just before the discharge of the furnace contents, carbonate of lime is intimately mixed with the mass. To destroy cyanides, Pechiney adds sodium sulphate, and this calcium carbonate may be added at the same time.

ERNST SIERMANN, Stettin: *Caustic Soda and Potash from Sulphides.* (Germ. P., No. 3280, Jan. 18, 1878.)—The sulphides are intimately mixed with alumina of known composition, using somewhat less alumina than is necessary to form aluminates. The mass is then heated in a muffle furnace, air being allowed to enter, at first slowly, gradually increasing its supply. Aluminates are formed and sulphurous acid, which latter compound may be utilized. Carbonic acid, conducted into the dissolved mass, precipitates alumina, which may be used again for the same process. The solution contains carbonates.

JOSEF TSCHERNIAC and HEINRICH GÜNSBURG, in Paris: *Synthetic Production of Sulfocyanides and Ferrocyanides.* (Germ. P., No. 3199, April 6, 1878.)—100 pts. of bisulphide of carbon and 200 pts. of 85 per cent. ammonia water are heated under pressure to 110° C. The following reaction takes place:

$$CS_2 + 2NH_3 = H_2S + NCSNH_4$$

From the ammonium sulphocyanide the ammonia is recovered by distillation with lime, and the so-formed calcium sulphocyanide may be used for the preparation of other sulphocyanides, for instance, that of potassium, by adding potassium carbonate to the solution.

To prepare ferrocyanides, 6 mol. of sulphocyanide of potassium are mixed with 5 mol. of quick lime, 5 atomweights of carbon, and one molecule of finely divided iron. This mixture is then brought to red heat. From the solution which may be obtained from this mass, the potassium ferrocyanide may be at once obtained in good crystals.

ZERNIKOW, in Oderberg (Germ. P., No. 3774, March 10, 1878), prepares *hydraulic cement* by mixing brick-dust with quick lime, and then boiling, until the particles of brick-dust are covered with a thin layer of silicate of lime. The mixture is then used as usual.

V. DECHEND, Bonn: *Process to make Plaster Casts Water-tight.* (Germ. P., No. 2303, May 1, 1878.)—Plaster casts are first covered with a warm solution of borax, then with an also warm solution of barium chloride, and finally with a hot solution of soap.

JULIUS QUAGLIO, Munich: *Method for Removing Bisulphide of Carbon and other Sulphides from Illuminating Gas.* (Germ. P., 3785, June 29, 1878.)

ALFRED LONGSDON, London: *Tool to Charge Gas Retorts.* (Germ. P., No. 3584, June 1, 1878.)

PAUL FRIESE and C. KESSLER, Berlin (Germ. P., No. 3697, May 25, 1878), use crude acetate of lime to soak the *sacks* used *for transportation of superphosphates.* This precaution becomes necessary from the fact, that free sulphuric acid frequently destroys the sacks, while acetic acid will evaporate without doing any harm.

W. P. JENNEY, Boston: (Germ. P., No. 3577, May 8, 1878.)—The *resinous precipitate*, which is obtained from *sludge acid*, when it is mixed with water, is freed from oils by distillation at 250° C. in a current of air. The residue is used for the preparation of *varnish*, or, when united with india rubber, as insulator.