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Hotwaxing leather sheaths

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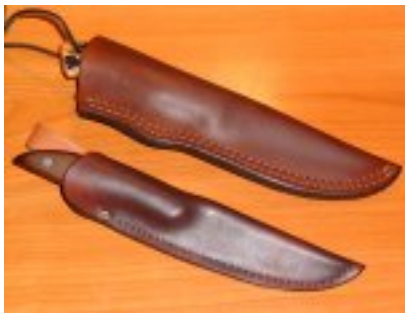

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Description :

How to hotwax leather sheath at your home, with improvised tools.

Hotwaxing is ancient method of making leather harder. With really sharp knives there is always possibility of knife getting through leather, and Hotwaxing is a really efficient way to prevent this.

I promised this tutorial long time ago, posted some info on few forums but this will be final and most complete version.

I first encountered hotwaxing on sheath for knife I got from a good friend. Sheath was surprisingly hard, almost hard as it was made of composite material, but at the same time soft surfaced, protecting the knife.

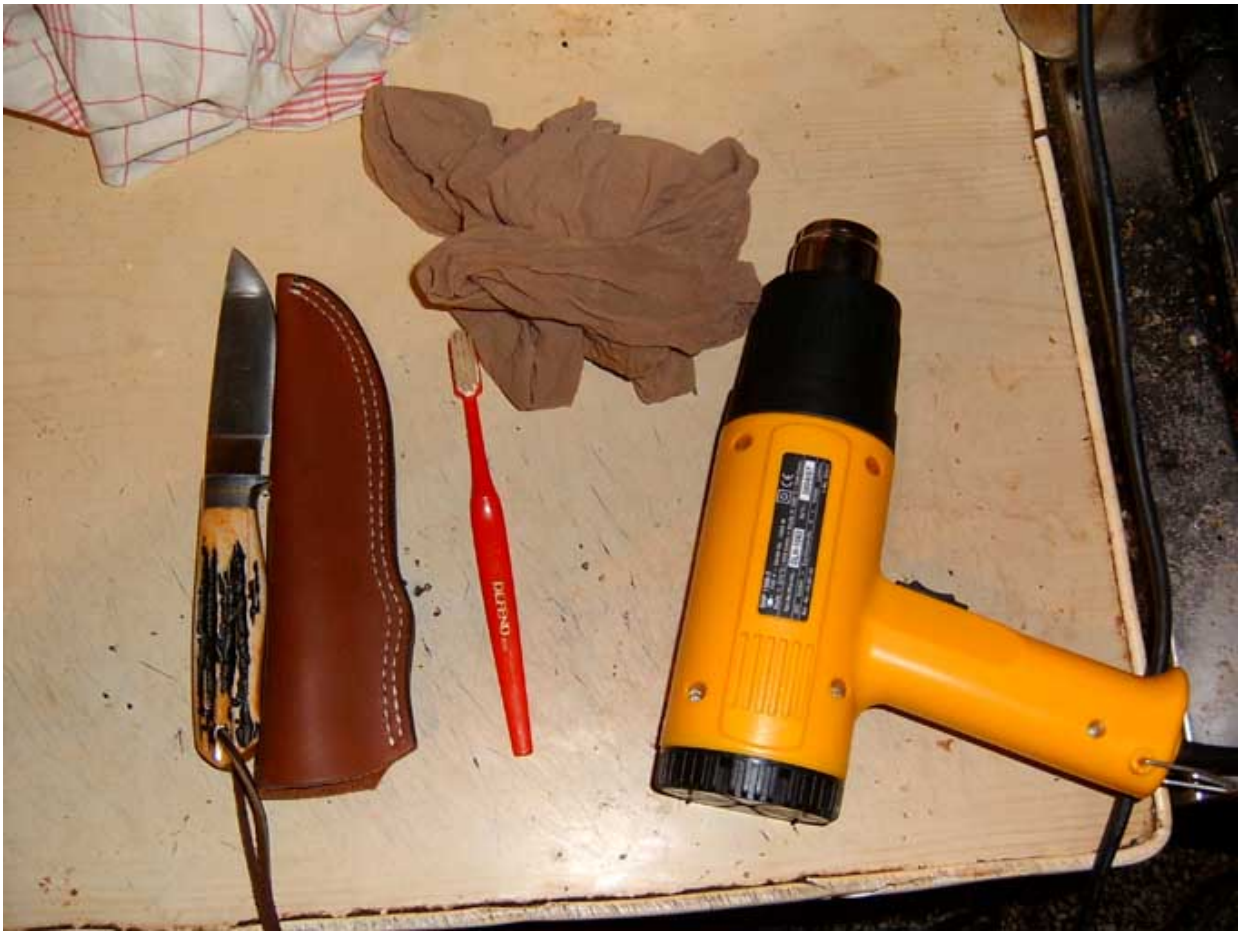
Then I discovered that such a hard surface is achieved by hotwaxing. In ancient times armour were made from hardened leather, with exactly this procedure of hotwaxing. The trick relies is applying hot beeswax to the sheath, and then heat the sheath until the wax melt, and mould it to the knife,. I use it on more than few sheaths, and it work great, making them much more durable, and even sheaths which were very soft from oil, and famous for not withstanding sharp knives very long are now very durable, withstanding months and years of everyday carry.

Most tutorials on hotwaxing included hating wax in oven, dipping sheath in hot wax, and only Jimbo's tutorial did it without using too much wax, which was one of important factors to me. I tried to make it work with small amount of wax, and as small investment as possible.

Even more important with this method I can achieved differential hardening of sheath, by controlling amount of applied wax, and therefore get the mouth of sheath softer for easier returning of the knife into sheath, and lower part much harder in order to keep blade from getting through sheath.

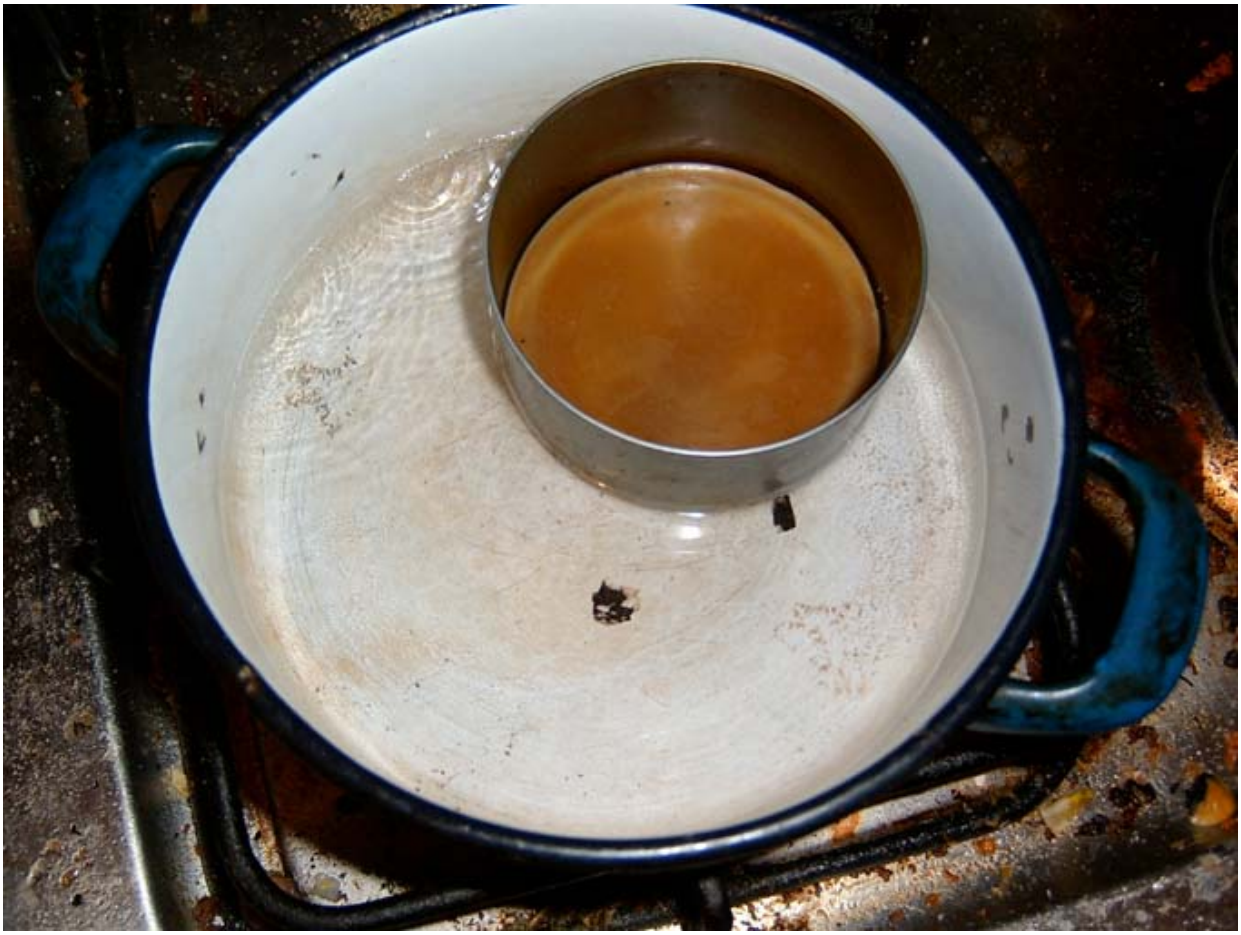
I am using pure beeswax, and I can't recommend anything else. Beeswax is available here, and anywhere on the world too as I am informed, so it is simple and good solution. A pound goes long way, I did 8 sheaths so far, and I have still material from one pound of beeswax.

Here is picture of equipment.



Equipment for hotwaxing Tools for hotwaxing are wery simple, old toothbrush, old women nylon stocking and something to heat sheath over, in this case it is electric heat paint remover. It is much better tool for heating sheath over than gas stove, and much more safer, cheap but wery usefull investment.

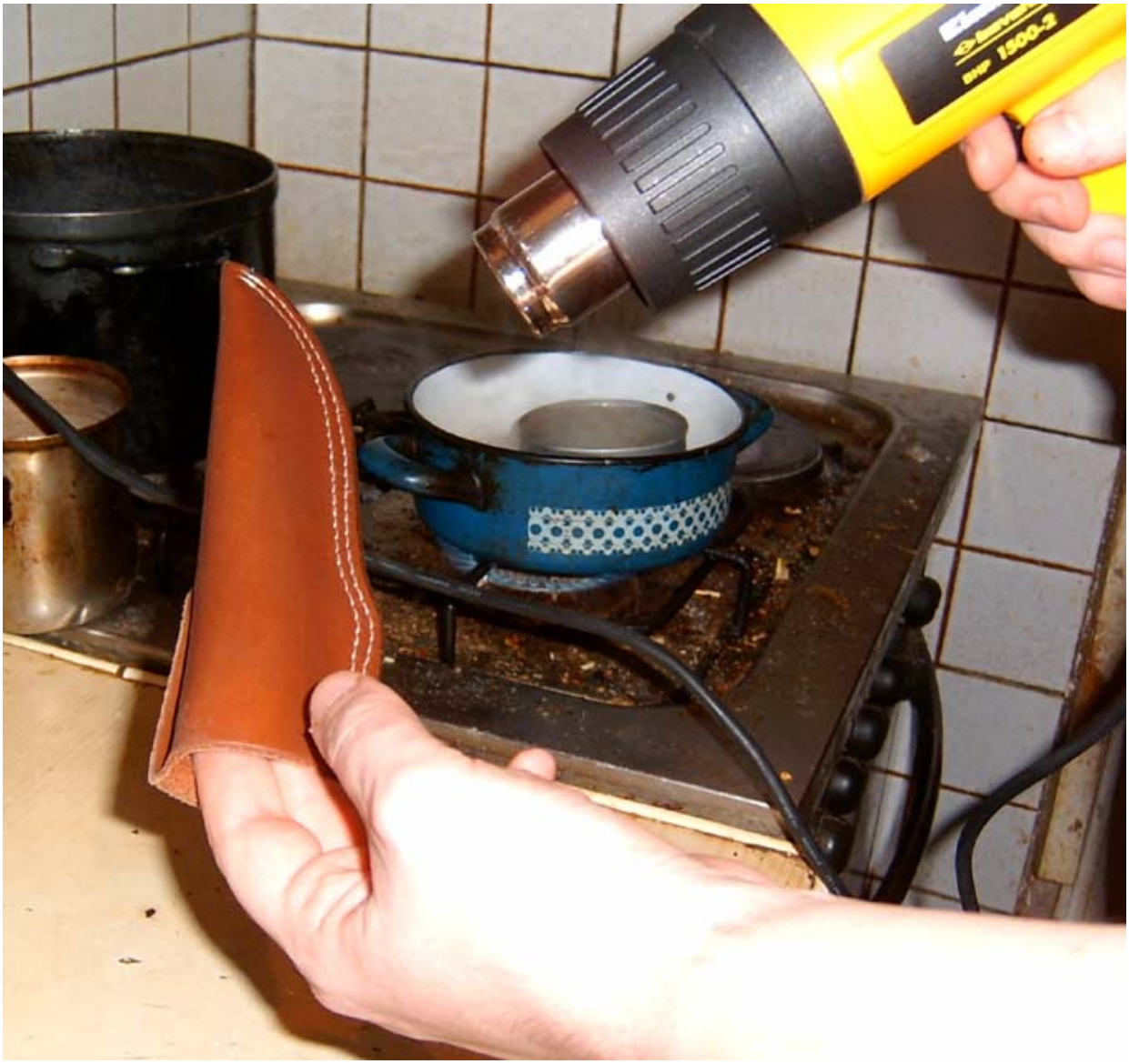
I used to heat wax over gas stove, but drops of melted wax can produce smell and flames, so I switched to hairdryer type of heat paint remover. It is a cheap tool, as I recollect it was 15$, so I consider it good investment, but for small numbers things can be done on gas stove, but outside.



Heating the wax Beside equipment on previous photu, you will need stove to heat wax on. It can be electric or gas stove, but always use double bath filled with water to prevent wax overheating. I am heating wx inside the tuna can.

I am always using water bath for heating the wax, by using small tuna can inside bigger pan filled with about 1/2" of water. After the wax melt it will be enough for water to just simmer, and it will prevent wax from overheating

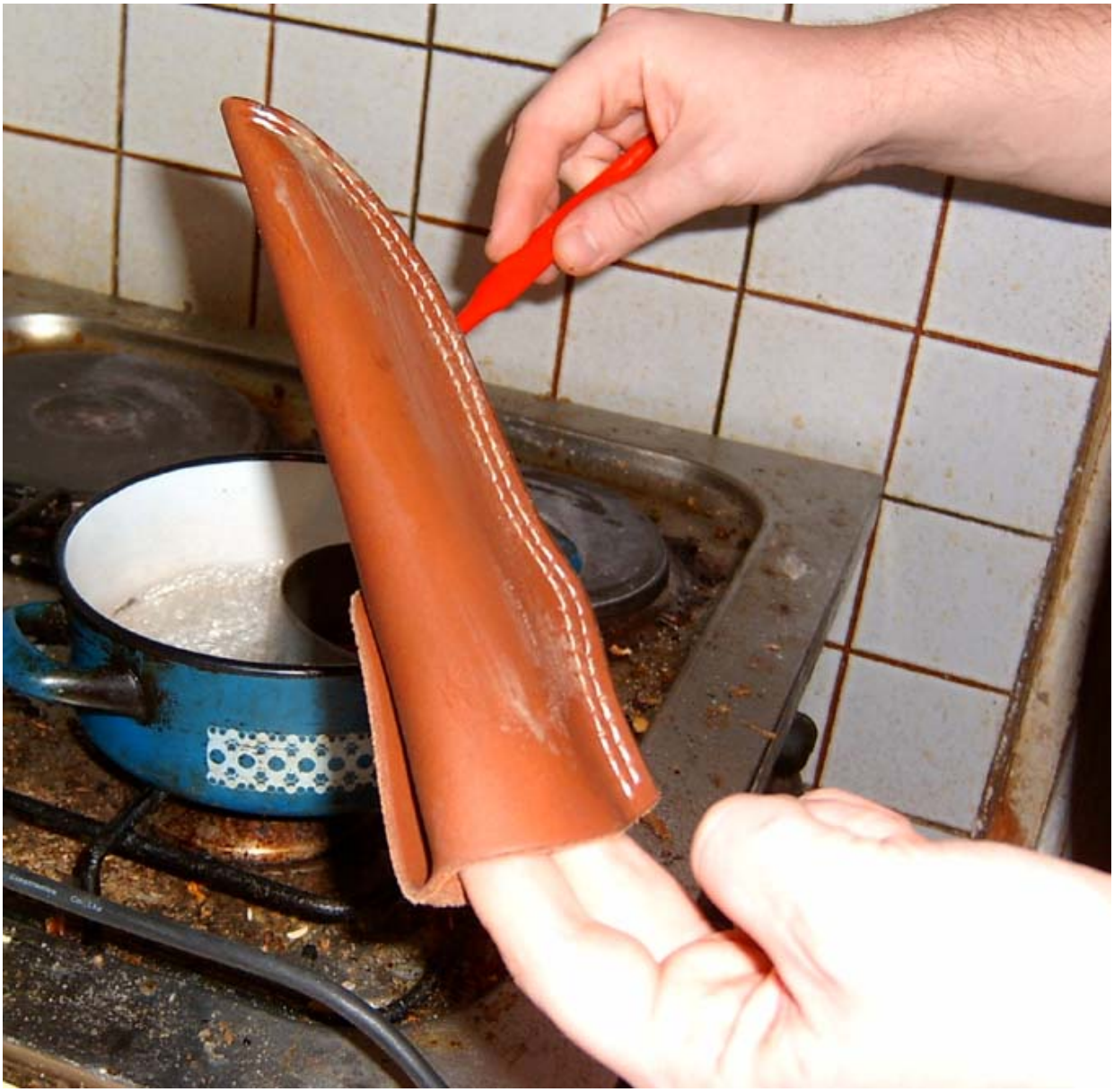
Before applying wax it is good to preheat sheath, and I filled it with paper in order to remove as much oil as I can. This is Forager sheath, and I wanted it tighter.



Preheating sheath

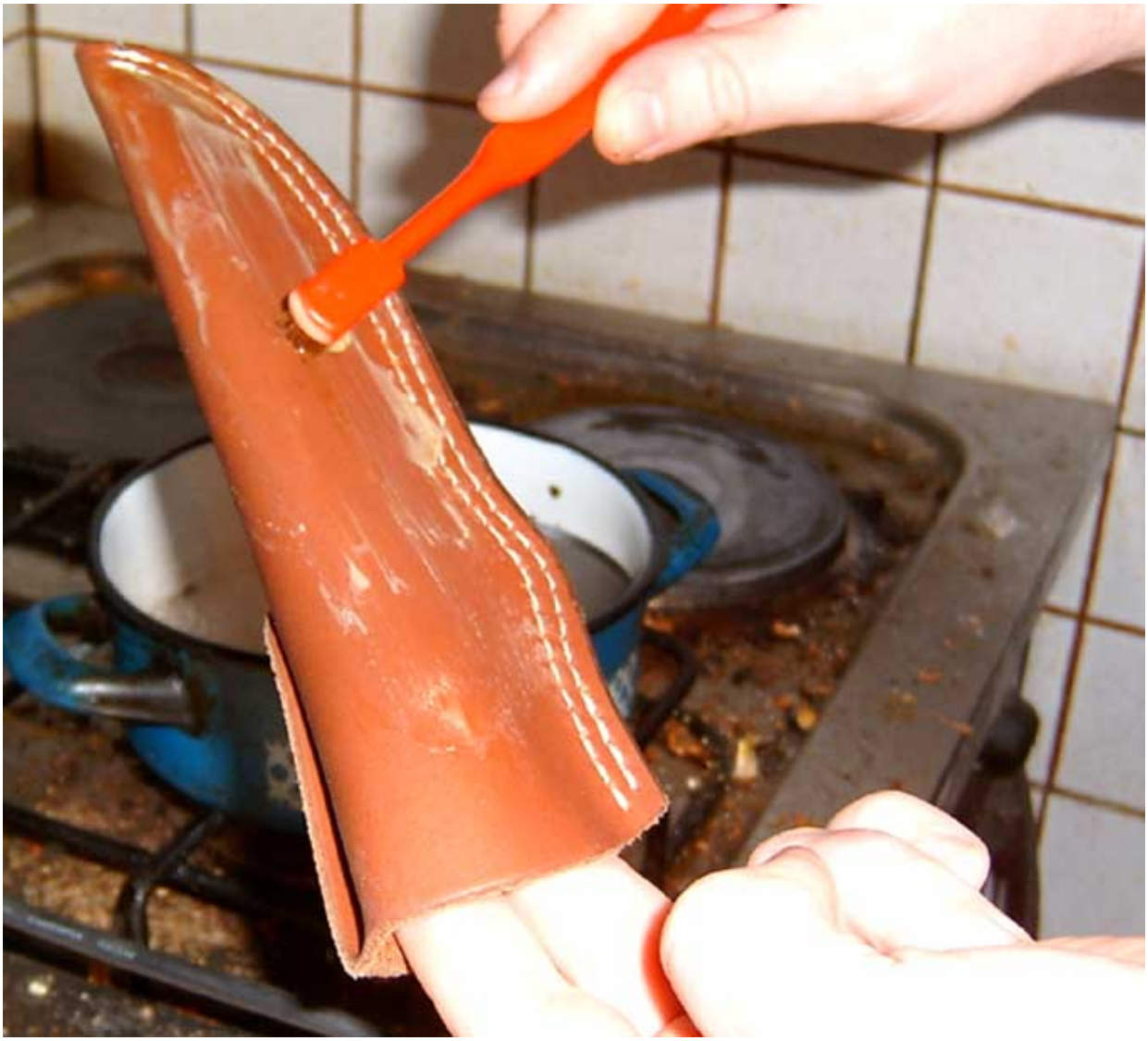
I am using bare hand to hold sheath, it is very visible on picture, and that prevents overheating sheath. I am not keeping jet on one place, and constantly moving it. Sheath should be warm on a touch, but not to feel pain when you put fingers on it.

I am using old toothbrush for aplying wax, and it is working great. Melting of bristles is also sign of too high temperature, so it is a good tool for that.



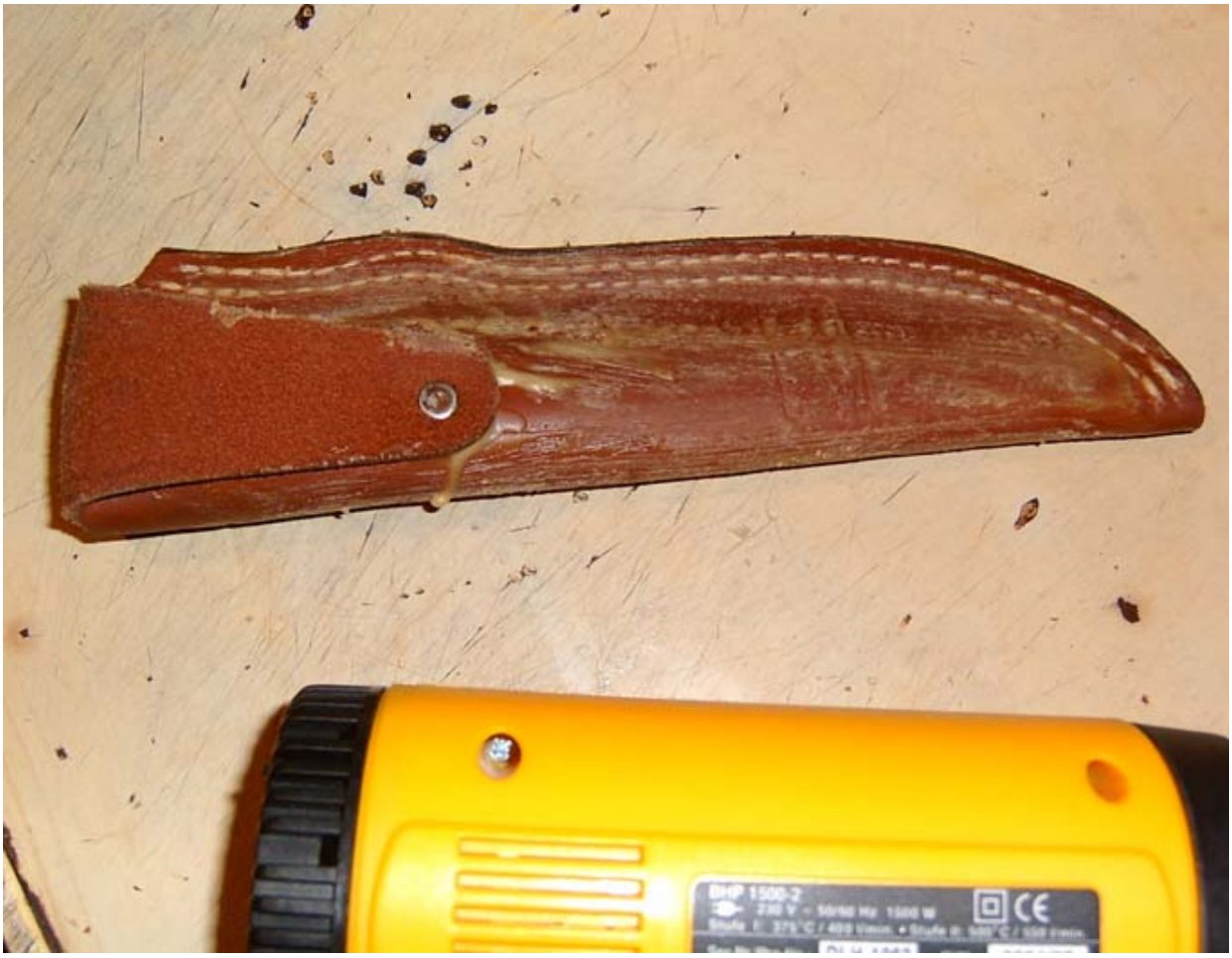
Aplying the wax

Wax will build up on sheath, and that isn't problem.

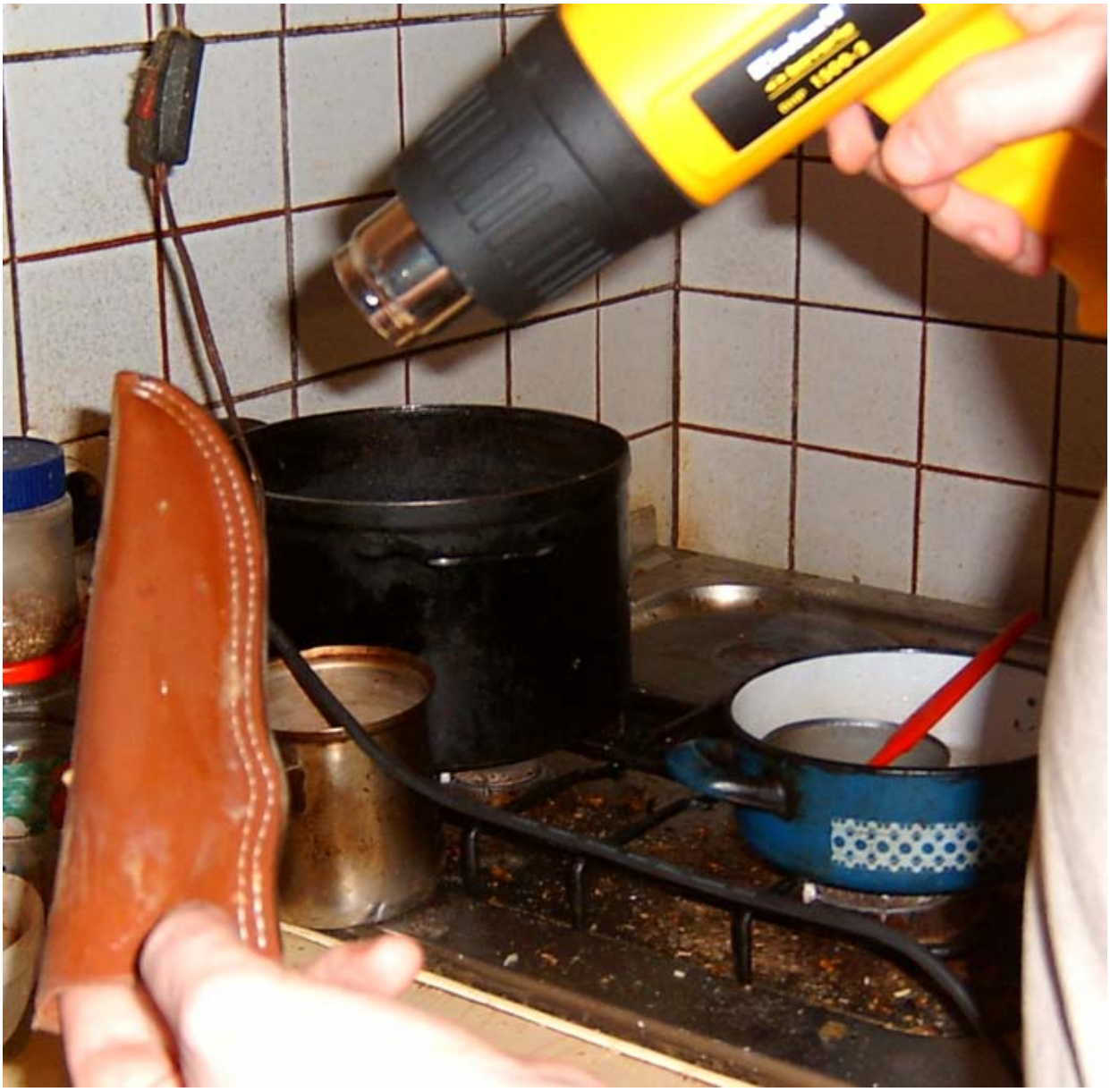


Wax buildup

This illustrates well how much wax buildup should be on the sheath before heating it again.

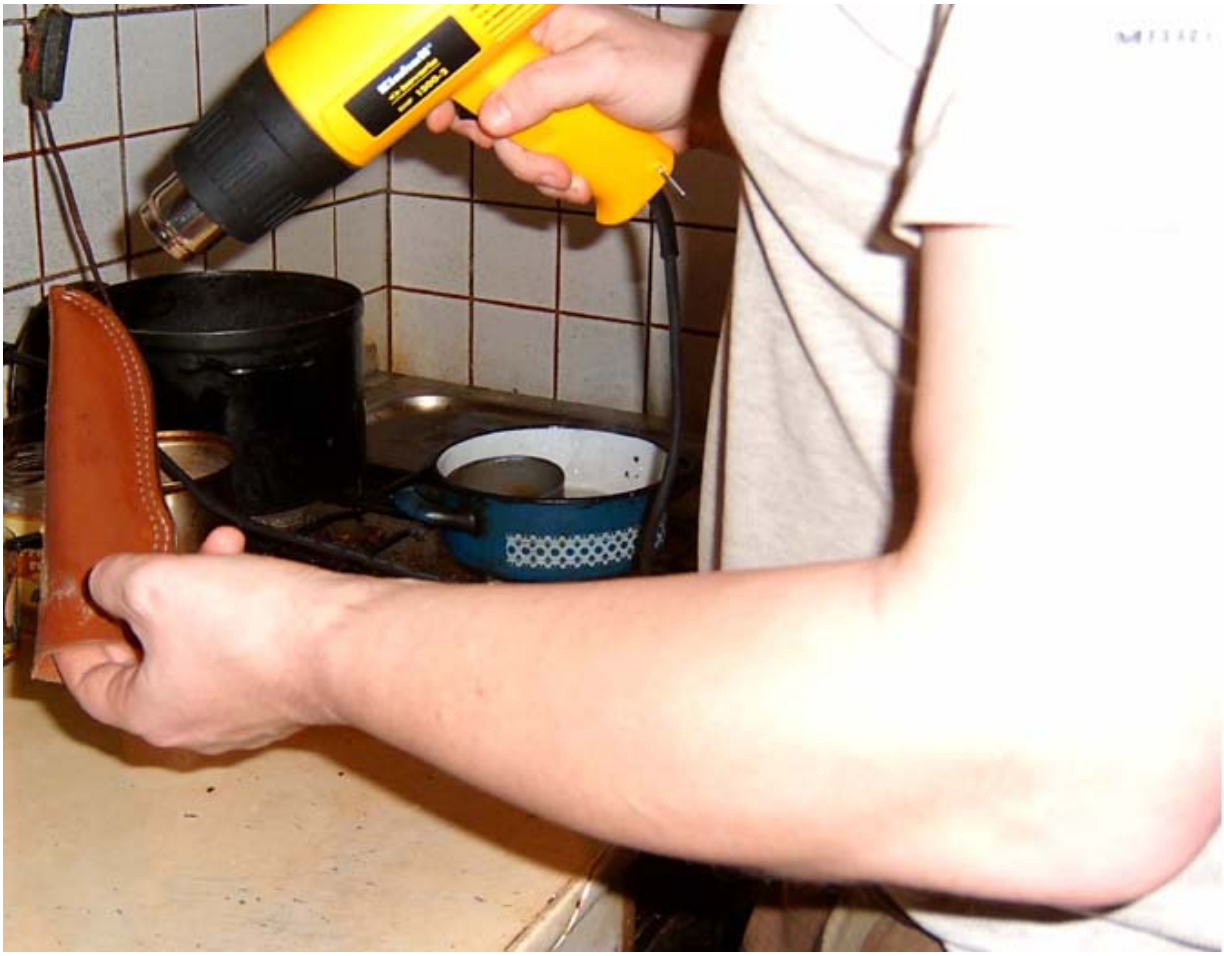


Next step is heating sheath again, melting wax, and there is almost wicking action of leather, it will wick hot wax from the surface, and after a little more heating surface will look dry.



Heating sheath with wax on it. I am again using fingers to control heat, beeing careful not to get burned. Leather can be dameged with heat, same as my skin, so this is good testing metod.

Following steps are just repeating of first ones. Wax, heat, wax heat, until leather is saturated in wax. Differential hardening is achieved by applying different amount of wax at different parts of the sheath with soft borders. Sign that leather is saturated is a film of melted wax on the surface of sheath even after prolonged heating, and leather surface doesn't become dry, and usually I apply another layer or two of wax after that to be on safe side and sure that everything is waxed enough. Of course parts that should be softer in differentially hardened leather shouldn't be saturated to maximum.



Wax is wicked into the sheath, and it is almost dry. Distance from blower should be at least 4" or 10 cm, and blower should be set on blow. There is no need to speed things too much.

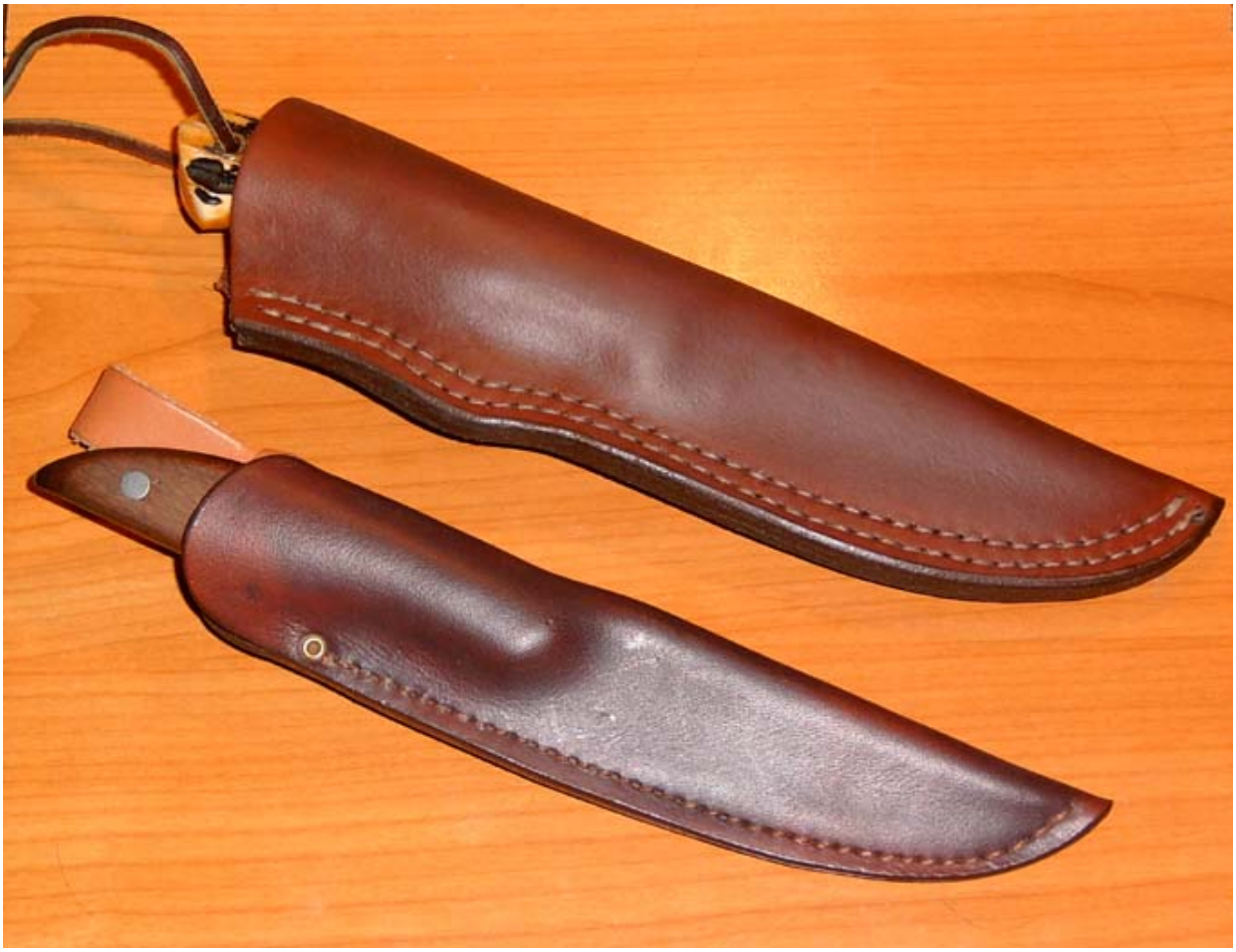
Some sheaths I don't saturate, they get little harder from hot waxing, but not armour hard, and wax is best leather waterproofing agent I know so far.

At the end there will be film of melted wax on the surface of the sheath, wipe it with paper towel, and then as soon as possible, carefully, because leather is very soft insert knife in its proper position. I am always using hands to touch sheath, to be sure that I dint overheat it, it should not be painful for short time and is a good check for right temperature.

After the knife is inserted, next thing is moulding. I am using my hands and press around knife, trying to get sheath in best shape I can. It isn't easy, at first sheath is hot and soft, but it will get cooler soon, and harder and harder.

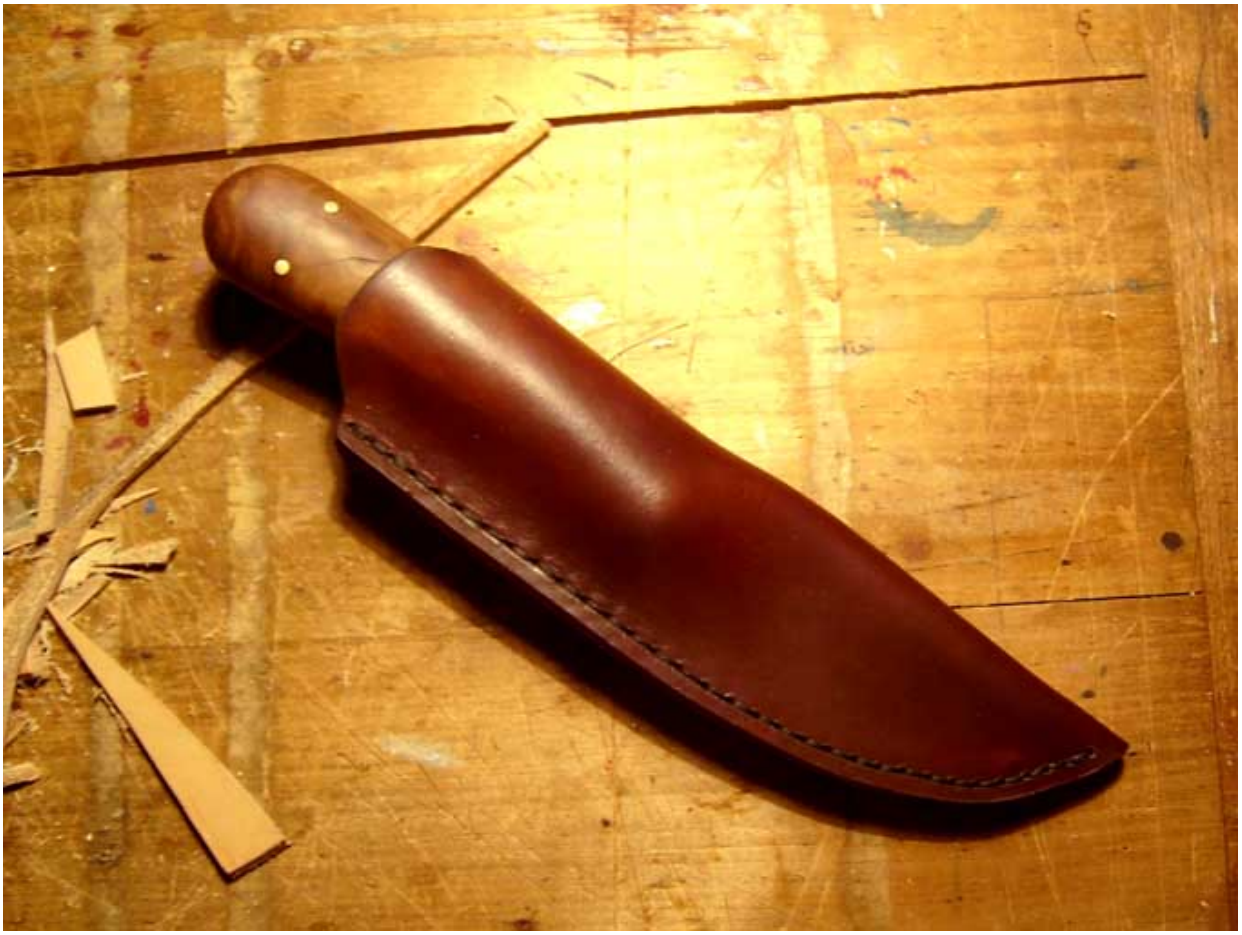
After leather doesn't stretch and mould any more I am usually leaving sheath for 15 minutes to cool, and then polish it with old women nylon stocking. It gets very shiny from that.

Here is picture of two hot waxed sheaths, they get dark brown from natural leather colour, and very hard. On sheath made from un oiled leather, there is almost a click when inserting and removing knife, and they become almost impossible to cut through.



Finished sheats Two finished sheats, upper is for BRK&T Forager, and lower for Grohman No1. Bottom sheath is differentilay hardened, with softer upper.

Lower, Grohmann sheath on the picture is differentially hardened, and it is seen on the picture as darker lower, and lighter upper part in colour. I left a 1" portion on top softer then bring it around the handle on full hardness and saturation, and there is almost a click feel when inserting knife into sheath. There is no way to get the knife from the sheath, besides pulling it, even if it is hanged upside down, because of handle shape and moulded leather.



Nessmuk sheath A sheath for Nessmuk knife, my first sheath from the scratch. I hotwaxed it completly, and it is wery hard and durable. Due to handle shape on the knife, and hotwaxing thee is clik when inserting knife in the sheath, and it is imposible to get the knife from the sheath unwilingly, even when it is turned upside down.

Good luck, and be careful, hot wax is flammable. There is always small droplets of wax on working surface, so find a good excuse if you do this in kitchen, or send your wife to her mother before you start.

Any questions will be glad to answer.

I wish to thank Jimbo, on being so good tutor, giving me idea on how to start, and discovering women stocking for polishing.

Bogdan Ristivojevic