



Evolution of Wood drills?

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HISTORICAL DEVELOPMENT:

In the era of hydropower wheels, steam engines and transmissions the wood drills were more and more used on stationary drilling machines, which were provided with a much higher speed compared to the speed of a classic brace, so that at this point the wood could be machined correctly. Due to this new increased speed, Mr. Benjamin Forstner's drill invention with its continuous peripheral cutting edges suddenly turned out to be quite hindering. Because now the stationary machine took over the guidance of the drill and the peripheral cutting edges were not designed to be sharp. The rubbing on the wood surface became much more intense and the edges heated up enormously in the drilling process.

As a consequence quite often the wood happened to burn, the drill discoloured and the material of the Forstner bit was irrevocably destroyed. Furthermore the two chip spaces of the drill were too small for all the chips to be removed ideally at that new processing speed.

Finally it took a mastermind to reduce the length of the peripheral cutting edges. This provided a much larger chip space: The cylinder boring bit was born!

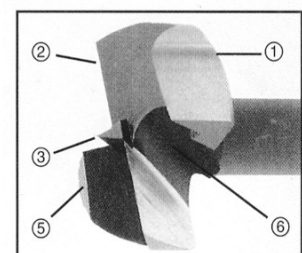
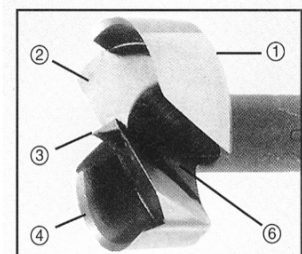
CYLINDER BORING BIT:

The classic cylinder boring bit has a shank, a blade and a cylindrical drill head equipped with a centre point, two main cutting edges and two opposite roughing taps. These roughing taps have a carve effect. Like with the Forstner bit, it allows them to cut the wood fibres precisely and produce a clear tear free-bore wall when drilling in soft and long-fibered wood. As opposed to the Forstner bit, the cylinder boring bits have no continuous cutting but usually two roughing taps. Due to this geometry they have nearly no guidance qualities and are unsuitable for working with a hand drill.

Cylinder boring bits are ideal tools when it comes to drilling clean and precise holes in soft wood and larger diameters with a stationary drilling.

So in the future it became necessary to use two different cylinder drills for "freehand drilling" (Forstner bit) and "stationary drilling" (cylinder boring bit). How awesome it would be to combine the best qualities of them both?

Decades later, this balancing act has been successful. The good guidance qualities of the Forstner bit and best characteristics of the cylinder boring bit were merged into a revolutionary invention called Bormax[®]. This excellent woodworking tool is a development of FAMAG, which owns patents on it, almost worldwide.



1. Drill head
2. Main cutting edges
3. Center point
4. Peripheral cutting edges (Forstner bit)
5. Taper tap (cylinder boring bit)
6. Flute