The phenols consist mainly of monophenols and creosol. The hydrocarbon oils contain small quantities of the paraffins and higher alcohols but appear to consist mainly of pinene and its homologues. They have fair drying properties and would make good turpentine substitutes. It seems likely that commercially it would be feasible to steam distil out hydrocarbon oils from the crude tar and replace them by less valuable coal tar or petroleum residues without destroying the creosoting value of the tar.

In conclusion we wish to express our indebtedness to Messrs. Swan Hunter and Wigham Richardson at whose instigation some of the above experiments were carried out.

Nottingham Section.

Meeting held at Nottingham on Wednesday, October 20th, 1913.

MR. J. T. WOOD IN THE CHAIR.

A CHROMOGENIC ORGANISM CAPABLE OF DECOMPOSING TANNIC ACID.

BY S. R. TROTMAN, M.A., F.I.C.

Abstract.

The discolouration of some leather was traced to the use of a particular sumac, from which a bacillus was isolated

which reproduced the original discolourations on sound goods. The organism is a short oval mobile bacillus. It forms a white growth on gelatin without liquefaction, but produces acid. When grown in peptone broth it is also colourless, but in the presence of a little tannic acid a dark brown colour is rapidly produced. Grown in sterile sumac extract, the production of colouring matter is accompanied by a reduction in the amount of tannic acid present.

DISCUSSION.

Mr. J. T. WOOD referred to some experiments carried out by himself many years ago on the fermentation of extracts of tannin brought about by a mould (penicillium), and remarked that recently Louis Knudsen in America had referred the action of such moulds to an enzyme, tannase, previously discovered by Fernbach. It would be interesting to know whether Mr. Trotman's bacillus also secreted tannase. So far as he was aware, however, the enzyme did not produce colouring matter. What was the reaction of Mr. Trotman's solutions?

Mr. D. J. LAW inquired whether the colour was produced on a precipitate of pure tannin and gelatin, and also whether Mr. Trotman knew what was the nature of the colouring matter.

Mr. TROTMAN, in reply, said that the reaction of his solutions was strongly acid, and the same colour was produced in gelatin containing tannin as in peptone broth. He was not aware of the nature of the colouring matter.

Journal and Patent Literature.

PATENT SPECIFICATIONS may be obtained by post by remitting as follows:—

English.—6d. each, to the Comptroller of the Patent Office, W. Temple Franks, Esq., Southampton Buildings, Chancery Lane, London, W.C.

United States.—1s. each, to the Secretary of the Society.

French.—1 fr. 05 c. each, as follows: Patents dated 1902 to 1907 inclusive, Belin et Cie., 56, Rue des Francs Bourgeois, Paris (3c.); Patents from 1908 to date, L'Imprimerie Nationale, 87, Rue Vieille du Temple, Paris.

German.—1 mark each with full particulars to Kaiserlich Patentamt, Berlin, Germany.

I.—GENERAL PLANT; MACHINERY.

PATENTS.

Chemical reactions; Apparatus for effecting.—F. E. Matthews and E. H. Strange, London, and C. A. Pim, Rushgar, Ireland. Eng. Pat. 22,737, Oct. 5, 1912.

THE apparatus described in Eng. Pat. 13,051 of 1912 (this J., 1913, 740) is modified by arranging a collecting gutter in the reaction chamber, from which the condensed liquid is returned to the vaporising chamber by a curved tube.—W. H. C.

Agitating or aerating liquids or pulps: Method and apparatus for.—A. C. Howard and Minerals Separation, Ltd., London. Eng. Pat. 22,743, Oct. 5, 1912.

AN agitator formed of curved, upright, radial blades and having a circular horizontal plate below, or intercepting them, is rotated with the concave surface of the blades forward, in a vessel with flat sides provided with an inlet and outlet for the pulp and placed in the pulp tank. Either above or below the horizontal plate, or both above and below, the radial blades do not extend inwards quite to the axis. Between the agitator and the containing vessel there may be a number of vertical baffles of expanded metal, lattice-work or the like, so disposed that the flat faces thereof obstruct the rotary movement of the pulp.—W. H. C.

Centrifugal machines. W. W. Richardson, London. Eng. Pat. 20,201, Nov. 14, 1912.

THE pulp or liquid is fed through a central pipe into the annular space between two concentric cup-shaped vessels,

spaced apart, and rotated together. The liquid, or liquids and solids rise within the annular space, become separated by the centrifugal force and are guided by dividing rings in the upper part into annular collecting channels. Both the dividing rings and the collecting channels are supported from a fixed outer casing.—W. H. C.

Furnaces heated by gaseous or liquid fuel. J. King, jun., Latchford, J. R. Burnett, Stockton Heath, Cheshire, and The Richmond Gas Stove and Meter Co., Ltd., Warrington. Eng. Pat. 27,686, Dec. 2, 1912. Addition to Eng. Pat. 14,277 of 1911 (this J., 1912, 690).

THE combustion chambers open directly into the heating chamber of the furnace, and secondary air flues are arranged beneath the floor of the heating chamber. Outlet flues for the products of combustion may also be arranged beneath the floor of the heating chamber.

—A. T. L.

Vacuum-dryer. O. S. Sleeper, Assignor to The Buffalo Foundry and Machine Co., Buffalo, N.Y. U.S. Pat. 1,074,903, Oct. 7, 1913.

A HORIZONTAL drum, rotating within a chamber, dips into the liquid contained in a pan in the lower part of the chamber. The front wall of the pan is spaced apart from, but the rear and end walls engage with, the periphery of the drum. Liquid is fed to the pan through a number of nipples attached to a manifold, and means are provided for rocking the manifold and the pan.—W. H. C.

[Drying] Kiln. W. Drayton, Shawnee, Ohio. U.S. Pat. 1,075,904, Oct. 14, 1913.

THE materials are conveyed through a tunnel kiln on a travelling bed, and air, heated in an air-heating apparatus