Restoration of a Zograscope



A couple of weeks ago I was given a opportunity buying a Zograscope, but unfortunately not in a tip top condition. But that's, fortunately, not really a problem for me.



At a superficial examination the most faults were not directly noticeable



At close inspection however, the loose frame of the mirror and bent bracket for example, are clearly seeing.



A complete revision is the only solution. The screws must be carefully removed to avoid brakage. Use a well fitted screw driver !



Because of bad wood, the screws needed a player to get them out, carefully turning and simultaneous pulling..



Damage is clearly visible, and here also the screws are removed.



After removing all the screws, the different parts are separated



After removing the nails by means of a small side cutter, the bad part of wood must be milled away



Use a good Putty. Wet the hole (breach) with a bit of water, to improve solidity.

At a good proportion the Putty is about a hour workable. Use a thick needle by filling the hole with Putty, to let the air escape.



Clearly visible is the bad condition of the screw holes. Even a couple of nails, used in a previous attempt to give the bracket a bit more stability



The good wood is now visible, but must be filled up to accommodate new screws



After 12 hours the Putty is dry and ready to drill. Use a wet piece of sandpaper to get a smooth surface. Afterwards, colouring with a wood colour



The mirror frame must be taken apart very carefully as well, saving the remaining wedges



Use a larger screw driver as a wig to separate the frame parts.



By means of two saw blades besides each other, it's easy to



Also the slanting sides must be free of rest. Use a good file and a flat underground.



After good cleaning of the frame, the appropriate parts must be I use modern gum instead of the old fashioned bone glued. glue. Please forgive me.

Use elastic bands (from the postman) and appropriate clamps. Let dry for 24 hours.





For a new wig, use a slightly elastic, and of the right thickness, piece of wood.



Afterwards saw off the extended pieces of wood. Let the saw do this work !



Scrape the remaining pieces with a scraping knife and a small file. Colour if necessary



Assembling the straightened clamp. I use new copper screws, cause the old iron ones are very fragile and breakable



Before inserting a new screw, drill a small hole into the Putty.



I clean the different parts with one part turps and two parts raw linseed oil. Use steel wool 0000



Wait a couple of minutes and remove the dirt by means of a paper towel or cloth. The photo proves the necessity of this



After cleaning , the different parts can be assembled again



The right column had to be removed to make assembly of the mirror and condenser possible. Returned with some new gum. Give it a rest for another 12 hours or so



After complete assembly, use a good bee wax and carefully rub each part throughout. Let it dry for a couple of minutes, then use a flannel piece of cloth to brighten up/



A test to see whether it's working properly. Very nice indeed !



The result. A museum piece richer.