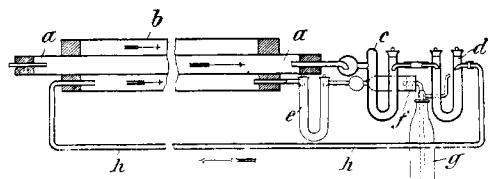


RECENT INVENTIONS

By C. L. PARKER, Solicitor of Chemical Patents, McGill Building, Washington, D. C.

Apparatus for Use in Elementary Organic Analysis. H. Brach, Oct. 6, 1914. U. S. Pat. 1,112,432. In this apparatus a calcium chlorid tube, *c*, and a soda-lime tube, *d*, are connected in the usual manner to the combustion tube *a*. The escaping carbon monoxid and the carbonic acid which has not been absorbed, are returned through a connecting tube, *h*, to the front



portion of the outer or jacket tube *b*, in order to be completely burned while passing therethrough and to be absorbed in the soda-lime tube *e* when escaping from the tube *b*; *f* is a straight calcium chlorid tube and *g* is a wash bottle charged with a solution of palladium chlorid in order to indicate the passage of the gas and the speed of the combustion.

Treating Mineral Oils. J. Dehnst, Oct. 6, 1914. U. S. Pat. 1,112,602. The unpleasant odor is removed from sulfur containing mineral oils by first adding sulfur to the oil and then distilling off the portions boiling at and below 150° C. The remaining oil is then heated to a temperature above 150° C. until the evolution of hydrogen sulfide has ceased.

Renewing Used Fullers' Earth. C. L. Parsons, Oct. 6, 1914. U. S. Pat. 1,112,650. Fullers' earth residues resulting from oil refining processes are restored to their original condition by treatment with a solvent of the oil treated in the refining process and a solvent of the coloring matter contained in the oil. These solvents are separated from the residues.

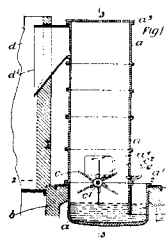
Barium Oxid. L. E. Saunders, Oct. 6, 1914. U. S. Pat. 1,112,721. Barium oxid is produced by decomposing barium sulfate by the heat of an electric arc maintained out of contact with the sulfate.

Alkali Cyanogen Compounds. J. C. Clancy, Oct. 6, 1914. U. S. Pat. 1,112,893. Calcium cyanamid and an alkali-metal sulfid are heated to a reacting temperature in the presence of carbonaceous material.

Converting Cast-Iron into Steel or Malleable Iron. J. A. Hunter, Oct. 6, 1914. U. S. Pat. 1,112,909. Cast-iron is heated to a high temperature but below its melting point and subjected at such temperature to the action of nitric acid.

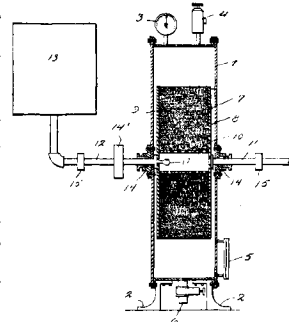
Improvement of Inferior-Grade Rubbers. D. Spence and W. F. Russell, Oct. 6, 1914. U. S. Pat. 1,112,938. Inferior grade rubber is subjected to the action of metallic sodium in the presence of moisture.

Hydrogen Production. C. Bosch and W. Wild, Oct. 6, 1914. U. S. Pat. 1,113,097. Hydrogen is produced by passing carbon monoxid and steam at a temperature between 350° C. and 650° C. over a catalytic agent in lumps containing more than 30 cobalt and a non-metallic, indifferent refractory and porous material.



Lead Oxid. W. Innes, Oct. 6, 1914. U. S. Pat. 1,113,123. Molten lead in the pot *a* is acted upon by the stirrer *c*, the blades of the stirrer dipping into the molten lead and throwing it upward to atomize it.

Lard Substitute. J. C. Chisholm, Oct. 6, 1914. U. S. Pat. 1,113,151. Oil to be hydrogenated and hydrogen are forced by centrifugal action outwardly through a porous drum formed of spirally wound wire or fine mesh wire gauze of catalytic material.



Varying the Velocity of Detonation of Explosives. C. A. Woodbury, Oct. 13, 1914. U. S. Pat. 1,113,275. The velocity of detonation of dynamite is controlled by utilizing large or small grains of ammonium nitrate. Where a relatively low velocity of detonation is desired, grains of ammonium nitrate of a relatively large size are employed.

Detinning Process. W. Savage, Oct. 13, 1914. U. S. Pat. 1,113,491. The scrap to be detinned is subjected to the action of a slime containing tin ammonium chlorid and gray tin. The slime transforms the white tin to be removed into non-adherent gray tin. The gray tin is transformed into white tin by melting.

Electrolyte for Use in Electro-Metallurgy. N. H. M. Dekker, Oct. 13, 1914. U. S. Pat. 1,113,546. An anode and a cathode are placed in an electrolyte consisting of a salt of the metal to be refined but no water except the water of crystallization of the salt and a current is passed through the electrolyte.

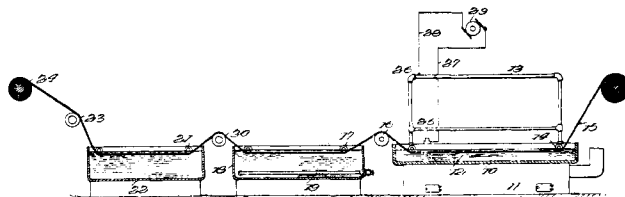
Caoutchouc Substances. F. Hofmann & C. Coutelle, Oct. 13, 1914. U. S. Pat. 1,113,630. The caoutchouc substance is produced by polymerizing isoprene in the presence of about 1 to 2 per cent of urea.

Colored Caoutchouc Substances. R. Ditman, Oct. 13, 1914. U. S. Pat. 1,113,759. The caoutchouc materials to be colored are treated with organic vat dyes and are then vulcanized by heating with sulfur at the vulcanization temperature.

Acetic Anhydrid. W. A. Beatty, Oct. 13, 1914. U. S. Pat. 1,113,927. Sulfuric anhydrid is mixed with carbon tetrachlorid and the products of the reaction are used to react upon sodium acetate.

Treatment of Oils, Fats, Etc. N. Testrup, Oct. 20, 1914. U. S. Pat. 1,114,067. Unsaturated organic bodies are hydrogenated by subjecting them in a state of minute sub-division to the action of hydrogen and a catalyzer.

Method for Cleaning Metals. A. A. Nelson, Oct. 20, 1914. U. S. Pat. 1,114,635. The iron or steel to be cleaned is first subjected to the action of an electric current as a cathode in a bath of a fused alkali metal salt, preferably sodium or potassium



hydroxid, whereby a thin covering or surface film of the alkali metal is deposited upon the iron or steel. The iron or steel is then passed through a bath of hot water where the alkali metal film combines with the water with such violence as to remove rust, scale, oil or other impurities upon the surface of the metal.