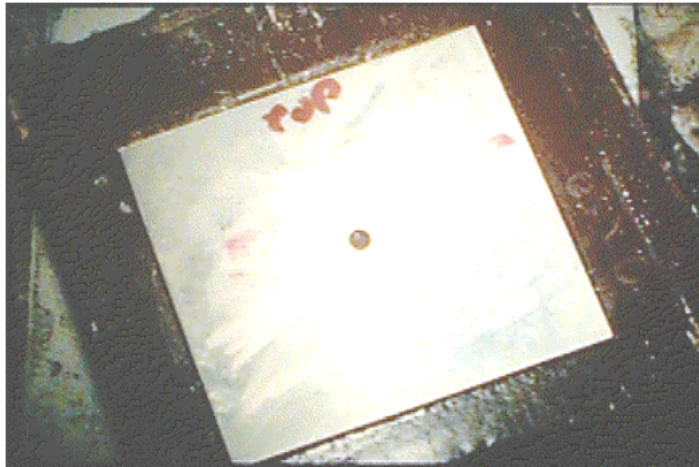


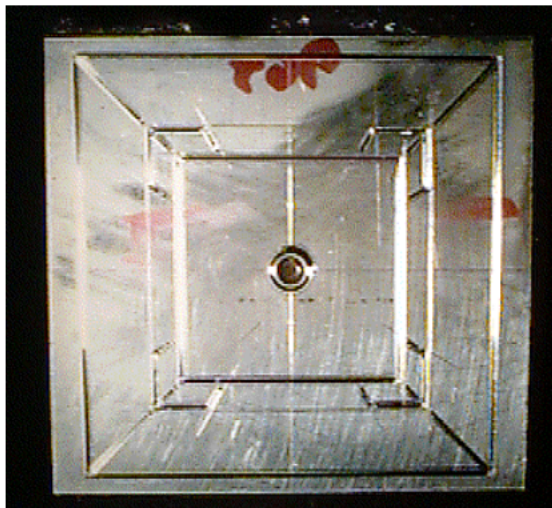
Enamelling and Recessing with Engine Turning

The Recessing Process Illustrated in Stages on a Flat Surface

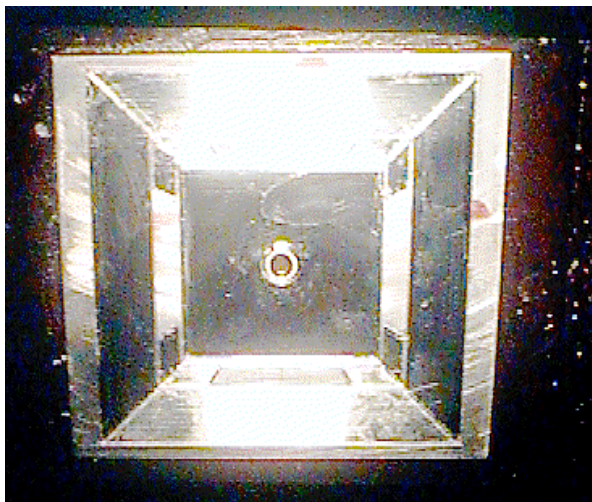
Recessing for enamel is time consuming but produces results that can't be equalled by other methods. Edges are clean and absolutely geometrically true. Corners are sharp with no radius. (Acute angles are trimmed by hand.) Recessed surfaces are prepared to a very high standard, very few steps away from a mirror finish minus the polish, by scraping, stoning and abrading with fine pumice so that the reflections from the engine turning, which is dependent on surface quality because of the guide controlling depth of cut, will be absolutely clean. This is particularly important in this example with sunray straight lines.



The blank dial stuck to a wooden block with wax You can't see the marking out because it is too fine

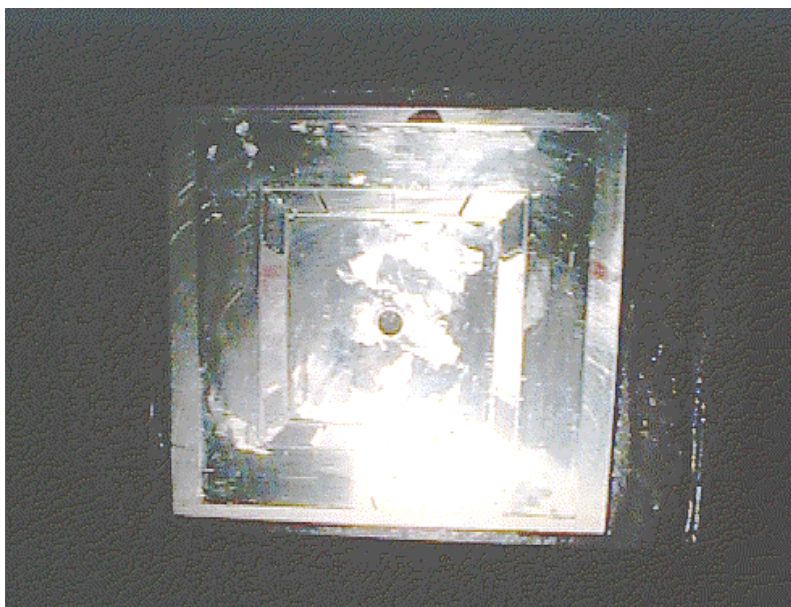


After very careful marking out on the straight line machine the edges of each recess are sunk Positioning of the edge of the tool exactly in the middle of a mark of less than 0.01mm width requires a binocular microscope attached to the machine and accurate manipulation of controls

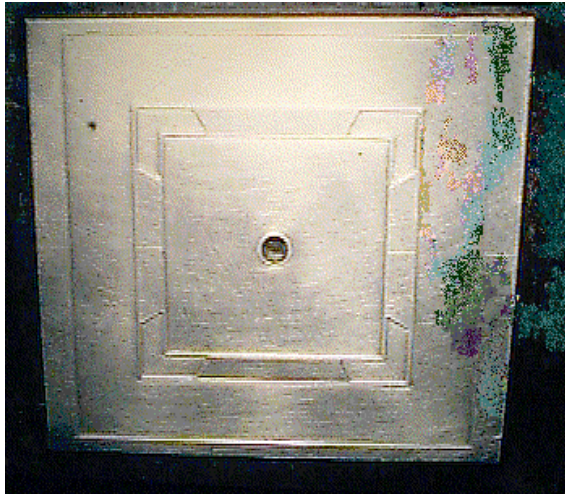


The rough recesses cut away At this stage the only accurate thing is the edges The bottom of each recess is just a planed surface, OK if for opaque enamel but we are using translucent here

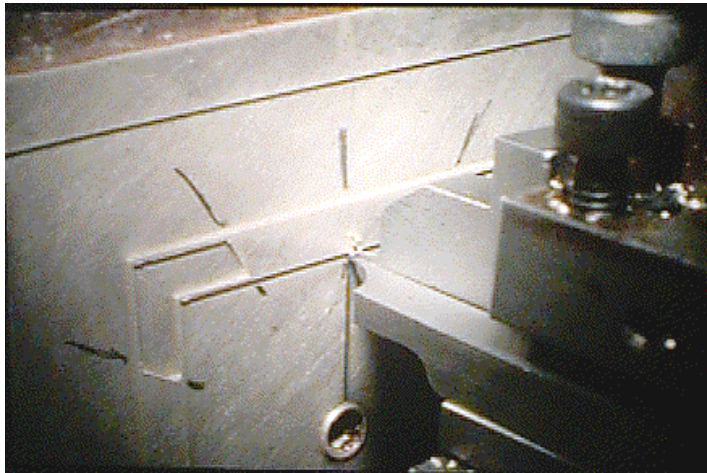
The depth of the recess for enamelling is usually about 0.35mm before the pattern is cut in the bottom. On small 18ct gold work this would require a total guage before recessing of 0.75mm minimum for stability. Larger pieces require heavier guages or strengthening with wires, and possibly counter enamel also. For silver, substantially heavier guages are required. For details on individual jobs we would consult, or recommend that you consult, the enameller as determining appropriate guages for enamel is outside the scope of this reference work.



The high points, ridges and furrows produced during rough sinking are carefully scraped by hand using a selection of purpose made scraping tools to produce a level surface This process is extremely critical and the scraper must be in absolutely the right condition (surprisingly edge quality is not what you would expect - too clean and it chatters, but it must be very sharp indeed) Scraping is a whole art in itself and requires great patience to produce really good results Do it wrong and you make the surface worse!



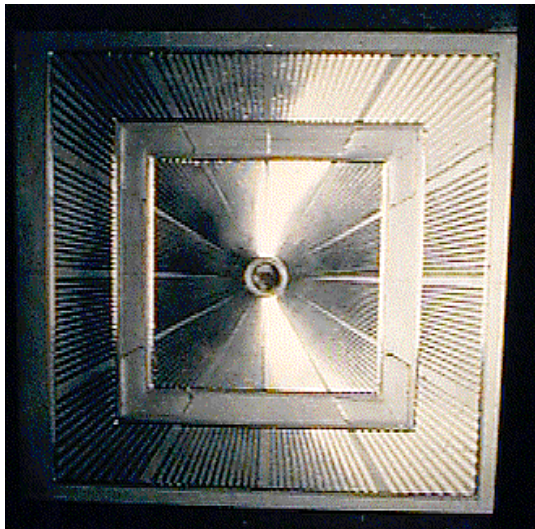
After Stoning with Water of Ayr and cleaning up with fine pumice the surface of each recess should be good enough that if you polished it, it would produce a mirror finish Any undulations at this stage will show in the engine turning if the pattern has straight lines in it



Taking the first sunray cut A guide is in use but the surface has been set up so well that if the depth stop were used instead the depth of cut wouldn't vary This is very important as the depth stop will be required for the final cut



Cutting the lines in the prepared recesses



Ready for the final trim lines around the edges of the recesses



A recessed enamelled clock about 200mm or so high This was many hours work, particularly recessing around the roman numerals



Recessing on two levels