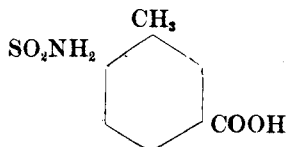


metatoluic acid; therefore, the new acid is sulphaminemetatoluic acid. It dissolves in hot water and alcohol, but is nearly insoluble in cold ether and chloroform and bisulphide of carbon. The authors have prepared numerous salts of this acid, which are easily soluble in water. Unsuccessful attempts were made to convert it into hydrochloric acid a fact which distinguishes it from the isomeric sulphamineparatoluic acid. In regard to the structure of the new acid, the relative positions of the methyl and carboxyl groups are those designed as meta, and the opinion is expressed that the relation of the sulphamine group is that shown by the following scheme :



In which case, the ortho methyl group of the amide has been protected and the para methyl, oxidized; and this is in accordance with well-known facts, and with the results of the authors' further experiments.

The sulphamine group SO_2NH_2 of sulphaminemetatoluic acid was converted into hydroxyl by fusing the potassium salt of the acid with caustic potassa. Analysis of the acid thus obtained gave the formula $\text{C}_8\text{H}_8\text{O}_3 + \frac{1}{2} \text{H}_2\text{O}$, the composition of an oxytoluic acid. This acid is readily soluble in hot water, in alcohol and ether, but insoluble in cold chloroform and bisulphide of carbon. It fuses after the loss of its water of crystallization, at $174^\circ\text{--}175^\circ$ (corr.). Several salts were prepared and analyzed. They are mostly easily soluble in water, the copper salt, however, is but slightly soluble, and otherwise characteristic. The authors are still engaged in the study of the derivatives of this acid.

Report on Foreign and American Patents.

Foreign Patents.

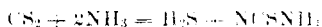
Condensed from R. BIEDERMANN'S Report to the German Chemical Society, by H. ENDEMANN.

WALTER WELDON: *Manufacture of Soda and Potash by Leblanc's process.* (Engl. P., No. 133, Jan. 11th, 1878).—Towards the end of the Leblanc process, when all sodium sulphide has been converted into carbonate, by the action of carbonate of lime, it frequently happens, especially if the temperature becomes very high, that a reaction takes place, in the course of which sodium sulphide again forms, of which crude soda contains about one per cent. To prevent this,

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: *Cautious Separation of 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 TSCHERNIAK and HEINRICH GÜNSBURG, in Paris: *Synthetic Production of Sulphocyanides and Ferrocyanides*. (Germ. P., No. 3199, April 9, 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:



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. DECIEND, 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.

JELIĆ 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 *visinous 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.