

## ABSTRACTS.

### Abstracts of American Patents Relating to Chemistry.

(From the U. S. Patent Office Gazette.)

Issued February 11th, 1890.

**420,945.**—Process of reducing metallic oxides to the metallic state. L. G. Laureau.

The process consists in mixing hydrocarbon gas with air in such proportion that the oxygen of the air will transform the carbon of the hydrocarbon into carbon monoxide, subjecting the mixture to the temperature of combination of oxygen and carbon and such higher temperature as the ore reduction calls for, and injecting the carbon monoxide, hydrogen and nitrogen thus formed into the mass of ore.

**421,009.**—Method of etching and oxidizing gold plated silverware. G. Myrick and W. Roller.

**421 010.**—Method of etching gold plated silverware. G. Myrick and W. Roller.

**421,029.**—Apparatus for distilling wood. E. Koch.

**421,031.**—Process of extracting silver from copper ores, mattes and other copper products. R. Pearce.

The finely pulverized ore or matte is mixed with two per cent. of sodium or potassium sulphate, and the mixture is roasted, after which the silver sulphate is obtained by leaching with hot water.

**421,046.**—Process of refining copper. J. Garnier.

Copper ores, desulphurized by subjecting them, in the presence of carbon, to fusion in a basic lined furnace in the presence of basic slag, the basic slag used being composed of about seventy per cent. of base and thirty per cent. of silica.

**421,049.**—Sulphonating rosaniline. E. D. Kendall.

Rosaniline is heated dry with sodium or potassium bisulphate.

**421,058.**—Drying apparatus. C. Sents.

**421,076.**—Binary fluid. G. H. Holgate.

Consists of a liquefied mixture of anhydrous sulphur dioxide and carbon dioxide.

- 421,093.**—Oil Filter. C. G. Bryant.
- 421,161.**—Method of lining metallic vessels with lead. T. B. Burgess.
- 421,163.**—Vacuum evaporator. W. H. Collings.
- 421,172.**—Compound plaster. T. Jones.  
Consists of lime, silica, gypsum and potassium bicarbonate.
- 421,201.**—Sulphur burner. S. Smith.
- 421,223.**—Detergent. C. P. Andersen.  
Consists of a decoction of quillaia bark with soap, haematin, and potassium bicarbonate.
- 421,229.**—Composition of Paint. N. A. Bibikov.  
Consists of sodium silicate, potash, pulverized mica and lime.
- 421,238.**—Filter. A. L. Bush and W. C. Clark.
- 421,299.**—Art of manufacturing coke. H. Mueller.
- 421,360.**—Composition for paint. D. S. Robinson.  
Consists of pulverized slate, rosin, crude hydrocarbon oil, linseed oil and Japan drier.

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- 421,431.**—Process of producing caramel malt. L. Ramsel.
- 421,503.**—Filtering press. D. Licht.
- 421,521.**—Filter. J. Seabrooks.
- 421,564.**—Stove polish. B. C. Frobisher.  
Consists of water, sodium silicate, crude plumbago, glycerin and manganese dioxide.
- 421,583.**—Coke oven. I. N. Knapp.
- 421,640.**—Blue azo dye. A. Weinberg.  
Is prepared by first combining diazo compounds with the oxy-ethers of alphanaphthylamine or their sulpho acids, forming as intermediate products the sulpho acids of compounds of the general formula :  
 $R_1-N=NC_{10}H_8$  (OR)  $NH_{21}$  (where R,  $NH_2$  stands for the aromatic amido compound, R for the alkyl group), and afterward diazotizing these basic compounds and reacting with the diazo-azo derivatives upon amines or phenols.
- 421,662.**—Explosive compound. B. Broncs.  
Consists of a double salt of sodium picrate with other picrates, potassium nitrate, saccharine matter, a gummy or resinous substance and soot.
- 421,753.**—Explosive compound. H. Orth.  
Consists of the double picrate of sodium and barium or lead, combined with nitrated naphthalin.
- 421,830.**—Preparation of flour from curd of milk. W. Gerbel.
- 421,847.**—Mordant. C. Wachendorf.  
Consists of chromium chloride.

W. R.