

## Third hand

Written by Hans Summers

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This nice idea is a design by Pierre F2WW, who writes:

"A response to the long-wanted Helping Hand or Third Hand. The idea came up to my mind when browsing the rows at the nearby super-market. You'll recognise a thing of the past : a rat-trap; surprisingly still in demand.

You can arrange the thing to your own taste but two things are important to prevent it from slipping on your bench-top. My solution was firstly to add weight and putting anti-slip feet secondly. My added weight was in the form of a C-clamp with a screw, that I found in my junk-box. It is made of heavy metal and does the trick well. You can probably find something similar and useful at the same time. A small vise can do also. Otherwise I think adding a sole of heavy metal screwed underneath the base will do. Perhaps you can borrow the sole of your grandma's iron?

To have anti-slip feet I had to make my own. I used a kind of glue that stays a little sticky after drying (the glue I used is PXT 3B by PATTEX-HENKEL. It is a polyurethane based glue which is transparent and stays flexible when dry). I first put a big drop of it at every corner of the sole; then waited a few minutes to allow the glue to spread the size of a coin and dry a little. Then I put the trap on a flat surface to let the glue flatten and dry, about 20 minutes. To obtain feet about 3 to 4 millimeters thick you recommence the operation as necessary.

You will remark I used wooden clothes-pegs. Do not use plastic pegs: they will melt as soon as you solder a piece of copper wire! I cut flat the ends as it helps for holding small objects. Carving a groove on the inside of the jaws can help for holding small round pins etc. The pegs are firmly maintained on the sole with strong glue and a screw.

For holding and soldering small pins I drilled a series of small holes at the end of the sole and on the thickness as you can see on picture nr. 5. As can be seen on the pictures I glued small pieces of wood on the transverse wire of the spring. This helps to maintain firmly flat parts, like the circuit-plate seen on the photos. I used epoxy glue after carving a groove for the wire on the wooden plates and making scratches on the wire to help for a strong joint with the glue.

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For those working with SMD's I'd recommend using a mouse-trap in place of the rat's! They have them in my super-market, of the same trade-mark.

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