

How to make an animated cuckoo – not only - as a replacement for an old style German black-forest cuckoo-clock

This step-by-step-instruction from a German hobby-woodcarver comes quite handy as an inviting tiny handicraft-project for a lonely rainy Sunday. No matter, if one accidentally owns an old cuckoo-clock, were the cuckoo got lost or damaged by the ravages of time or not, the little animated bird is worthwhile to be made. Indeed, the cuckoo on **Fig. 1** is really too nice, to be locked in a clock-case for the most time of the day. Protected by a small glass dome, it surely could serve as an outstanding decorative object on top of the desk of its carver. Although carving the needed parts is really simple, bending the tiny wire-loops and assembling the cuckoo exactly, so that the wings rise symmetrically and the beak opens, if the trail becomes lifted, can be a certain challenge, especially for those fellow-carvers, who are used, to handle merely much bigger logs of “timber”. - But let’s start:

Fig. 2 shows a “blueprint” of all the needed wood-parts. It’s a good idea, to transfer the shapes of body and wing to thin cardboard and cut out stencils for later use. According to **Fig. 3** some basswood-bars have to be cut. Measures of its cross-sections are given in the specification-list **Table 1**.

Hint: Because of the really low material-costs for such small parts, it’s always worth to prepare at least one piece of each part more, than needed. In case something goes wrong, one is not thrown back to the very beginning. Turns everything out very well, the surplus is a nice gift or swap.

Now the branch, where the cuckoo rests, needs a mounting-hole for attaching it to the clockwork. On **Fig. 4** this hole is already drilled, and working out the raw recess of the body-part is in progress. **Fig. 5** is about drilling the hole of the bird’s gullet. A vice is here recommended in order to hold the wood exactly vertically. Rounding the branch is demonstrated on **Fig. 6** - very professional - on a small wood lathe, but can be done as good by whittling and sanding. This is also true for preparing the wood for the under part of the beak **Fig. 7**.

Hint: A general rule for secure and convenient working on small parts is always to shape the details before separating the part from the excess wood, which serves as a “handle”.

Fig. 8 shows one more example for this important hint: A sanding disc is used for rounding the breast of the bird, before the “handle” is cut of. The photo on **Fig. 9** was taken, when the wood bar, intended for the wings, got its “aerodynamic” profile. Therefore the wood was locked between wedges, cut from waste wood and nailed together as a simple but useful holding jig. **Fig. 10**, a close-up of the wooden parts in different stages of progress is divided in these subparts:

Fig. 10/1 - The stencils, advised to make above, where used to transfer the shape of the body to the wood, and an electrical jigsaw was used to raw shape top view and side view one after the other. Due to the hint above, two cuckoos are still Siamese twins.

Fig. 10/2 – The bodies of the cuckoos got its final shape by whittling, filing, sanding and separating.

Fig. 10/3 – The aerodynamically shaped wood prepared to become the wings.

Fig. 10/4 – Two branches for the cuckoos to rest, with a hole for clamping the cuckoos to the cuckoo-clockworks.

Fig. 10/5 – The correctly shaped wings. Attention: There is a left- and a right- wing needed, of course!

Fig. 10/6 - Four under parts of the beak (only one is necessary for each cuckoo) and a rounded bar of wood in the next higher place, from which the beak parts can be carved from.

Fig. 10/7 – Shows two “breast”-parts and the wood prepared for making these.

After all wooden parts for at least one cuckoo are done; the procedure of assembling can begin:

Studying **Fig. 11** will help, to get an idea, how the “wiring” of the cuckoo works. (For more clarity only one wing is shown.) As can be seen in **Fig. 12**, some material and tools are necessary, which don’t seem to be ubiquitous in a woodcarver’s workshop, so missing things

as some small tongs and pincers, some drills of about 1/64" diameter, steel wire 1/64" diameter have to be fetched elsewhere in advance.

Hint: Instead of using a "Drehmel", drilling can also be done with a bigger drilling press, but only if its chuck can hold and center such small drills.

Fig. 13: Wire hooks and loops are properly attached to the wooden parts. Final assembly comes next: **Fig. 14** shows the drilling of the hole for the pivot. **Fig. 15** shows the completely mounted and tested cuckoo.

Hint: Although close fitting should be achieved by using the right drill- diameter, micro-drops of instant-glue may help to strengthen the joints.

Painting the plumage of the little cuckoo is not much fuss. As the cuckoo is supposed to rest well protected in a clock-case or a glass-dome, cheap water-colour will do **Fig. 16**.

Hint: Studying some reference material like photos and drawings of real cuckoos is helpful to match, or better exaggerate the characteristic marks of this kind of bird in the resembled finishing.

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Table 1 - Spezifikations-List:

- 1) Basswood-bar 1/2" x 1/2" (body)
- 2) Basswood-bar 3/8" x 3/8" (branch)
- 3) Basswood-bar 1/4" x 1/4" ("breast")
- 4) Basswood-bar 3/8" x 1/8" (wings)
- 5) Basswood-bar 1/8" x 1/8" (under part of beak)
- 6) Steel-wire 1/64" diameter