

The background of the entire image is a dense, overlapping pattern of circular cross-sections of wood. Each cross-section shows the characteristic concentric growth rings of a tree trunk, with varying shades of tan and light brown. Some sections are larger than others, and they are arranged in a somewhat random, natural-looking pattern. The wood grain is clearly visible in each section, and some have small dark spots or cracks.

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***A MANUAL
OF WOOD
CARVING***

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A Manual of Wood Carving

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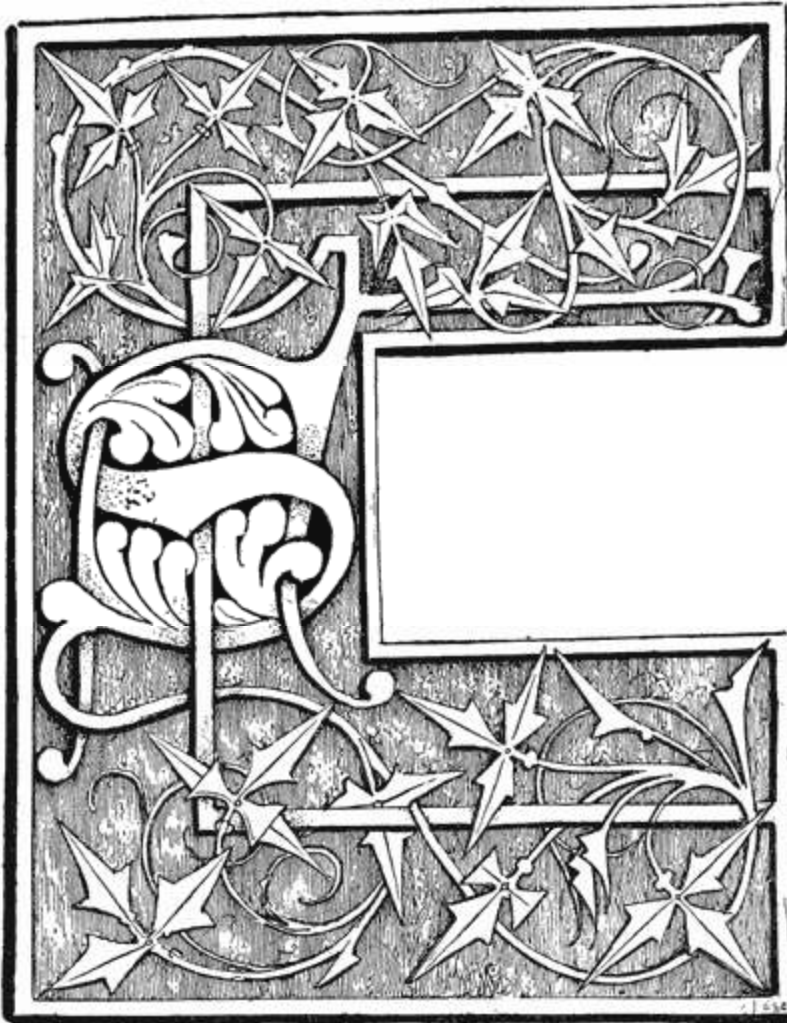
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INTRODUCTION.

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WOODS, TOOLS, AND SHARPENING.



SKILL in wood-carving, as in every other art, is to be attained only by thoroughness. Let the pupil therefore bear in mind that he or she must be careful to master the *first* lessons, and to go no further until these can be executed with ease and accuracy. This will be greatly aided if the book is read with care, and not used for mere reference.

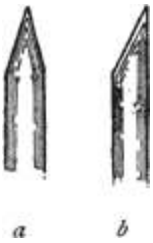
TEACHERS will please observe that the work is in a regular series of progressive lessons, the first being extremely easy; and that these lessons lead so gradually one to another that the last are no harder than the first to one who has gone on carefully from the beginning. This will be found to aid teaching and self-instruction greatly.

Every item of information will be found under its proper head, and not scattered here and there through different chapters: for every lesson is complete in itself, and from the first the pupil is taught how to produce some satisfactory work of its kind. Thus, indenting or stamping, which can be learned at once, and grooving with a gouge, which is not more difficult, are capable of producing very beautiful decoration even if the worker goes no further. No writer has, indeed, ever seriously considered what valuable and varied results may be produced by these simple processes.

Finally, the author has endeavoured in these pages to treat wood-carving not merely as a fine art, whose chief aim is to produce specimens of fancy work for exhibitions, and facsimiles of flowers, never to be touched, but also to qualify the learner for a calling, and what nine-tenths of all practical wood-carving really consists of, that is, house and other large decoration, and of work which is to be perhaps painted, and exposed to the air. There is no reason why the artist should not be prepared to undertake figure-heads for ships, garden gates, cornices for roofs and rooms, dados, door panels, and similar work, as well as mere drawing-room toys, which should have no finish save the delicate touch of the cutting tool.

The author would observe as regards this work that he has been under very great obligation to Mr. John J. HOLTZAPFFEL, Assoc. M. Inst. C.E., whose name is so well known to all workers in wood and metal, for revisions, suggestions, and addition of the chapter on the use of the saw in carving. He is also indebted to Mr. CADDY, teacher of wood-carving in Brighton for valuable suggestions.

TOOLS AND IMPLEMENTS. The first and most important is a strong, and, if possible, a *heavy* table or bench. If the pupil cannot afford this, an ordinary small kitchen table must be found. It should be used for carving alone, as it will be necessary to bore holes and drive screws into it. But if a table cannot be spared for this, the pupil must make shift by putting a board at least an inch in thickness on a common table and fastening it with clamps. At a more advanced stage he will carve standing up at a higher bench, or with his work on a stand. Pupils in wood-carving “shops” often carve standing from the beginning.



Carving Tools are generally divided into two classes: chisels, which are flat at the end and in the blade; and gouges, which are hollow. Among professional wood-carvers the former is generally known as a *firmer*, in order to distinguish it from the chisel used by carpenters. A carver's chisel is always ground on *both* sides, so as to form a wedge like a very high, steep roof (*a*), while that of the carpenter is a stouter implement, its edge being like a wedge which is

flat on *one* side (*b*), as it is only ground on the other. The object of grinding carvers' chisels on *both* sides is that there are many cuts which cannot be executed by a carpenter's chisel at all, or at least not with ease, for one would be obliged, while using it, to continually turn it around.

Fig. 1 a.

GOUGE.

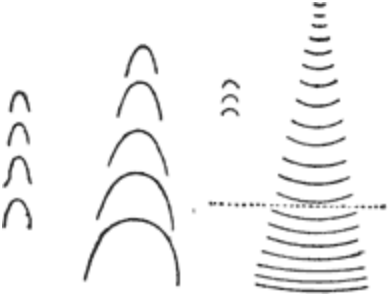


FIRMER

Carvers Chisels or Firmers, Fig. 1 b, are of many and all sizes, from an inch in breadth down to the "pick," which, across the end or edge, is no wider than a small hyphen (-). To these may be added the "skew-chisels," also called "skews" or "corner-firmers," which are firmers ground off diagonally, so that the point is on one side. These are also sharpened on both sides.



Fig. 1 b. FIRMERS.



Figs. 2-5. GOUGES.

Gouges, Figs. 2-5, are chisels more or less rounded. These, of all widths, vary from the *extra flat*, which is so slightly curved that it might at a casual glance be taken for an ordinary chisel, to the ordinary "flat." A little more bend or convexity gives the *scroll gouge*. A semi-circle or any narrower portion of the same curve is a *hollow gouge*, the smaller sizes of which are called *veiners*, the very smallest of the latter being known as *eye-tools*. There are some differences of names for these among writers, as well as workmen, but for all practical purposes the terms here used may be accepted, and are understood by all who sell the tools.

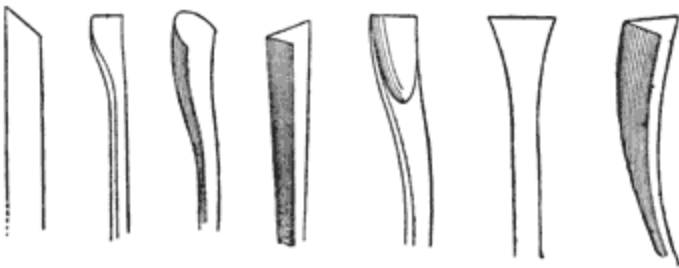


Fig. 6. BENT TOOLS.

Bent Tools. Both chisels and gouges are made straight, or bent or curved in the shank. It often happens that in deep cutting, or in hollowed spaces, it is impossible to cut with an implement having a straight shaft, while with one differently shaped the wood can be easily removed, Fig. 6.

Holdfasts.—*Carver's Screws*, and *Clamps*, *Hand Screws*, *Bench Screws*, &c. As the carver holds his tool with one hand and directs it with the other, it is evident that some means must be taken to secure in place the piece of work which he cuts.

I. The simplest method of doing this is to drive three or four nails or screws into the table at a convenient distance. The work may be held between these to prevent its slipping.

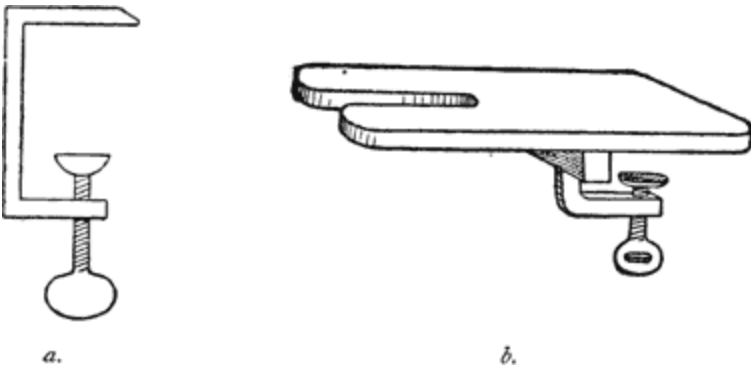


Fig. 7. HOLDFAST AND SAW TABLE.

II. HOLDFASTS.—*Clamps* or *Cramps*, Fig. 7. These cramps are small iron frames, like three sides of a square, with a screw in the under limb. They are used on the edge of the table to hold the work firmly down to its surface; two or more are always employed. Their fault is that they indent and damage the work; a piece of waste wood may be interposed between the work and the upper limb to prevent this, but such a guard is generally in the way and otherwise objectionable. *Hand Screws*, Figs. 8 and 9, are a far better tool, entirely free from the above-named objection. They consist of two strips of hard wood rounded at the one end, or jaws, and two screws, also of wood, one of which passes through both jaws, and the other through only one; the end of this second screw entering a recess made in the other jaw to retain it in position. To use them the handles are grasped firmly in the two hands, and the hands are revolved around one another away from you, which causes the jaws to open exactly parallel with one another. When the opening between the jaws equals the thickness of the work and the table, the hand screws are slipped over them, and the second screw then alone receives an extra half turn, this throws the jaws slightly out of parallelism, and effects a powerful grip upon the work at their points. They are

exceedingly powerful also in holding work for gluing together and other purposes, and are made of all sizes.

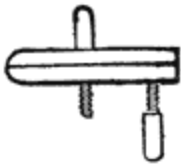


Fig. 8.

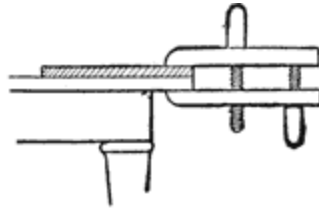


Fig. 9.

HAND SCREWS.

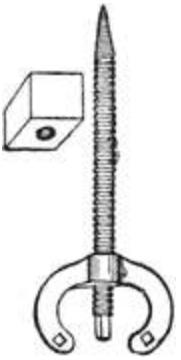


Fig. 10.

CARVERS' SCREWS.

III. *Carvers' Screws*, Fig. 10. These are iron screws about 12 or 14 in. long, with a finer pointed screw, like that of a gimlet, at the one end, and a square at the other; on the screw is a winged or fly nut. To use them the point is screwed firmly into the under side of the work, with the fly nut removed and used as a lever by one of the holes in its wings placed on the square on the end of the shaft. The shaft is then passed through a hole made through the top of the bench or table, and the fly nut replaced on the screw below the table to fix the work down to it. The screws are long, which is sometimes convenient, but if the work be thin it is usual to put a block of waste wood on the shaft before the fly nut, to avoid the tedium of having to screw the latter up a long way. Slackening the nut enables the work to be

turned round to any required position, and there is nothing above the table except the work.

IV. *Snibs or Dogs*, Figs. 11, 12. These are pieces of wood screwed down to the table, which hold the panel or other piece of work by a projection. They are easily made by simply sawing out a piece of wood fairly corresponding in thickness to the panel.



Fig. 11.

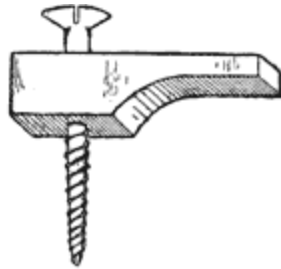


Fig. 12.

SNIBS OR DOGS.

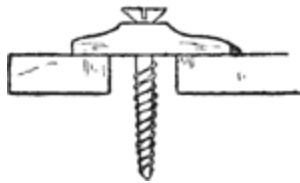


Fig. 13.

V. Take an ordinary "button," Fig. 13, such as is common on cupboards in country cottages to fasten the door. Saw out a piece of the panel, one or more inches square. Put the screw through the button and turn it over the panel and the little waste piece of wood. Two or more of these will hold the work perfectly fast.

VI. The simplest method of all is to leave about an inch at either end of the panel and pass screws through these extra portions into the table. When the work is carved these ends may be sawn off.

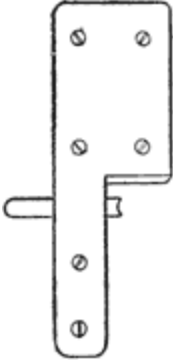


Fig. 14. SCRATCH.

The Scratch, Fig. 14. This is a very convenient and ingenious tool. "It is used," says J.S. Gibson ("The Wood-Carver," Edinburgh, 1889), "for running small mouldings and hollows. Where the lines are long and straight it makes finer work than is possible by means of gouges. The cutters are made from pieces of steel barely 1-16th of an inch thick. Broken pieces of saws are generally used for cutters. They must be tightly fixed in the stock. It is worked backwards and forwards gently. When the cutters are filed to the required shape, they have to be finished with a slip stone to take out the file marks. They are sharpened straight across the edges."



Fig. 15. ROUTER.

The Router, Fig. 15. This is a small copy of the joiner's plane of the same name. It consists of a block of wood with a perfectly flat sole; a hole through it at an angle carries the cutter and the wedge by which it is fixed. It is employed for flattening the groundwork after that has been partially excavated with the chisels. The sole of the router rests upon any margins left of the original surface, and being worked

about over the ground, the fixed projection of the cutter rapidly reduces the latter to one true level. These routers are made from about nine inches long in the sole to about three inches, the smallest, which little tools have cutters about 1-8th of an inch wide.

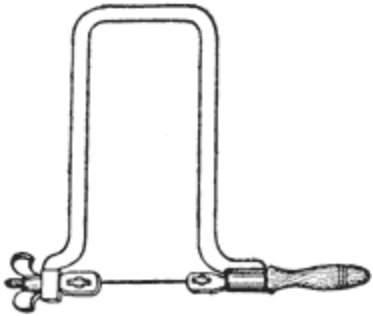


Fig. 16. FRET BOW SAW.

Saws. These are of various kinds; perhaps the most useful is the Fret Bow Saw, Fig. 16. This consists of a light thin steel frame with screw jaws, at the open end in which the thin saw-blades are clamped. The handle is also formed as a screw, by which its jaw can be advanced about an inch towards its fellow. To place the saw in position for work, the end of the handle is screwed round until its jaw has advanced about an inch, the saw is then fixed in the opposite jaw by its thumb-screw, then in the handle jaw in the same way, after which the handle is turned until its jaw has travelled back again the distance it had previously advanced, thus straining the saw by the tension of the steel spring saw-frame. This saw is very useful for removing superfluous pieces from the outline, both in flat works and when carving in the round, as will be explained; its primary purpose is for cutting out pierced and buhl and fretwork, but for such work, as the apertures cut do not always cut out to the edges, a drill is required to pierce holes to thread the saw through the work before it is placed in the second jaw

to strain it. Fig. 16 is required for pierced work laid down on a ground and then carved, a style of carving which will be described. The ordinary joiners “dovetail” or “tenon” saws, their blades with stiff backs, are required, and are almost indispensable for cutting off portions of the work and trimming it to shape; these saws are too well known to require description.



Fig. 17. KNUCKLE-BEND.

In addition to the tools already described, the pupil will need for more and varied work the following:—I. *The Spade Chisel*, and *Spade Gouge*. These are very light, and are used for finishing by hand, as, for instance, in cutting around grapes or plums or in fine work. II. *Knuckle-bends*, Fig. 17. These are gouges scooped or bent in a curve like a knuckle. III. *The Macaroni Tool*, Fig. 18. This is like the three sides of a square. It is for removing wood on each side of a vein or leaf, or similar delicate work. It is not very commonly used. IV. *The Parting Tool or V, straight or curved*. This is a useful tool for outlining a pattern or veining leaves. Beginners find it, like the Macaroni, rather difficult to sharpen, or to keep an edge on it. It must not be used recklessly for carving, as it is apt to break unless handled with care. It should be kept with a cork on the end.



Fig. 18.

MACARONI
TOOLS.

It is a question among experts as to whether the tools for beginners should have long or short handles, which is as

sensible as if they should debate whether the pupils should have large or small hands. General Seaton, who is in other matters a good authority, declares that "small, short, neatly-turned boxwood handles must be avoided; they are nearly useless. Get good-sized beech or ash handles quite five inches long, and if the steel is four or four and a half inches long you will have a really serviceable tool." Common sense teaches that between a child or a young lady who has a palm "the size of a cardinal's seal" (to borrow a simile from Benvenuto Cellini), and a workman who would burst a number ten glove, there must be very great differences in the size of handles, and it is certain that for young beginners short ones are to be advised. If they are not to be obtained ready made, then take an ordinary long handle, saw it off to the requisite length, say from three to three and a half inches, round the sharp edge of the wood, firstly with a knife or chisel, then with a rasp, and finish it off with glass-paper. See that the tools when set into the handles are *well ringed* and *firm*. In most shops it is usual to sharpen them if it be required. After becoming accustomed to such handles the pupil may, as he progresses, familiarize himself with those which are in general use.

There is really only one *trouble* in wood-carving. This is the sharpening the tools, and keeping them in good condition. For this the grindstone and oilstone are indispensable, and the beginner must take pains to learn to sharpen his tools well and readily.

SHARPENING. Tools which are as yet unground, or which have had the edge broken, may, with patience and care, be sharpened on a harsh flat stone, but round grindstones

which revolve with a handle are not dear; you can, however, always get your tools ground by any carpenter. Every carver should therefore, if possible, own one of these grindstones. It will serve as well for a large class as for an individual. The next indispensable is the *oilstone*. This is to be found of different kinds; the ordinary Turkey stone, set in a block of wood, will answer for firmers, skewes, and flat gouges, for finer tools the best Arkansas stones may be employed. Before using one, let fall on it a few drops of oil, which is to be kept in a small can with a narrow spout, made expressly for such dropping. Have a coarse rag, and when you have done with the stone, always wipe it clean of the oil. Take great care not to wear a hollow in the middle of the stone. It is by far the best plan to get some wood-carver or carpenter to show you how to sharpen the tools. There are very few places where there is not somebody who can teach this art. It is usual to have a box-cover to the oilstone, which should always be over it when not in use, to prevent dust from settling on the surface. A very little dust indeed combined with the oil is a great hindrance to sharpening.

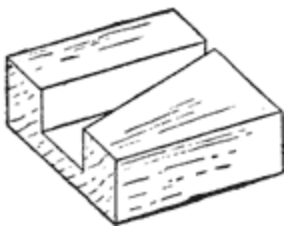


Fig. 19. SLIP HOLDER.

Slips. These are pieces of Arkansas, Turkey, and other stones, made of a variety of shapes, to fit the inside of such tools as cannot be sharpened on a flat surface, like that of oil-stone. They require great care in handling lest the fingers be cut. To avoid this, take a piece of wood, and cut a deep

groove in it, exactly adapted to hold the stone firmly, leaving as much of it projecting as may be required for use, Fig. 19. If you cannot obtain a slip exactly suited to any particular tool, then grind or cut it to shape on the grindstone or with a file; some carvers use a very coarse whetstone adapted to this purpose. The safe method of using a slip when not mounted in wood is to “lay the back of the gouge at an inch and a half from the edge on the edge of the table; the edge of the tool must be slightly raised, and the slip can then be applied with perfect safety and with great effect.” (Seaton.) The V, or parting tool, is difficult to sharpen because, until one has had practice with it, it is hard to cut down each side in *exact* uniformity with the other. For this it is necessary to have a slip ground to a V edge, so as to exactly fit the inside of the tool.

The Strap. This is a piece of hard, smooth leather, glued on a flat bit of board. This may be prepared with sweet oil and emery powder, or Tripoli, to be renewed as occasion requires, or with a preparation of lard and crocus powder. Emery paste sold at the tool-shop will answer for all ordinary work. When no strap is at hand a final sharp, or a razor edge, may be given even on a smooth pine board, especially if a very little fine air-dust be on it.

Sharpening the tools is like threading the needle in sewing, or putting a point on lead pencils when drawing, something which is a great trouble, and a constant interruption to earnest work, yet which must be constantly seen to. Never go on carving for a second if you find that a tool is growing in the least dull or “scratchy.” There can be

no good work whatever without really good tools in perfect order.

It may be observed that tools are never ground quite so much *inside* as they are externally. Also that this double grinding gives a sharper cutting-edge; but gouges require very little edging *inside*.

Should the carver be unable to obtain a Turkey or Arkansas stone, he may use smooth slate, or almost any stone which is tolerably hard.

WOOD. All wood for carving should be of the best quality, well seasoned, and free as possible from cracks, knots, or other irregularities. Fine white pine or deal, being very easy to cut, is suitable for a beginner. Lime and pear-tree wood, like pine, are even in the grain. American walnut is also easy to cut. It is of a beautiful dark colour, which is much improved by oiling and age. With this, but tougher than the preceding, are beech, elm, and oak. Poplar, yellow deal, and the so-called American wood (known as poplar in America, Middle States) are useful for many kinds of work. The carver should accustom himself, as soon as possible, to oak, as a hard wood is by no means hard to carve as soon as a little skill is acquired. Bone, ivory, and pearl-shell, which at the first effort seems to be almost impenetrable, after a few days are "worked" with great ease.