FOREIGN PATENTS.

FARBWERKE, successor to MEISTER LUCIUS & BRUNING, Hoechst: *Method of preparing coloring matters by the action of the disulphonic acids of B-naphthol upon the diazo compounds of aromatic acids.* (Germ. P. 15,250, Jan. 22, 1881.) Red dyes result from the action of the two disulphonic acids of B-naphthol upon the diazo-compounds of ethylic and methylic ethers of aromatic acids. The methylic and ethylic ethers of para-diazocinnamic acid yield red, those of diazo-a-naphthoic acid bluish red, and those of diazo-B-naphthoic acid claret red coloring matters.

O. N. WITT, Muelhausen: *Method of preparing coloring matters by the action of nitroso-compounds or chloroquinoneimides upon aromatic metadiamines.* (Germ. P. 15,272, Nov. 6, 1880.) By the action of the nitrosoderivatives of tertiary aromatic amines, or of nitrosophenols upon metadiamines, particularly upon phenylene and toluylene-diamine coloring matters result which upon oxidation yield new coloring matters. Instead of nitroso-compounds the so-called quinonechlorimides, obtained by allowing solution of chloride of lime to react upon hydrochloride of amidophenol or upon the chlorhydrates of paradiamines, may be employed. These yield blue and violet coloring matters which change to red upon boiling.

R. IRVINE, Royston Glanton: *Improvements in the manufacture of lubricants.* (Germ. P. 15,397, Nov. 24, 1880).

F. HEEREN, Hanover; *Method and instrument for testing milk.* (Germ. P. 15,681, Feb. 22, 1881). A disc upon which are six radial panels of different shades, the colors of which correspond to the appearance of milk of different degrees of fatness. There is also a dark central panel. Upon this a thin layer of the milk to be tested is produced. The panel corresponding in color with this layer shows the degree of fatness of the milk.

C. SCHEIBLER, Berlin: *Method of preparing saccharate of strontium from molasses and syrup.* Germ. P. 15,385, July 24, 1880). Tribasic saccharate of strontium separates at a boiling heat from the above liquid, and is purified by washing with hot water. At a lower temperature the strontium saccharate so obtained is decomposed into a less basic saccharate and free strontium hydroxide. The former is used for defecating beet juice and similar liquids.

KUNHEIM & Co., Berlin: *Method of removing gypsum from solution of glucose obtained by the aid of sulphuric acid.* (Germ. P. 15,076, Jan. 29, 1881). Barium oxalate or phosphate is added to the solution after neutralization of the sulphuric acid with chalk. Instead of the above, any other barium salt the acid of which forms an insoluble compound with lime may be used.

P. Hosemann, Berlin: *Sizing for woven goods, wall paper, calico printing, felting &c.* (Germ. P. 15,251, Feb. 1, 1881). A size unalterable, odorless and neutral is prepared by mixing solution of calcium chloride, potato starch, water, rosin dissolved in potash and soda lye, and heating to 140–170°F. A mixture of "cream of tartar preparation," sulphuric acid and solution of aluminium sulphate stirred up in water, is then added. Finally solution of zinc chloride, water, phenol and nitrobenzole. Some of the above substances may be left out or others substituted to suit the purpose for which the sizing is intended.

H. Schmidt, Frankfort on M: *Method of preparing nitrobenzaldehyde from nitrobenzylchloride with the aid of metallic oxides.* (Germ. P. 15,881, Feby. 20, 1881). Paranitrobenzylchloride is heated to 200–250°C. with 1–2 parts oxide of copper or peroxide of lead. Besides the above mentioned substance, nitrobenzylbromide, sulphide and hydrosulphide can be converted into nitrobenzaldehyde.

A. P. Dubrunfant, Paris: *Manufacture of maltose.* (Engl. P. 1,048, March 11, 1881). Extract of malt is added to a dough of starch and warm water. The mixture is kept at a high temperature until the dextrine is all converted into maltose. The resulting liquid is clarified, filtered and evaporated *in vacuo.*

B. Roeber, Dressle: *Disinfection and clarification of sewage and waste waters from industrial establishments.* (Germ. P. 15,392. April 25, 1879). Addition of lime and tar. Waters difficult to clarify receive besides the above a quantity of magnesium chloride.

C. V. Clolus, Paris: *Obtaining substances from soap boilers' waters.* (Eng. P. 681, Feb. 16, 1881). Neutralization with HCl evaporation to 32° Bé. to separate salt, and treatment of the liquid portion with hot air to remove water from the glycerine.

H. Stier, Gerstewitz: *Arrangement for rendering the hot waste gases from coke furnaces suitable for certain chemical purposes.* (Germ. P. 15,683, May 23, 1880). The heat of the gases is used for heating a cylinder containing coke in which water gas is generated. The latter, together with part of the above furnace gases, are employed in heating soda furnaces, etc.

A. Rossi and L. Beckwith, New York: *Method of generating cold.* (Germ. P. 15,151, Jan. 18, 1881). An ammonia ice machine in which the ammonia is dissolved in glycerine.

J. S. Barff, London: *Preservative for organic matters.* (Engl. P. 1,332, March 25, 1881). Use of boracic acid dissolved with the aid of heat in glycerin.

E. Chesnay, Paris: *Depilatory for hides.* (Germ. P. 15,736, Nov. 6, 1880). Solution of ammonium sulphite.

W. Wolters, Kalk, near Cologne: *Method of applying an* *acid-proof coating to iron vessels used for distilling sulphuric acid.* (Germ. P. 15,639, Nov. 11, 1880). By heating a mixture of pyrosulphates of the alkalies and concentrated sulphuric acid in iron vessels, the latter are said to become coated with sulphide of iron, and to be acid-proof at the distilling temperature of sulphuric acid provided the acid sodium sulphate be left in the vessels during the distillation.

E. SOLVAY, Brussels: *Method of calcining the sodium bicarbonate obtained in the ammonia soda process.* (Germ. P. 16,131, May 10, 1881). Adds a certain quantity of calcined soda to the bicarbonate to prevent the latter from becoming pasty in the calcining apparatus.

E. SOLVAY, Brussels: *Method of utilizing native basic phosphates by employing them in the manufacture of soda and potash by the ammonia soda process.* (Germ. P. 16,229, April 15, 1881). The phosphates are concentrated in the following manner: They are first pulverized and washed in order to separate part of the lighter calcium carbonate. The powder is afterwards calcined whereby the lime not combined with phosphoric acid becomes causticized, it is then employed in decomposing the ammonium chloride resulting from the ammonia soda process. Calcium chloride dissolves out and calcium phosphate containing but little excess of lime remains.

H. KOECHLIN, LOERRACH AND O. N. WITT, Muelhausen: *Preparation of blue and violet dyes.* (Germ. P. 15,915, Mar. 19, 1881.) The coloring matters can be obtained by two different methods.

I. The nitroso derivatives of tertiary aromatic amines or phenols, as well as the so-called chlorquinoneimides, yield coloring matters if allowed to remain in contact with alkaline or ammoniacal solutions of phenols at the ordinary temperature. Their formation can be effected immediately if the re-action be initiated by the addition of reducing agents, as zinc dust, stannous oxide or grape sugar.

II. The same coloring matters are formed if weakly alkaline, neutral or weakly (preferably acetic) acid mixtures of phenols, with para-amido bodies of phenols, primary, secondary or tertiary aromatic amines be treated with oxidizing agents. As such atmospheric oxygen, chromates, ferricyanides, permanganates, etc., may be employed.

Instead of preparing the coloring matters they may be produced directly upon the fibre, a proceeding which possesses certain advantages in calico printing. Three processes for doing this are described in the patent. (See also this Journal vol. IV).

L. WOLLHEIM, Vienna: *Method of obtaining pure caustic alkalies by means of electrolysis.* (Germ. P. 16,126, Apr. 13, 1881.) A diaphragm divides the decomposing vessel into two chambers. In the one is placed the negative, in the other the positive electrode. At starting a solution of the alkali to be prepared is poured into the former, into the latter a solution of the salt to bendecomposed, carnallite for instance. If the electric current does ot exceed a certain strength a continuous flow of caustic potash solution, uncontaminated with salt solution can be obtained.

A. HEGENER, Cologne : *Improvements in the fractionated distillation of coal.* (Germ. P. 14,889, Oct. 17, 1880.) The object of this invention is to obtain illuminating gas and fuel gas from the same charge of coal, the latter gas being chiefly evolved at the beginning and towards the end of the distillation. For this purpose the retort furnaces are provided with two separate mains and the dip pipes of both furnished with valves.

C. A. BURGHARDT, Manchester : *Treatment of animal and vegetable fats for the manufacture of soap.* (Eng. P. 5,191, Dec. 11, 1880.) The crude fatty matters are heated to a 130—180° in a retort by means of high pressure steam. As soon as vapors begin to form, a stream of cold or warm air is blown upon the surface of the fatty matters. The distilling fatty acids are absorbed by water or caustic lye.

H. P. HOSEMANN, Berlin : *Finish for woven fabrics.* (Germ. P. 16,110, Nov. 15, 1880.) The fabrics are passed through a solution of silk, wool or feather-down in caustic soda, then through a bath of sulphuric acid and finally through water.

ACTIEN—GESELLSCHAFT FUER ANILINFABRIKATION,Berlin: *Manufacture of orange red, red and brown—red azo dyes from methylnaphthalene.* (Germ. P. 15,649, Feb. 18, 1881). That part of coal tar which boils between 225° and 250° C. consists essentially of methyl and dymethylnaphthalene. From these, by nitration, conversion into the sulphonic acids and reduction amidomethyl (or, as the case may be, dimethyl) naphthalenesulphonic acid is prepared. The diazo compound of this acid yields coloring matters with betanaphthol or its sulphonic acids.

Or methylnaphthalene is transformed into the sulphonic acid and subsequently by fusion with potassa into methylnaphthol. This body yields with diazosulphanilic acid, or with diazonaphthalenesulphonic acid, or with amidoazobenzenedisulphonic acid yellowish red dyes; its sulphonic acid yields red dyes with the diazo-hydrocarbons.

ACTIEN GESELLSCHAFT "VIEILLE MONTAGNE," Angleur near Liege: *Manufacture of zinc white from solution of zinc chloride or sulphate.* (Germ. P. 15,249, Dec. 17, 1880). Excess of ammonia is added to the solutions so as to redissolve the zinc hydroxide. Ferric and manganic oxide remain undissolved and can be separated by filtration. Steam is then blown into the filtrate, to distill off the excess of ammonia and to precipitate the zinc hydroxide. The latter is filtered off, dried and heated. The ammonia is recovered from the solutions of sulphate and chloride by adding lime and distilling.

C. SEMPER, Philadelphia: *Manufacture of aluminium sulphate.* (Eng. P. 2,997, July 7, 1881). Precipitates iron from the solution by adding potassium ferrocyanide and cupric sulphate.

BADISCHES, GESELLSCHAFT FUER ZUCKERFABRIKATION, Waghæusel: *Improvements in the method of dry distillation of molasses swill for the purpose of obtaining swill char, ammonia, methylic alcohol and combustible gases.* (Germ. P. 15,702, Dec. 4, 1880). The evaporated swill is subjected to dry distillation with 5 to 15 per cent. of the dry substance of KOH obtained by causticizing with lime a portion of the char from a previous operation. The nitrogenous constituents of the swill are decomposed into simple ammoniacal compounds and a contamination of the potassium carbonate with lime avoided.

HARING, EHRENBERG & Co. and M. BASWITZ, Halle $^{0}/_{S}$: *Improvements in the dry distillation of molasses swill, elution lyes and osmose waters for the purpose of obtaining ammonia.* (Germ. P. 15,751, April 2, 1881). The liquid, concentrated to sp. gr. 1.35–1.39, is allowed to fall in drops into retorts heated to redness. The resulting gases are made to pass through a number of heated tubes located in the same furnace, in order to decompose the difficultly manageable tar, before they enter the receiver.

H. OPPERMANN, Bernburg: *Method of converting molasses swill into a dry powder with the acid of caustic lime.* (Germ. P. 16,033, Nov. 21, 1880).