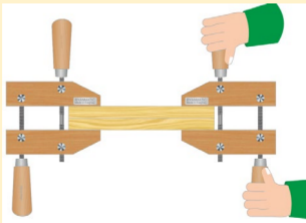
TYPICAL USE – HANDSCREW CLAMP

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Here two medium sized handscrew clamps are being used to clamp two pieces of wood during gluing. The hands show the relative size of the handscrew clamp.

Twelve sizes of handscrew clamp are available.

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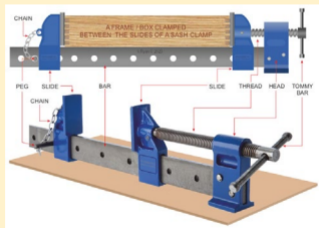


THE SASH CLAMP

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Sash clamps are used to clamp work together when it is glued. They vary in size and are normally used in pairs. The lengths are normally from 460mm to 1370mm. The bar is made from cold drawn mild steel and the head and slides made from malleable iron.

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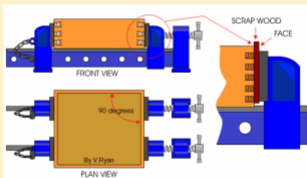
TYPICAL USE – SASH CLAMP

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When in use, the sash clamp is placed below the work to be glued / assembled. The slides are arranged on either side and scrap wood is placed between each face and the work.

This protects the work when the thread is tightened. The tommy bar is used to tighten the thread and pressure is increased slowly.

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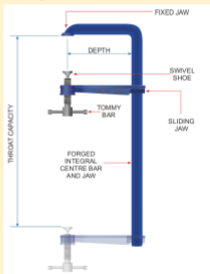


THE F CLAMP

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F-clamps, resemble the letter 'F' and are also known as bar clamps. They have a similar function as G cramps, but they have a much greater 'throat' capacity. They are used for general clamping and are faster to use than sash clamps, but do not exert the same pressure.

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TYPICAL USE – F CLAMP

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Typical general uses are shown below. F clamps are not as powerful as sash clamps

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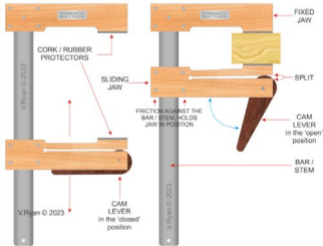


THE CAM CLAMP

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The 'cam clamp' is not only aesthetically pleasing, due to the materials used to make it and its simple mechanism, but it is an effective, functioning clamp. It is lightweight and easy to use, but has been largely replaced by cheap F Clamps.

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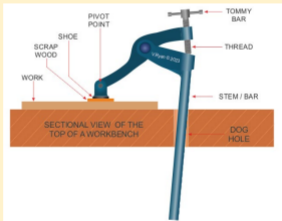


THE BENCH HOLDFAST

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The bench holdfast can be regarded as an extra helpful hand and is the perfect 'clamp', for holding work firmly flat on the workbench. The stem / bar of the bench holdfast, fits into any of the numerous holds distributed around the workbench. The work is placed under the shoe of the holdfast and the tommy bar is used to turn the thread, applying pressure.

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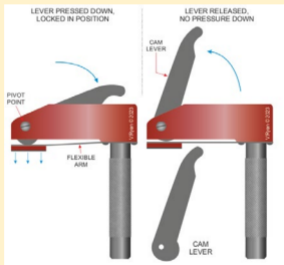


ALTERNATIVE BENCH HOLDFAST

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As the lever is pressed down, the CAM applies pressure to the shoe and the wood being worked on. Releasing the lever, releases / removes pressure downwards. The knurled stem / bar provides the friction, holding it in the dog hol

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THE WOODWORKING VICE

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The woodworking vice is normally fixed to a sturdy workbench. It is used to hold work securely whilst it is being planed, chiselled, drilled etc.... They are usually cast iron / steel, with a large threaded handle, for tightening the work in the vice.

Tap the images – example of a vice being used, for holding work whilst cutting joints.



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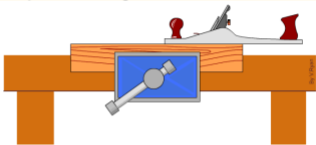


THE WOODWORKING VICE

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The woodworking vice is ideal for holding work while using a Smoothing or Jack plane OR when using a spokeshave (see below).

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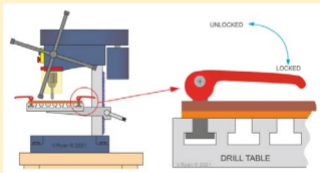
ECCENTRIC CAM - T BOLT LOCKING SYSTEM

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The T Bolt locking system shown below, is an excellent example of a eccentric cam at work.

When the lever is vertical, the system is unlocked and material can be placed in position, or removed from under the drilling area. When the lever is pushed down to a horizontal position, the material is locked in place. It is now safe to drill.

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