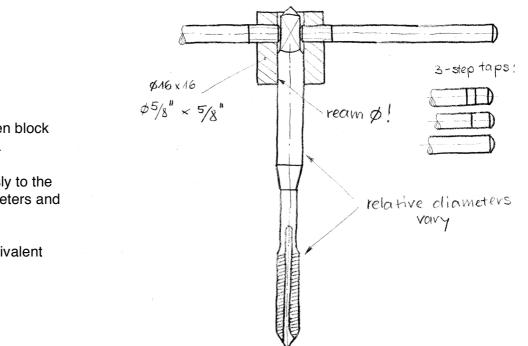
Functional Tap and Die Holders by Ulrich Viebahn Sept 16th 2021

Conventional tap holders (with an internal moving prism) are faulty in 2 aspects: They lose the grip to the delicate tap which hits then the concrete floor. And the time consuming fumbling (best to possess 3 hands) to assemble / change tap and holder. As I am not travelling with my thread cutting tools (storage space is not an issue) I found it very convenient to ,equip' each tap with it's own holder. I cannot imagine a simpler design:



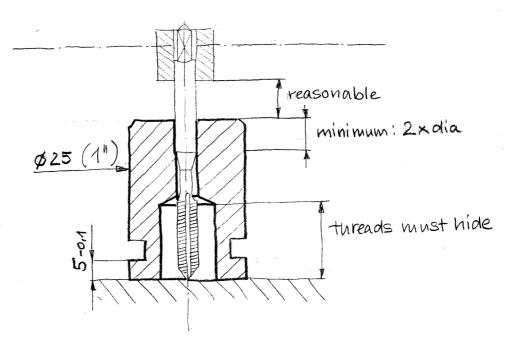
I store them in a wooden block with easily fitting bores.

To reach subconsciously to the right one, I varied diameters and lengths of the handles.

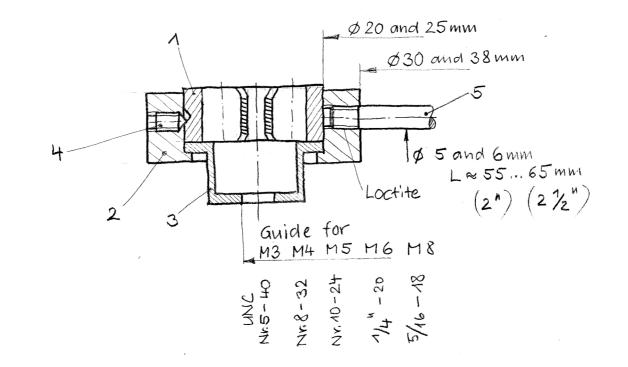
3-step taps get the equivalent marks on the handle

No tap is complete without a guide. The following principle is simple but needs some reflection concerning the dimensions. The recess is necessary if you want to use a forked downholder.

If the thread diameter is greater than the shaft then you have to slide the tap onto the guide and then use a conventional tap holder.



Die holders are by no means better than their siblings: Dies fit to loose or too tight in the holder. The "rim" of the holder is so slim that 2 or 3 of the 5 screws never stay in their place. To tighten them needs diligence. So I gave each die it's own fat die holder rim. (diameter of die + 10mm (3/8"))



All die holders a fitted with pot-like guides (#3).

The runaway screws were replaced by hidden ,worm' screws. The worm screws are offset to tear the die against the guide.

Again, I varied diameters and lengths of the handles so that subconcience points to the right die.

The heights of the bodies (#2) and guides(#3) are different in each case.

Those who are cutting threads in the lathe (I do not because the parts tend to slip in the chuck) prepare holders for their favorite dies without guides. And there are quite some tailstock die holders stored in HMT.

Finally I observed a visual / aesthetical effect: These tap and die holders are geometrically so simple that they are pleasing to the eyes. No dancing nor obstructing nor appearing / disappearing elements while rotating the holders with delicate fingers. A real pleasure.