

sorrow, fear, melancholy, despair, illness, etc., and adds another—revenge. By numerous quotations he shows that in many primitive peoples, and those partly civilized, a person would kill himself to spite another. This he explains by the belief that the soul of the suicide would have the power to torment his enemy during the latter's life; not only this, but the death of the suicide would be attributed by his kinsfolk to the enemy and the penalty of blood-revenge would be demanded.

Doubtless this is true at times, but the theory is rather too finely spun. Suicide from an obscure motive of this nature is not rare in civilized lands where such beliefs and customs do not exist. Lovers kill themselves that their cold lady-loves may grieve (which they generally do not); children kill themselves that their parents may be sorrowful. Foolish, but human!

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NOTES ON INORGANIC CHEMISTRY.

FROM the twenty-eighth annual report of the Deputy Master and Comptroller of the Mint, 1897, *Nature* has taken a memorandum by Professor Roberts-Austen on the treatment of the surface of medals of silver and bronze. For centuries silver medals have been issued in England with the tables or flat surfaces smooth and mirror-like, while a more or less frosted surface has been given to the portions in relief. Owing to the ready discoloration of the polished surface, in France it has been customary often to use unpolished dies and to give the medals a dead surface by rubbing with pumice. More recently the sand blast has been used for this purpose. This surface may be further treated by immersion in a soluble sulfid, or better in a platinum solution, when a black surface is obtained which may be more or less removed by rubbing with brush

and pumice. Very beautiful shadow effects may be obtained, and many medals were thus treated at the (British) Mint in 1897 for the first time.

IN the case of bronze metals much of the beauty of the earlier medals was due to the fact that instead of being struck they were cast, and a thin layer of oxid was acquired in the process. Most modern 'bronze' medals are really copper 'bronzed' or artificially colored on the surface. The production of this color is by various methods, but generally by boiling with dilute solutions of certain salts, of which verdigris and sulfate of copper are the most important. The finest work in this line is that of Japanese artists, and its beauty seems to be chiefly due to the quality of the verdigris used. This verdigris, known as 'Rokusho,' is produced by the action of plum-juice vinegar on plates of copper containing certain metallic impurities. Very fair effects in bronzing are obtained with ordinary European verdigris, and this process is used in the British Mint. In France medals are struck of true bronze, with a high percentage of zinc, and the color is improved by gentle heating, producing superficial oxidation, but no true patination.

AT the recent meeting of the American Association in Boston a paper was read by Charles L. Reese on quartz crystals from Diamond Post-office, near Guntersville, Marshall county, Ala., which contain inclusions of petroleum. Some of the cavities of these crystals measure as much as 2.3x1.8x1 mm. On warming, the petroleum globule bursts and wets the walls of the cavity. The contents of the cavities were identified as petroleum by the yellow-green fluorescence, the stain of the crushed crystals on filter paper, and the characteristic odor and smoky flame. Petroleum also occurs in the neighborhood where the crystals were found.

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