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The young man's book of amusement

Halifax, 1848

Artificial Jewels

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cap paper, so as to smoothen it, and absorb the superabundant moisture. Put the paper so moistened upon the writing, and both between cap or other smooth soft paper, placing the whole on the carpet or hearth-rug, one end of which is to be folded over. By standing and treading upon this, an impression will be taken, equal, if not superior, to what would have been taken by a copying machine.

Artificial Jewels.

The base of all these imitations is strass, or white crystal. The materials employed are melted in Hessian crucibles, and a porcelain furnace, or what is preferable, a potter's furnace is afterwards used. The more tranquil and prolonged the fusion is, the more hardness and beauty does the strass acquire.

STRASS.

The following three mixtures give a very fine strass :

Rock Crystal	0,321	0,3170	0,300
Minium	0,490	0,4855	0,565
Potash, pure	0,170	0,1770	0,105
Borax	0,021	0,0200	0,030
Arsenic, oxide of	0,001	0,0005	

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M. Lancon recommends the following mixture for a pure strass :

Litharge.....	0,540
White Lead.....	0,406
White Tartar, or Potash....	0,054
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	1,000

TOPAZ.

The imitation of topaz is difficult. It passes from the white of strass, to sulphur-yellow, violet, and red purple, according to circumstances which are not determined. The following are two of M. Wieland's recipes :

White Strass.....	0,95816	0,99
Glass of Antimony....	0,04089	
Purple of Cassius....	0,00095	
Oxide of Iron.....		0,01
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	1,00000	1,00

These mixtures sometimes yield an opaque mass, translucent at the edges, and of a red colour in thin plates. By mixing it with eight times its weight of strass, and keeping the mixture in fusion for thirty hours in a potter's furnace, the result is a fine yellowish crystal. This crystal re-melted by the blow-pipe, produces the finest imitation of eastern *ruby*.

RUBY.

A ruby less beautiful, and of a different tint, may be made thus :

Strass.....	0,9755
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Oxide of Manganese ..	0,0245
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	1,0000

EMERALD.

This paste is very easily made; and that which approaches the nearest to the mineral, is the following:

Strass	0,98743
Green Oxide of Copper ..	0,01200
Oxide of Chrome	0,00057
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	1,00000

The following is M. Lançon's recipe for emerald:

Strass	0,9905
Acetate of Copper	0,0080
Peroxide of Iron	0,0015
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	1,0000

PERIDOT.

By augmenting the proportion of oxide of chrome and oxide of copper in the first composition of emerald, and adding oxide of iron, we may vary the green shades, and imitate the peridot and deep coloured emerald.

SAPPHIRE.

The composition for this paste is,

Strass, very white	0,9855
Oxide of Cobalt, very pure	0,0145
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	1,0000

This mixture must be put into a Hessian crucible, carefully luted, and remain thirty hours in the fire. If the process be well conducted, the result will be a very hard glass, without bubbles.

AMETHYST.

Very deep amethyst may be obtained with,

Strass	0,9870
Oxide of Manganese	0,0078
Oxide of Cobalt	0,0050
Purple of Cassius	0,0002
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	1,0000

M. Lançon uses

Strass	0,9977
Oxide of Manganese	0,0022
Oxide of Cobalt	0,0001
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	1,0000

BERYL, OR AQUAMARINE,

Is made with

Strass	0,9926
Glass of Antimony	0,0070

Oxide of Cobalt	0,0004
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	1,0000

SYRIAN GARNET.

This paste is used for small jewels, and is made with

Strass	0,6630
Glass of Antimony	0,3320
Purple of Cassias	0,0025
Oxide of Manganese	0,0025
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	1,0000

In the fabrication of these pastes, many precautions are necessary, which can only be learned by experience. The materials should, in general, be carefully pulverised. The mixtures should be properly sifted, and the same sieve should not be used for different compositions. In order to obtain the glass well melted, and homogenous, and without striæ or bubbles, materials of great purity must be employed; they must be mixed in a state of extreme tenuity; the best crucibles must be used; the fire must be graduated, and kept equal to the maximum temperature, and the mass must be left in the fire from 24 to 30 hours, and allowed to cool very slowly.