

GUSTAV BERNHEIM, Brussels: *Fire extinguisher*. (Engl. P., No. 4089, Oct. 29, 1878.)—Consisting in 1000 pts. of 700 calcium chloride solution, 44° B., 20 conc. solution of borax, 29 potassium bicarbonate, 90 conc. solution of sodium tungstate, 90 ammonium chloride solution, 160 sodium chloride solution, 29 magnesium sulphate solution and 79 water. Nothing is said of what becomes of the various precipitates. The material is kept in barrels, and used in case of fire, in the place of water.

SAM. ARTHUR PETO, London: *Graphite crucibles*. (Engl. P., No. 3992, Oct. 9, 1878.)—Black lead crucibles absorb water to a considerable extent, and before use they must be carefully heated. To prevent the absorption of moisture, and the cracking by careless heating, the inventor covers the crucibles with a mass consisting of 12 clay, 2 Cornish stone, 4 burnt clay and $\frac{1}{2}$ manganese. The crucible thus covered, is then heated in a stove. Some salt thrown into the stove improves the glaze, which is said to correspond well in its coefficient of expansion, with the mass of the crucible, thus preventing that it cracks or loosens during cooling.

PHIL. EMBURY LOCKWOOD, London: *Medicine*. (Engl. P., No. 4192, Oct. 21, 1878.)—Mixture of cod liver oil and malt extract.

American Patents.

Condensed from the Official Gazette of the U. S. Patent Office, by ARNO BEHR.

October 7, 1879.

220,304.—*Explosive compounds*. JOHN PATTISON.

An explosive compound, having for its base chlorate of potassium, is mixed with a certain proportion of coarsely ground mustard, or flax-seed. This addition is intended to prevent premature and spontaneous explosion.

220,321.—*Artificial fuel*. EBENEZER BURGESS WARREN.

A mixture of coal tar, pitch and petroleum tar, or wax-tailings with coal-dust, as obtained at the mines.

220,334.—*Varnishes*. REVERE M. BREINIG.

The varnish is made of metalline gum, caustic soda, or potash, resinous gum, linseed oil, chloride of sodium, turpentine, and a drier consisting of a metallic salt.

220,397.—*Manufacture of chloroform and allied products*. JOHN W. MALLET.

Brief: This improvement consists in forming from the vapors and gases arising from petroleum springs, or from the light products of distillation of petroleum, chlorine substitution products, by bringing the chlorine into close contact with such hydro-carbons through the intervention of a porous substance, or of metallic chlorides, and by separating such products from each other by fractional distillation.

- 220,449.—*Manufacture of chloride of zinc.* WM. H. WAHL and EDWARD Y. ETTENHEAD.

The inventors obtain a crude commercial chloride of zinc, by treating with hydrochloric acid the alloy of zinc and iron formed in the manufacture of galvanized iron.

- Reissue 8,921 of patent 162,394.—*Processes of reducing asphaltum to a liquid.* ARCHIBALD K. LEE.

A by-product from the redistillation of spirits of turpentine, is mixed with the asphaltum in the cold, and keeps it in a fluid state ready for use for paving, roofing, etc.

October 14, 1879.

- 220,499.—*Carboys.* FREDERICK W. SEYMOUR and EDWARD THOMAS.

A carboy has two trunnions attached to its sides by which it hangs, and around which it swings within a side-frame.

- 220,532.—*Process of treating non-feltable animal hair.* GIDEON HAMILTON.

It is claimed that such hair, after treatment with a fixed caustic alkali, or lime, can be used for felting, spinning, and for mattresses and upholstery.

- 220,533.—*Treatment of animal hair.* GIDEON HAMILTON.

The treatment consists of boiling the hair in an acid solution first, and then immersing it in an alkaline solution.

- 220,534.—*Blasting powder.* ORLANDO B. HARDY.

Nitrate of soda, sugar, salt, charcoal, sulphur and paraffine.

- 220,539.—*Vinegar apparatus.* SAMUEL LEVY.

Brief: Modification of "Singer's essig-generator" by the introduction of a perforated diaphragm, whose upper surface is in a plane with the bottom of the lateral perforations in the descent pipes.

- 220,638.—*Compound dyes.* GUSTAV MOLT.

A mixture of indigo, soda, tin-crystals and syrup, making a merchantable indigo dye, ready for immediate use.

- 220,686.—*Filter presses.* ALBERT WEGELIN.

October 21, 1879.

- 220,708.—*Methods of bleaching, coloring and ornamenting agate and other stones.* AUGUST DREHER.

The claims do not give a clear idea of the process, in which nitric acid, caustic alkali and coloring matters are used alternately.

- 220,720.—*Manufacture of aluminous cake.* FRANCIS LAUR.

Sulphate of alumina, prepared from bauxite or a similar material, contains more or less iron. The invention consists in the treatment of the solution with metallic zinc; after evaporation, the resulting aluminous cake is not colored by the iron, which has been reduced to the state of protoxide.

220,745.—*Preparation of pepsin.* WM. H. BALL.

A compound of pepsin and salt.

220,825.—*Processes for producing malt extract.* GUSTAVUS A. GESSNER.

In order to avoid fermentation, the extraction is carried on at 156–160° F.

220,872. *Processes of extracting malt in the manufacture of beer.* JOHN A. SCHAEFER.

In a process wherein ground and bolted malt meal is used, and the filtering is done through straw, the clogging of the straw filter is avoided by mixing the malt meal with water of only 95° F. at first, and then raising the temperature gradually to the boiling point.

Reissue 8,948 of patent 206,680.—*Processes of making lead pigments.* GEORGE T. LEWIS.

Claim: The process of manufacturing the basis of a pigment, by subjecting unroasted galena in mass to the simultaneous action of heat and blast, in a furnace capable of oxidizing the sulphuret of lead, and collecting the fumes in textile fabrics.

October 28, 1879.

221,008.—*Pumps for compressing ammoniacal and other gases.* EDGAR G. WHEELER.

221,017.—*Paving compositions.* MICHAEL B. BAILEY.

221,028.—*Compositions for coating metals.* AARON B. and WENDELL P. BROWN.

To prevent rust and corrosion, the metal is coated with a mixture of india-rubber, gum-kanri, gum-danmiar and wax; the whole dissolved in benzole.

221,096.—*Concrete pavements.* ANTONIO PELLETIER.

221,113.—*Processes for preserving meats.* CHRISTOPHER C. SMITH.

Brief: The meat is placed in pickle from four to six weeks, removed therefrom and dipped in scalding water, and then coated with a mixture consisting of equal parts of lime, meal and pepper, and laid away on shelves.

221,114—221,120.—*A series of patents for various new coloring matters.* JAMES H. STEBBINS, JR.

The reactions by which these coloring matters are obtained are the following: diazobenzole nitrate on pyrogallol, on picric acid, on cresole, on salicylic acid, on naphthalamine, on toluolediamine, and diazonaphthalene nitrate on diimidonaphthalene.