

RECENT INVENTIONS

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Aluminum Glazed Black Powder. F. Sparre, Nov. 10, 1914. U. S. Pat. 1,116,944. A coating of aluminum is applied to granulated uncoated black powder.

Treating Rosin. F. E. Mariner, Nov. 17, 1914. U. S. Pat. 1,117,584. Rosin from which the turpentine has previously been separated is distilled over in a vacuum of approximately 22 in. and at a temperature between 290° C. and 310° C. The distillation is continued until substantially all the rosin has been distilled over, whereby a grease-set high in abietic acid is produced.

Removing Oxygen from Water. R. Gans, Nov. 17, 1914. U. S. Pat. 1,117,831. A reducing sulfur compound and a salt of copper is added to the water to be freed from oxygen.

Leather. O. Roehm, Nov. 17, 1914. U. S. Pat. 1,117,912. Glacé leather is produced by treating depilated skins with a tanning liquid and then with a sulfonated oil free from soap and containing a volatile substance soluble in oil.

Smelting Zinc Ores. J. M. Hyde, Nov. 24, 1914. U. S. Pat. 1,118,012. Zinciferous ores mixed with a flux and a reducing agent are heated in an externally heated retort to a temperature sufficient to reduce the metallic constituents of the ores. The molten materials are collected in a bath beneath the charge and the zinc vapors are removed from the retort above the molten bath, kept molten by being applied directly to its surface.

Recovering Molybdenum. F. D. S. Robertson, Nov. 17, 1914. U. S. Pat. 1,118,150. Molybdenum is produced in the form of pure molybdenum trioxid by subjecting ores containing molybdenum to a volatilizing temperature in an atmosphere having an excess of oxygen.

Manufacturing Fusel-Oil. J. Scheckenbach, Nov. 24, 1914. U. S. Pat. 1,118,238. Fusel oil is produced by means of bacteria by subjecting a solution of a carbohydrate to the exclusive action of such bacteria as are capable of standing the heat of saturated steam at 100° C. for about half an hour.

Pyroxylin Solvent. F. Kniffen, Nov. 24, 1914. U. S. Pat. 1,118,498. The solvent comprises equal parts of ethyl acetate and benzol.

Hydrogen. B. Spitzer, Nov. 24, 1914. U. S. Pat. 1,118,595. A mass of iron ore is heated by means of producer gas and air and reduced by means of water gas. Steam to be decomposed is then passed through the reduced mass.

Ammonia. C. Bosch and A. Mittasch, Nov. 24, 1914. U. S. Pat. 1,118,628. A mixture of hydrogen and nitrogen is passed over a catalytic mixture containing tungsten and nickel.

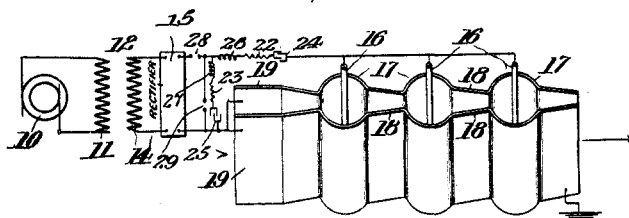
Pure Zinc Oxid. H. W. de Stucklé, Nov. 24, 1914. U. S. Patent 1,118,894. A dissolved zinc salt is reacted upon with ammonium sulfite in the presence of caustic ammonia or ammonium carbonate. The precipitated zinc sulfite is calcined and the evolved sulfur dioxide utilized for regenerating the ammonium sulfite.

Method of Distilling Hydrocarbons. R. E. Humphreys, Dec. 1, 1914. U. S. Pat. 1,119,700. The liquid residue of the

paraffin series of petroleum distillation having a boiling point of upward of 500° F. is distilled under a pressure of over four atmospheres. All the vapors passing from the still are cooled while passing through an inclined conduit or run-back, and which is kept under a pressure of over four atmospheres, which automatically returns the condensed heavier fractions to the still, where they undergo further treatment. The light vapors, which are of the same series as the original material but of lower boiling points, are led off and condensed.

Removing Particles of Suspended Matter from Bodies of Gas or Fluid. W. W. Strong and A. F. Nesbit, Dec. 1, 1914. U. S. Pat. 1,119,469. Suspended matter is removed from bodies of gases or fluids by means of an apparatus, as illustrated, which consists of grounded electrodes formed by oppositely disposed

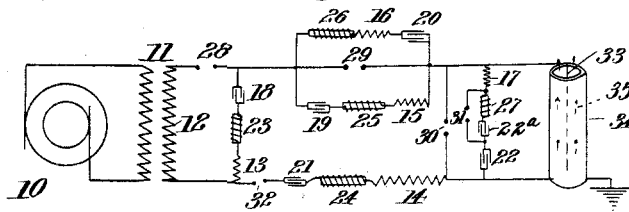
Fig. 1.



members having bulging sides that form cells connected by constricted passages. The electrodes are maintained at a high difference of potential and means are provided for the proper disposal of the material collected and for keeping the cells clean.

Separating Finely-Divided Particles of Solids or Liquids from a Gas. W. W. Strong and A. F. Nesbit, Dec. 8, 1914. U. S. Pat. 1,120,561. This improvement in the separation of solids or liquids from a gas depends upon the fact that the precipitation produced by an ordinary high tension alternating corona discharge may be greatly increased by the introduction of a spark gap in series with the active or grounded electrode; this spark gap greatly extends the luminous region about the elec-

Fig. 1.



trode. Fig. 1 shows the relative positions of the spark gaps in one arrangement of apparatus. It was also found that, contrary to the usual view, iron cored inductances may be used to exert a noticeable adjustment of the circuits. In practice an alternating current of high frequency is used; the amplitude and damping of the oscillations are controlled by predetermined and adjustable values of resistance, self-inductance and capacity. One or more spark gaps are used and flame discharges in the spark gaps are prevented by suitable means.