Pyrite

I didn't want to use the expected double cross for the Finnish bible. Instead I chose a beautiful pyrite as a symbol of the single source of light from which all life originates. I wanted the joy of seeing both sides of the pyrite. Beforehand I had asked a goldsmith to set the pyrite. It had a "frame" of gold following it's outline and three "legs". (fig.1)

For the demonstration I chose a gold look-alike alloy and three "legs" only to keep the cost down. (fig.2)

1. attach 2 boards — combined they equal the thickness of the board on the back — with a few glue dots. (I prefer glue to P.V.A. because glue splits easily while P.V.A. rips the fibers of the board.)
2. trace the pyrite onto the upper board, add a little extra space for the leather turn-in.
3. fasten board with clamps to the table and use a saw frame to cut the penciled shape.
4. bevel upper board at the opening reaching ca 10mm onto it. (The beveling makes for a smoother transition because the pyrite itself is layered. This refined look is more pleasing to the eye.)
5. separate boards.
6. trace "legs" on inner side of upper board, cut and remove adequate amount of fiber for an even, leveled fit for "legs".
7. attach upper board to the book block.
8. paste a narrow, thinly pared leather strip around the lower board's opening. The strip should reach 3-5mm on each side onto the board.
9. trace opening onto the cover leather, add ca 5mm towards the center for the turn-in.
10. cut.
11. pare around the opening at a width of about 15mm, down to zero at the hole.
12. cover spine and sides of the binding, turn the leather around the opening in and work it into the space for the "legs", place 2nd board exactly onto the 1st, give a quick nipp in the press, let dry under weight.
13. open front cover of the binding, place or glue "legs" of pyrite into corresponding position, glue 2nd board onto the 1st for a perfect fit. Insert a thin metal sheet between book block and cover board, press over night.
14. finish covering as usual.
(fig.3)
Agate

In the case of “Creation” I wanted light to be able to penetrate the agate. The back of the agate had to be free of any support.

To have the agate “float” I used 3 layers of board. (3 boards equal the board thickness at the binding’s back.)

1. attach the 3 boards with glue dots so they will not slip.
2. trace the agate, reduce the outline by 3-5mm.
3. use saw frame to cut outline, sand.
4. separate boards.
5. trace 4-6mm around the middle board’s opening, cut at this widened outline.
6. attach upper board to book block.
7. paste narrow strip of thinly pared leather around lower board’s opening. (If you want a different color than the cover leather’s on the edge of the upper board, paste the strip now.)
8. trace opening onto cover leather, add 5mm for the turn-in at the opening. (In the case of a different color strip, trace the exact shape of the opening)
9. cut.
10. pare at a width of ca 15mm down to zero.
11. cover spine and sides, work leather around the opening, dry.
12. glue 2nd board.
13. place agate in designated opening.
14. glue 3rd board with the leather strip around its opening.
15. finish covering.

( fig 4 )
Mother of Pearl

For E.A. Poe's "Tales of Mystery and Imagination" I chose to use abalone shell for its property to reflect light when held at different angles in various colors.

In the case of abalone shell or other flat object, I am removing enough layers of fibers on the board to have the shell at the same level as the cover leather in the completed binding.
1. trace the shell onto the board, add enough to allow for the cover leather for a perfect fit.
2. cut or punch out the desired shape.
3. remove an appropriate amount of the board’s fibers.
4. cover the binding, take care at the lower level parts to ensure that the leather adheres well.
5. finish the binding, the design, the flyleaves and polishing of the cover before using the shell, then proceed.
6. roughen the leather at the lower lying surface.
7. use Epoxy on both surfaces.
8. press shell into its “bed” using your fingers.
Precious Stones

To be able to use small precious stones on a leather binding it is necessary to have them mounted. A goldsmith will make the setting, which ends in either one or two “legs”. These “legs” are pushed through the cover-boards and bent at the exit point. The small surface of a precious stone has an area too small to give a long lashing hold when using Epoxy. Settings most often used are a “colar” or “claws”. (fig 5 a, 5 b)

I prefer to have the surface of the stone as even leveled with the board’s surface as possible. Therefore I remove an adequate layer of board to accommodate the set jewel.

1. cut or punch out the desired amount of board to fit the set stone on the leather covered book.
2. cover the book, make sure the leather adheres to all sides of the cut-outs.
3. make a hole at the point for the “leg” or “legs” in the board.
4. push the “leg” through and bend it at an angle of 90° at the exit point. (If necessary remove some fibers on the board to accommodate the leg)

Later the surface of the inner board between the turn-ins and leather joint will be covered by Bristol board.