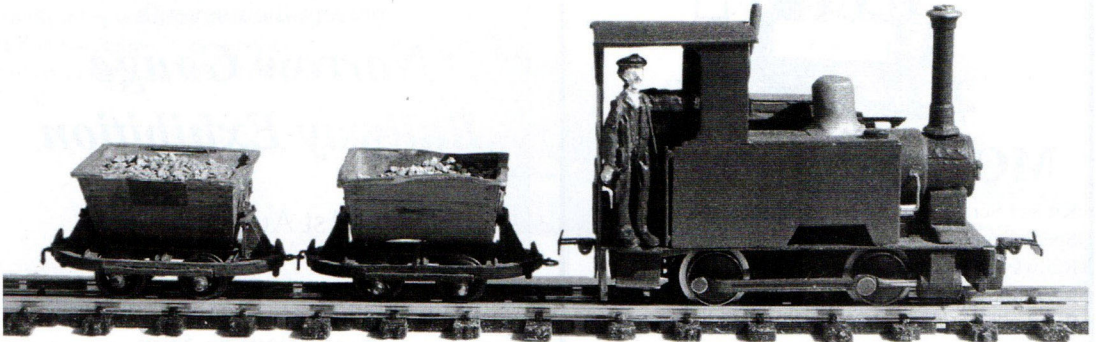


# A Scratchbuilt Bagnall for Moors End

*Reinier Hendriksen builds the Mk2 version of his Bagnall 0-4-0T*



*The Bagnall coupled to some Hudson skips. There are some skips in my collection which are fitted with DG couplings! [Photographs: Reinier Hendriksen]*

In the past I glued and soldered several kits of small steam engines together. These resulted in nice running models (at least others say). Then time had come to construct a model, at least the body, completely by myself. The chassis was a Minitrix 0-6-0, removing the second axle, a long wheelbased drive unit was the result. 'It is only a test engine' could be my excuse.

My first try was a Bagnall 0-4-0T 'Mk1' consisting of styrene. I was not completely satisfied with the model: for me styrene is not the ideal stuff to build an engine which in reality is made of iron. Unfortunately the model started to warp after some time, maybe because I used the wrong type of glue for the (lead) ballast inside the tank and cab. After some time I began to think about a brass model and building a brass model I could improve my soldering techniques for a future Backwood kit. The styrene engine body became a museum piece in the DDMLR display cabinet. Farewell to 'Mk1' and welcome to the improved 'Mk2'.

In the local model shop I bought some 0,125 and 0,25mm brass sheet (K&S, a product from the U.S.A.). For some items (a bent roof) you can use a beer can, the material is already a little bit bent and will keep easily in that way when you work with it. I think a Guinness can is the best for Irish based engine roofs.

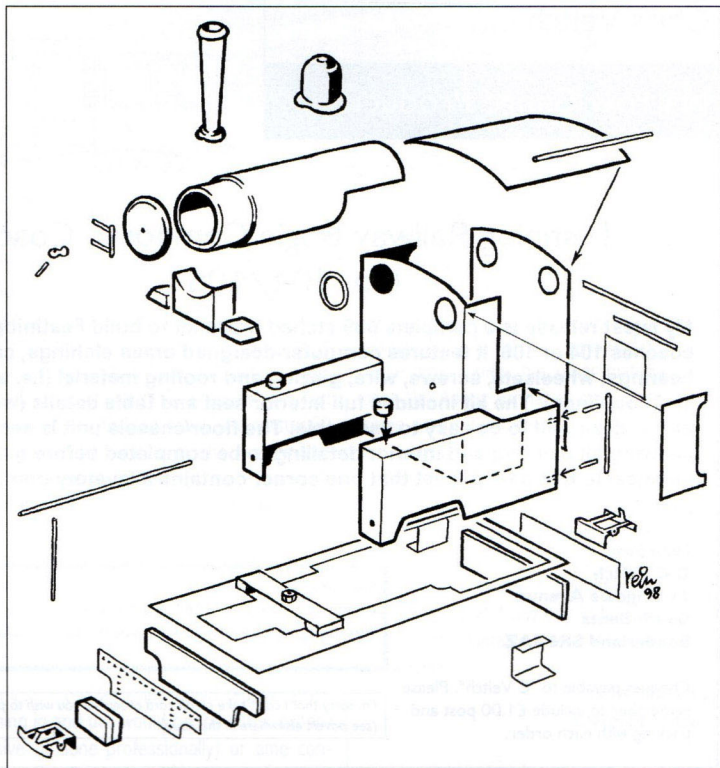
## How to 'etch' with a Stanley knife

Yes, you can 'etch' with a Stanley knife without dangerous fluids etc. Make a drawing of the parts you need on the brass, bigger parts (side tanks, cab etc.) on the 0,25mm brass sheet, smaller parts (roof) on 0,125mm brass sheet. Then take the knife with a new sharp blade. Cut the outlines first, you better make several cuts. When you are ready with

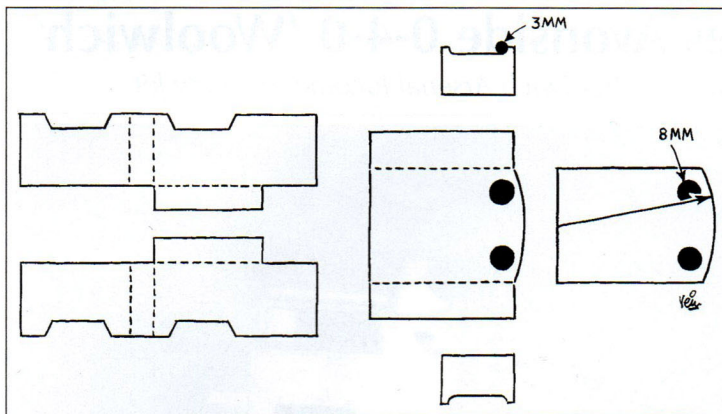
the outlines you start to cut the folding lines, not as deep as the outlines. When you have cut all the outlines and folding lines you start to bend the brass sheet at an outline after you put the brass sheet between two blocks of wood. The material will break easily. Put your home made kit together and solder the folding lines on the inside. That will make your 'kit' stronger! When you have never worked with brass sheet you better take some scrap material, cut a number of lines and

start to bend and break the material, just to learn the possibilities of the material. The sketches and photo's will give you an idea of the process I used to build this little steam engine.

**Below: An exploded diagram showing Reinier's method of construction.**



The cab and tank parts, drawn to 100%



Right: Several parts of the Bagnall together. The front buffer beam has round openings for the piston rods but these were altered at a later stage, as per the exploded drawing, to prevent the piston rods from short circuiting.

Below Left: A side view of the completed locomotive

Below Right: The Bagnall as seen by a Barn Owl

[Photographs:L Reinier Hendriksen]

