



The Ubiquitous

Adze

by Art Burrows

Photo.1

first was to cut a conveniently shaped limb from a tree (Fig.1) then shave it to the desired shape and fit an appropriate blade (Fig.2).

Line A on Fig.1 is the axis of the blade; line B is the nominal axis of the shaft. In use, the forces applied to the adze handle are generally as shown by the arrows at the outer extremities of these lines. The grain directions of a piece of wood cut from a tree in this manner are therefore ideal, though there will inevitably be some weakness where the limb meets the trunk. Fig.2 shows one of the possible adze shapes made in this manner. We can surmise that these adzes were made from relatively hard wood and the dearth of such trees in Egypt would have made a 'conveniently shaped limb' a prized possession.

Four thousand years ago, the hand-plane and spokeshave were still many centuries in the future. While the saw and the axe (Photo.2) must have played a significant role in the shaping of wood, it could only have been the adze that gave the Ancient Egyptian woodworker the ability to craft the exquisite furniture and other wooden artefacts which they left to posterity (Photo.3).

Yet, despite the acknowledged importance of the adze in Ancient Egypt, little attention has been paid to the variety of

adze designs and the way in these designs were probably contrived in order to achieve specific objectives.

Looking through the Cairo Museum's collection of Ancient Egyptian tools (Photos.2), even the most casual observer must be struck by their many shapes and sizes. Given the obvious intelligence and demonstrated skills of the Ancient Egyptians, this could hardly have been a matter of chance.

There appear to have been three common methods of adze construction. The

While there are still more methods of construction (one of which will be illustrated in the next issue), the other two common designs are shown in Figs.3 & 4. Both are made with separate shafts and heads in order to achieve the desired grain direction in each. In one instance, the head is simply bound to the shaft, while in the other, there is a joint between the two — probably using dowels, though Ancient Egyptians were also familiar with many of the other woodworking joints still in use today, including the mortise and tenon.

Fig.1: The production of some adzes obviously depended upon finding a conveniently shaped branch

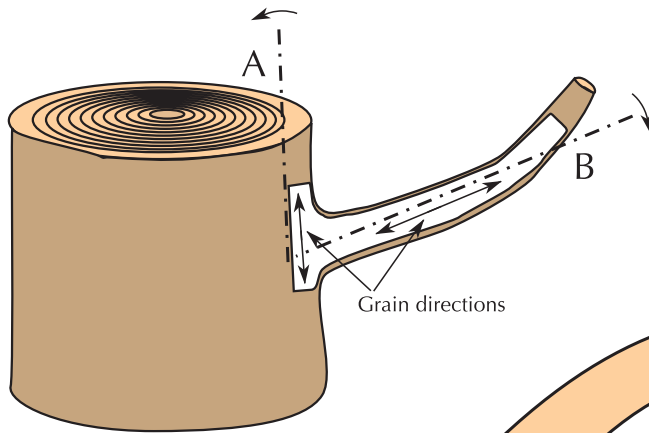


Fig.2: One of the possible shapes using a tree branch

Fig.3: Here the bent stick is bound to another to form the head of the adze

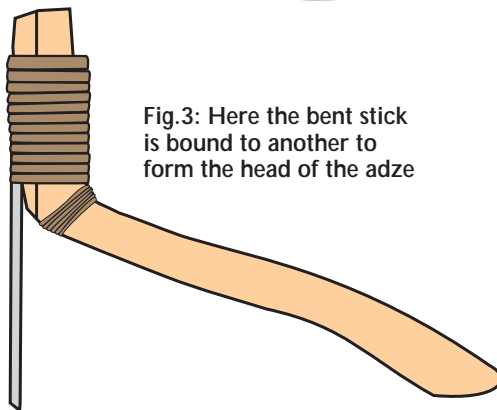


Fig.4: Another very common design in which the adze is made with separate shaft and head

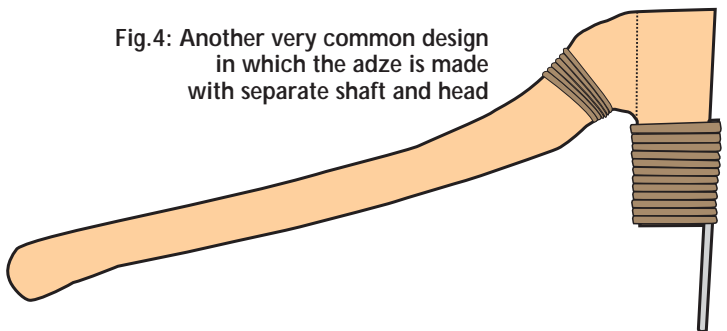


Photo.2: These are two of the smallest adzes on display in the Cairo Museum. Adze handle shapes and shaft/blade angles vary widely. Also shown are two woodworking axes and two saws (with blades engraved with hieroglyphics) as well as a basket and sieves — all 18th Dynasty



Unfortunately, there is no way to be sure. It's improbable that a museum curator would allow an adze to be pulled apart and broken shafts which might show the inner construction are unlikely to be displayed.

Use of the Adze

The introduction of the handplane and spokeshave have relegated the adze to a less important role in woodworking though steel adzes are still available from manufacturers such as Pfiel. In general, however, these adzes have relatively long and fairly straight handles and the angle between the blade and the shaft of the handle is large. They are therefore different from the shorter handled tools which were commonly in use in Europe over the past few centuries.

Occasional contributor, Alan Logan describes a technique for using a short handled adze, which was held in the web of the thumb and palm of one hand, the motive force being provided by the fingers pulling the handle back towards the palm.

'This technique', he says, 'was taught to me in carving where the top of the handle blended into the head in a curve and the tools were struck when the handle was pulled back against the palm, swinging the head in an arc. This gives a high degree of control and I found it always

imparted adequate impulse to the tool.'

Two or three generations ago, an adze was the Mediterranean tradesman's preferred tool for cutting a rebate. The adzes had a small head and short handle similar to the Egyptian tools but without the wide variety of handle shapes.

Alan, who worked with a Maltese craftsman, describes the process of using one of these adzes:

'They would inscribe a line with a knife cut, fairly deep, then remove the waste from the rebate with short rapid strokes of the hand adze, planing it smooth with a raking action to finish the bottom and side. It was very quick and involved no power which made it highly mobile on a work site. However, it didn't work on kiln dried Australian hardwood and I saw one Maltese chippie nearly wreck his wrist trying.'

The Egyptians left pictorial records and small wooden models that show woodworkers using the adze — usually, though not always, in one hand. While this one handed chopping motion would be ideal for removing waste quickly, a more delicate use of the shaped handle would have afforded the control necessary to perform the fine work necessary in constructing, for example, the small box shown in Photo.3. W

Next Issue: The Adze in Use

Free Offer Make your own Ancient Egyptian Adze

The Adze shown in Photo.1 is a facsimile. It will be used in the next issue to explore the use of these tools by Ancient Egyptian woodworkers.

To obtain a free A3 Plan for this facsimile, simply send a business size (about 220mm x 110mm) stamped addressed envelope to:

Adze Plan
The Australian Woodworker
PO Box 514
Hazelbrook 2779.

Note: This is not a toy. When fitted with a sharp steel blade, the Adze must be treated with the same respect as any other cutting tool.



Photo.3: Casket – Cairo Museum