

215,471.—*Process for freezing and pressing paraffine oil.* T. M. McMILLAN.

Crude paraffine oil from petroleum is cooled down to about 0° F., and the liquid part separated while cold by filtering under pressure.

215,477.—*Assayers self-calculating sample and button weighers.* T. S. PHILLIPS.

215,572.—*Purifying, circulating and rarifying air.* A. T. CHASE.

Air, before being admitted into the room, is conducted over ice, then heated and finally passed "over disinfecting chemical substances."

*May 27, 1879.*

215,756.—*Process and apparatus for distilling petroleum.*—J. L. KIRK.

The crude petroleum enters in a continuous flow a series of parallel pipes connected at their alternate ends, and placed in a furnace. The vapors evolved in the separate sections of the pipe pass through filters, and after being mixed with sulphuric acid vapors are separately condensed.

215,757.—*Composition for casting ornamental figures.* A. KIESELE.

The composition consists of a mixture of paraffine and starch.

215,811.—*Process and apparatus for mashing grain.* T. A. EBERHARDT.

In order to prevent the formation of acids in the mash, the malt is mixed with the boiled grain in vacuo.

215,875.—*Lubricating materials for use in wire drawing.* A. B. BROWN.

A mixture of a solution of alkaline phosphate and flour.

215,899.—*Solutions for galvanic batteries.* CHAR. A. EHRENBURG.

Claim: The use of urine as an excitant in galvanic batteries

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## MISCELLANEOUS.

At the conversazione of May 15th, held at the Stevens Institute of Technology, Hoboken, N. J., President Henry Morton and Mr. Wm. E. Geyer exhibited a number of specimens and some experiments illustrating the formation of the new dyestuff now beginning to attract much attention, and known by the trade names of "fast-red" and "rocceline," and which is, in fact, a compound from diazo-naphthaline and  $\beta$  naphthol, together with sulphuric acid, and by preference, also, with an alkaline base: in other words, a sodium salt of the sulpho-acid of oxyazonaphthaline.

The process of building up this compound, beginning with naphthaline, is as follows:

Naphthaline, by treatment with nitric acid, is converted into nitro-naphthaline. This, by distillation with acetic acid and iron, is converted into naphthylamine, and this, by addition of hydrochloric acid, into hydrochlorate of naphthylamine. If a solution of this salt, acidulated with hydrochloric acid, is poured into a solution of sodium nitrite, the naphthylamine will be converted into diazo-naphthaline, by the introduction of an atom of nitrogen in place of the two hydrogen atoms of the amine root.