

GUIDEBOOK TO THE FORGE



Upon arriving at the very location and standing in front of the entrance of the forge-building first of all please enjoy the view of the old building itself.

On the right hand side of the workshop you will see the ditch with three numbers of water-wheels propelling the major machineries of the forge namely the big hammer (Schwanzhammer) the bellows and the grinding machine with the big grindstone (see also sketch on pages 6/7, nos. 8 and 9)

Above the entrance door you will see a fresco with the emblem of the blacksmith guild.

If arriving from the Charterhouse Abbey (Kartause) direction and passing the idyllic water pond you can look through the window and have a view of the entire workshop including the water-wheels set-up.

The content of room no. 2 (sketch 6/7) comprises handcrafted tools which remind you on the extraordinary skills of the Masters of the blacksmiths guild.

By paying attention to the grinding facilities and their arrangement you will find quite a complicated and comprehensive layout in order to fully utilize the hydraulic power on the one hand as well as to prevent a quick wear and tear or even frequent break-downs on the other

Different wood varieties combined with different wood qualities are linked to the most useful set-up: For instance, the crossbars of the big gear are made of wood from beech trees, the teeth are fabricated of another beech variety called white beech, the frame is made of larch and so is the GRINDELBAUM which is the driving shaft linking the waterwheel and the large gear called KAMMRAD.

Other parts of the grinding work such as bearing sleeves etc are made of plum-tree and pear-tree wd. This composition of different kinds of wood is a result of a century old experience among builders of such works.

On the adjustable bench sits the grinding master who has to adjust the necessary pressure applied to the tools to be ground by shifting his body weight from left to right, back and forth.

This sometimes funny and like a monkey looking shifting and turning of the body led to a proverb quite common in our region called: *SITTING LIKE A MONKEY ON A GRINDING STONE!* It is applied to people restlessly shifting and moving around while sitting.

There is also an English proverb connected with the grindstone:

KEEP SOMEBODIES NOSE TO THE GRINDSTONE

The meaning is: *TO FORCE SOMEBODY TO WORK HARD WITHOUT REST!*

By passing a former forge (no3 on sketch) one is about to enter the actual workshop.

Located at the right hand side is a special kind of bellow (SPITZBLASBALG. no. 4) an apparatus which blows air into the fire in a forge through a pipe-system.

Again, this very facility is driven by the waterworks and the big driving shaft. The bellow itself consists of a wooden frame made of pine which is mapped with a tanned cowhide of about 12sqm surface. Too high a pressure inside the bellow activates a safety valve automatically.

The driving shafts are made of ash tree-wood.

Since the original bellow was damaged and rotten beyond repair, a very special private club/association of craftsmen called BALGSETZERHAUS in Weyer (Town in Upper Austria) remodelled and built this one based on old examples.

By the left there is the big fireplace with a chimney which is that wide that a man could climb up for cleaning when necessary.

One of the major preconditions to reach high temperatures to heat up metals to be shaped is the proper functioning of the forge which basically depends on the flow of air (oxygen!).

In this workshop the air will be blown in horizontally and can be controlled by a sort of valve.

In case of short water supply for the waterwheels leading to lesser power output and consequently lesser flow of air a 100 years old fan made in USA can be activated in order to

GUIDEBOOK TO THE FORGE



guarantee continued work.

Now we turn to the major facility of this workshop — the mighty hammer (Nos.6 and 7 of sketch)

The SCHWANZHAMMER is driven by the bigger waterwheel through the driving shaft caned GRINDEL. These facilities lifting the hammer are caned PAUKE and ERTEL whereby the ERTEL (=teeth) lock in the PRÖLLRING pressing down the hammer shaft (= HAMMERHALB). The WAGRING controls the up and down movements of the hammer shaft.

The whole framework made of oak tree is called HAMMERGERÜST, buried deep into the ground and also carrying the WAGRING and strong enough to bear the shocks and forces of the moving hammer.

At the front end of the HAMMERHALB is the hammer itself which hits the anvil (SCHAWAT) or rather the metal to be shaped in between.

At the *side* there is a control-mechanism controlling the speed of the hammer i.e. pushing down the lever one gets more water on to the driving waterwheel and subsequently increases the hammering speed.

On page 5 of the booklet you will find more technical details of above facilities.

Two more proverbs are obviously based on the work of blacksmiths, as just mentioned in the last paragraph above, the pressing down the control-mechanism leads to the saying:

ADD ONE MORE TOOTH!

(in order to increase speed or in order to get things done quickly, instantly).

Another source for this saying is probably the tortures of people in the Middle Ages: in order to extort a confession from somebody the tortures by stretching for instance were increased by adding one more tooth on a torturing machine.

The other one is connected to the iron balls on the main pillows of the frame carrying the hammer. Provided somebody works continuously, the balls will move and roll and will have a shiny surface. Once stopping for a long time the balls get rusty and one is therefore lazy or in other words:

MAN SCHIEBT EINE RUHIGE KUGEL! = „No work is being done!

Now, after having seen all the technical details of the workshop stop for a minute and let the feeling, the imaginations, the atmosphere sink into your mind.

Imagine the crackling fire on the forges, the hissing sound of air being blown into it, the scent of .smoke, the booming noise of the big hammer. the clanking sound of hammers being worked by busy blacksmiths on anvils, the glow of hot metal, the hiss of hot iron being cooled down in a bucket of water, the whole place a scene of hustle and bustle.

With the renovation of this old building and its old „factory" we tried to restore both the original conditions of the machineries and tools and even the kind of atmosphere within this rooms.

We do hope you found this place interesting and you also got a good idea on how things were done in the olden days way before mechanization set in.

Finally we thank you very much for your visit, your attention and wish you a safe journey furthermore through our country



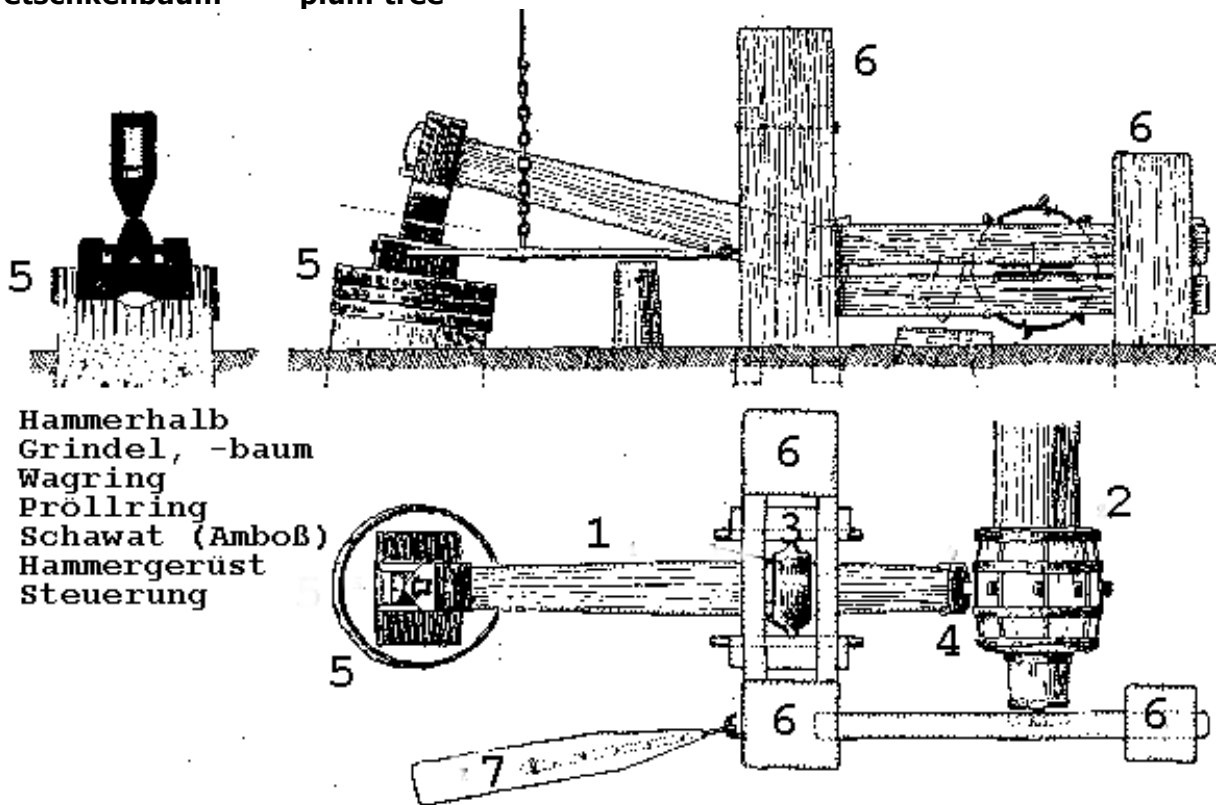
THANK YOU AND GOOD BYE.

GUIDEBOOK TO THE FORGE



VOKABELN:

Amboß	anvil
Blasebalg	bellow (apparatus for blowing air into a fire or into a forge)
Birke	birch(tree)
Birnbaum	pear tree
Buche	beech(tree)
Esse	forge
Esche	ash tree
Fichte	pine(tree)
Gilde, Zunft	guild (e.g. guild of blacksmiths)
Wassergraben	ditch
Handwerker	craftsman
handgemacht	handcrafted
Lärche	larch tree
Schmiede	forge, smithy (workshop with fire and anvil where metals are heated and shaped)
Schmied	the (black)smith (=man who makes or repairs things of iron)
Schmiedeeisen	iron, wrought iron
schmieden	to forge (to shape by heating and hammering things of iron)
schleifen	to grind, to polish., to sharpen
schärfen	to sharpen
Schleifmaschine	grinding machine
Schleifstein (drehbar)	grindstone
Schleifstein (Sense)	wetstone
Schleifer	the grinder
Wasserrad	water wheel (turned by a flow of water, used to work machinery)
Wasserwerk	water works
Zwetschenbaum	plum tree



- 1 Hammerhalb
- 2 Grindel, -baum
- 3 Waging
- 4 Pröllring
- 5 Schawat (Amboß)
- 6 Hammergerüst
- 7 Steuerung

**GUIDEBOOK
TO THE FORGE**

