



FIG. 1. ROMAN CARPENTER'S BENCH
Pompeii. Author's photograph

WOODWORKERS OF THE very earliest times had no need of a bench; the work was simply laid on the ground like the carpenters in the workshop shown on page 6 of the *WOODWORKER*, Jan, 1964, or on a short solid block of wood. But when the Romans began to use the plane for truing up the work some sort of table was found to be necessary; also methods of fixing the workpiece. The first benches were made of flat or half-round planks with four splayed legs, usually left in the round (Fig. 1). In this case the strip which the workman is mortising is held by pegs driven into holes in the bench top; sometimes the Romans used an L-shaped iron hold-fast, and for planing, serrated dogs or bench-stops (Fig. 2). Although the Romans knew

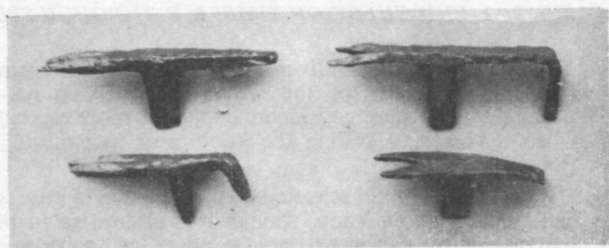
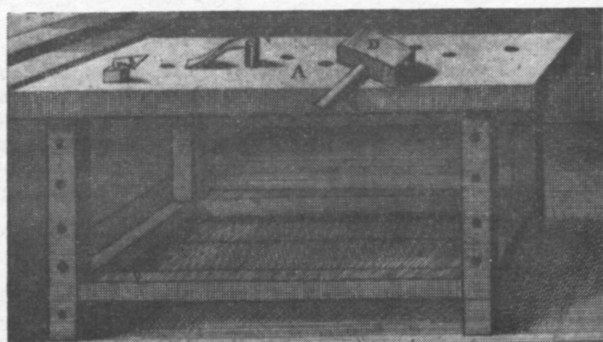


FIG. 2. ROMAN BENCH STOPS OR DOGS
Saalburg Museum, W. Germany



all about screws for wine and clothes presses, they never got round to devising a screw vice for the bench, as far as we know.

As with so many other Roman tools, this primitive bench was used throughout the Middle Ages, the only improvement being to square the legs (Fig. 3), which were also provided with holes to support a board on edge for shooting. It will be noted that this bench of the late fifteenth century also has no vice, and even as late as 1676 a joiner's bench (Fig. 4) in France still had a plain top with only the hold-fast and bench-stop to secure the work when necessary. About 1500 da Vinci in Italy and engineers in S. Germany had been experimenting with wooden screws for bench vices, but they did not come into general use for about 200 years.

The bench in the well-known carved panel in the Stent collection (*WOODWORKER*, April, 1960, p. 66) shows an early stage in the development of the bench vice. This takes the form of a notched piece of wood nailed to the side of the bench-top to hold the plank vertical. If the plank were



FIG. 3. MEDIEVAL CARPENTER AT WORK
Misericord in the Cluny Museum, Paris

FIG. 4 (left). FRENCH JOINER'S BENCH
Félibien, 1676

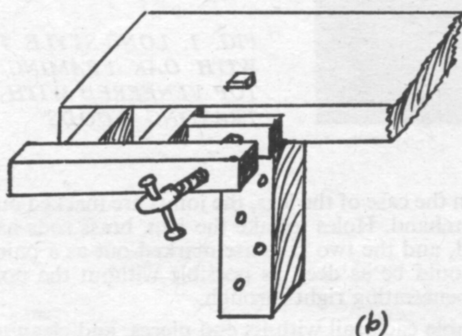
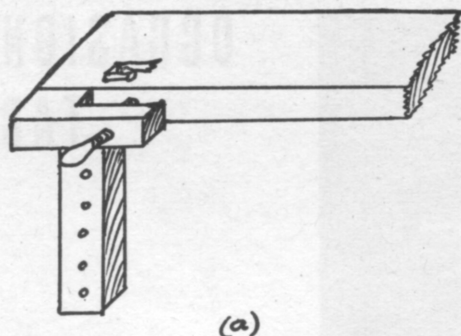


FIG. 5 (a). MOXON'S BENCH SCREW, 1683 (b). SWEDISH SCREW-VICE, c. 1720

thinner than the notch, it was possibly secured with a wedge. This panel probably dates to about 1640 or even earlier, but in 1683 Moxon's engraver copied the Félibien bench of Fig. 4 and added a similar notched piece, which was provided with a screw instead of a wedge (Fig. 5a). There appears to be a similar arrangement on the bench on the French joiner's shop sign (Fig. 5, *WOODWORKER*, p. 191, July, 1964), as well as a primitive end vice. Moxon also explains how a pair of handscrews can be used as a bench vice, sometimes fixed to the edge of the bench, or laid on the bench-top itself and held by means of a hold-fast. A Swedish bench of about 1720 shows a slightly more elaborate version of this vice (Fig. 5b), with a loose cheek as well as the screw to grip the work-piece.

Eventually the cheek of the vice was made to slide loosely in and out with a runner at one end, the screw passing through the cheek itself and engaging in a nut fixed under the bench-top, as in the English bench of 1812 (Fig. 6). This horizontal bench screw is still used a good deal on Continental benches—it is quite common in Italian workshops—and in our handicraft rooms, but the usual English practice since the early nineteenth century is to make the cheek upright or nearly upright, with the runner sliding in a box fixed to the outside of the legs. For some unknown reason the back vice of continental benches has never been very popular in this country, but it is certainly very handy both for planing and other types of work.

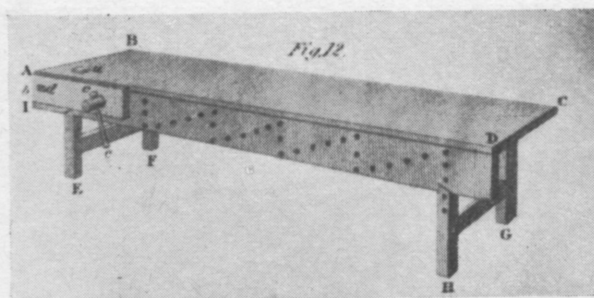


FIG. 6. ENGLISH BENCH, 1812
P. Nicholson, *Mechanical Exercises*



FIG. 7. FINNISH KEG MAKER'S "HORSE"
National Museum, Helsinki, Finland

Since about 1850 these wooden vices have been gradually replaced by the modern metal types, based on the engineer's or metal-worker's vice, known in primitive form since the seventeenth century (*The Story of the Lathe, WOODWORKER*, April, 1964, Fig. 8), but with wider and deeper jaws, and the further refinement of a half-nut device for rapid engagement.

As was mentioned earlier, the solid L-shaped iron hold-fast, with a tapered shank driven through a slightly larger hole in the bench-top, was used extensively by the Romans. A similar tool is shown on the Félibien bench in Fig. 4, and also under the bench in the Stent panel (*WOODWORKER*, April, 1960). This has been improved in recent times by pivoting the arm at the top of the stock, the pressure being applied and released by means of a screw, giving a quicker and more effective action.

Some specialist woodworking trades dealing with small, awkwardly-shaped work, such as that of coopers, wagon-builders, clog and boot-last makers, use a sort of combined seat, bench, and foot-operated vice, in order to leave both hands free to use the tool, usually some kind of shave. This is known as a "horse", from the manner of sitting on it. It goes right back to Roman times, and is still used extensively in the Mediterranean and Baltic countries. Fig. 7 shows a primitive modern example used by Finnish keg makers for shaping the sides of containers for Baltic herring. (343-393)