

A clerk spilled some glucose on the cellar floor and did not clean it up; next morning four mice were found asleep in it. About as cheap and harmless (except to mice) as anything else. Remarks unnecessary.

Try making medicated waters by agitation, using half the amount of volatile oils specified by the Pharmacopoeia.

Dakin's Solution.—Instead of making the finished product daily, prepare a concentrated solution, say about five times the usual strength. Correct the alkalinity with 10% HCl. Keep in dark bottle, in a cool place, well stoppered, and dilute to required strength by titration as needed. You will be surprised to learn how the concentrated solution keeps. In hospitals the concentrated solution is very useful for cleaning bed pans and as a general deodorant and disinfectant.

To deodorize Tincture Valerian or Asafetida use bitter almond water or a very small amount of benzaldehyde. The effect is surprising.

To prevent frothing in mixtures containing fluidextract of cascara sagrada and sodium bicarbonate, add a few drops of sodium hydroxide solution to the fluidextract.

To produce a smooth scarlet-red ointment, rub the scarlet-red with a few drops of mineral oil before incorporating with the base. The same method is applicable to mercuraphen.

When ampuls of neoarsphenamine in oil are prepared the oil should be sterilized and allowed to cool, and the neoarsphenamine incorporated in a sterile mortar and introduced into the ampuls. Avoid heating neoarsphenamine as a poisonous compound results. These ampuls should be prepared immediately before using, as the arsphenamine forms a cake on standing, and cannot be reincorporated by shaking.

Caroid decomposes sodium cacodylate. They should be dispensed separately.

PHARMACEUTICAL EVENTS IN 1821.

BY OTTO RAUBENHEIMER.

In conformity with my former contributions I have classified these Pharmaceutical Events of a Century Ago as follows:

COLLEGES AND UNIVERSITIES FOUNDED.

The first College of Pharmacy in the United States, namely, the Philadelphia College of Pharmacy, was established and a systematic course of lectures was given. This most important pharmaceutical event was duly celebrated by a Centennial in February and June 1921.

The University of Virginia was also founded, and the 100th anniversary was celebrated from May 31 to June 3, 1921.

The Kings County Medical Society in Brooklyn, N. Y., was established. McGill College and University founded at Montreal.

The University of Pennsylvania confers—only for a short time—the degree of Master of Pharmacy—the direct cause of the foundation of the Philadelphia College of Pharmacy.

Liebig goes to Paris to study under Gay-Lussac and work on Fulminates. Schönbein, of nitrocellulose and ozone fame, enters the University of Tübingen. Heinrich Rose graduates at the University of Kiel.

A. A. Meckel, of Halle, is elected professor of botany and forensic medicine at the University of Berne. Eilhard Mitscherlich joins the celebrated Berzelius at the University of Stockholm to pursue his inquiries on the connection between crystalline form and chemical composition. Mitscherlich in the same year succeeds Klaproth as professor of chemistry at the University of Berlin.

Friedrich Woehler, under the influence of Gmelin, deserts medicine for chemistry and goes to the laboratory of that distinguished chemist at Heidelberg.

Pereira studies pharmacy and chemistry in London.

Heinrich Robert Göppert, an apotheker's son, and later the founder of the first pharmaceutical institute connected with a university, that of Breslau, studies medicine in Breslau and Berlin.

Alexander Bunge, the celebrated Russian botanist, graduates from high school and enters the University of Dorpat.

Daniel Drake is appointed Professor of Medicine in the College of Ohio.

Nathan Smith establishes the Medical Department at Yale.

Ernst Heinrich Weber becomes Professor of Anatomy and Physiology at the University of Leipzig.

The Pharmacy Section of the French Académie de Médecine in Paris (established 1820) elects six new "titulary" members: Caventou, Clarion, Boudet, Cadet, Laubert and Derosne.

INVENTIONS AND DISCOVERIES.

Faraday prepares Ethylene di-iodide by the action of sunlight on Ethylene and Iodine.

Doebereiner isolates aldehyde-ammonia and determines the relation of acetic and oxalic acid to alcohol.

C. Schlippe discovers Stibio-Natrium Sulphuratum, the double salt which still bears his name.

Lassaigne and Feneulle isolate Cathartin from Senna leaves and Winckler from Buckthorn berries.

Desfosses isolates Solanin.

Pelletier and Caventou and also Robiquet isolate Caffeine, which base was already discovered in 1820 by the German apotheker Runge, a fact which is frequently forgotten.

Pelletier and Caventou discover Acide Quinovique, as one of the constituents of Cinchona. It was isolated from the bark of China Nova, in which it occurs combined with lime.

Henry and Caventou isolate Gentianin.

Rose prepares Titanium Oxide.

Iodine is found in brine from springs in Germany.

Coindet introduces successfully Potassium Iodine as a remedy against goitre.

Fraunhofer brings forth the theory of undulation.

Fresnel gives birth to the theory of double refraction.

Faraday begins his classic work on the theory of electricity and electromagnetism.

Peschier isolates Polygalic Acid from Senega Root.

EDUCATIONAL EVENTS.

Cagniard de la Tour noticed that many gases could not be liquefied above a certain temperature by any pressure.

Mitscherlich discovers dimorphism and polymorphism, and thereby reconstructs the science of crystallography.

Dulong discovers Specific Atomic Heat.

Seebeck notices Thermo-electricity.

Berzelius begins his classic work on the System of Atomic Weights.

Reichenbach establishes a chemical plant in Blansko, Moravia, for the destructive distillation of wood, which led to his discovery of Creosote in 1830.

Iodine Spring was discovered at Salt Sulphur Springs, W. Va.

Indian Springs, Georgia, together with 1000 acres of land, was excepted from a cession of the Indians.

Woehler discovers that by burning $\text{Hg}(\text{CNS})_2$ the so-called "Pharaoh's Serpents" are evolved.

Hofschläger isolates Delphinic Acid from Stavesacre, said to be crystalline and volatile.

Payen and Chevallier distil Oil of Hops.

H. B. Kunth names the plant, which furnishes Guarama, *Paullinia Cupana*, discovered by Humboldt and Bompland on the river Orinoco.

Bishop Agardh divides rootless plants into Algae, Fungi and Lichens.

Apotheker Wilhelm Meissner at Halle originates the word "Alkaloid."

Croton Oil is imported from India to England and enters the European *materia medica*.

The traveler Perrottet brings Resin of Elemi and living specimens of the tree from Manila to Paris, and Maujean, a French pharmacien, found two resins, one soluble in cold and the other in hot alcohol.

Buchu, namely *Barosma crenulata*, was first imported by the drug house of Reece & Co. of London. It was introduced to the medical profession through R. Reece in *Monthly Gazette for Health*, February 1821, 799.

BORN IN 1821.

PHARMACISTS AND CHEMISTS.

Theodor Poleck, the successor to the celebrated Duflos, at Breslau, Germany.

Otto Ziurek, the Berlin Apotheker, who in 1858 founded the first private chemical institute.

Edward Livingstone Youmans, American chemist.

Andreas Georg Staedeler, the Hanover apotheker and professor.

Lawrence Turnbull, Scottish-American chemist and physician.

James Sheridan Muspratt, Irish technical chemist, who studied under Liebig and who is the author of a master work on applied chemistry.

BOTANISTS.

In 1821 four celebrated botanists were born, namely, Nils Johan Andersson of Sweden; Julius W. Wigand and Fritz Müller, both of Germany; Robert Bentley, well-known English botanist, teacher and author.

PHYSICIANS.

Elizabeth Blackwell, first woman M.D. in the United States.

William Paine, American physician and editor.

George H. Taylor, American physician and inventor.

Francis Minot, American physician and writer.

John Fox Hammond, American physician.

Elias Samuel Cooper, American surgeon.

Franz von Leydig, German physician, professor of anatomy and naturalist.

SCIENTISTS AND OTHERS.

James Croll, Scottish physicist.

Rudolf von Roth, German orientalist.

August E. Mariette, French Egyptologist.

Samuel Eliot, American editor and author.

Nathan C. Webster, American editor and inventor.

Samuel Wetherill, American inventor and soldier.

George S. Appleton, American publisher.

Charles Robert Ingersoll, American statesman.

Perhaps the most noted born in 1821, having a great influence on physics, chemistry, pharmacy, medicine, biology and other sciences, are Hermann von Helmholtz, German physicist and physiologist, and Rudolf von Virchow, German pathologist. *The Scientific Monthly* for July 1921 contains excellent biographies of both of these scientists.

DIED IN 1821.

PHARMACISTS AND CHEMISTS.

Charles Louis Cadet de Gassicourt, celebrated French military pharmacist.

Carl Wilhelm Juch, German pharmacist and chemist, who published the first commentary on a pharmacopoeia, namely, the Ph. Borussica II, in 1805.

Franz Carl Achard, a pupil of Marggraf, German chemist, who in 1796 established the first beet sugar factory.

François Tingry, a student of Rouelle. Tingry became professor of chemistry and natural history in Geneva.

BOTANISTS.

Anders Johan Retzius of Sweden.

Louis Claude Marie Richard of France.

PHYSICIANS.

Jean Nicolas Corvisart, founder of the flourishing clinical school at the Paris Hospital La Charité. He was appointed professor in the College de France and member of the Academie des Sciences. Napoleon I created him baron and member of the Legion of Honor.

Eric Bollmann, Hannoverian physician in the United States.

Samuel Bard, American physician and writer.

Timothy Childs, American physician and statesman.

Johann Peter Frank, a rare and happy mixture of German thoroughness and French intelligence, born 1745 in Rotalben, Palatinate (a countryman of the late C. Lewis Diehl and myself), became the founder of modern public hygiene by his master work "System einer vollständigen medicinischen Polizey," published at Manheim in 1777-88 by Schwann, the printer of Schiller's "Räuber."

And last, but not least, Lyman Spalding, whose name will or should live forever as the originator of the United States Pharmacopoeia.

POETS.

I must not neglect to mention the death of John Keats, who died of tuberculosis in Rome on February 23, 1821, on the very day when the Philadelphia College of Pharmacy was established. Keats was born in London on Oct. 29, 1795, and attended school in Enfield. In 1810 he was apprenticed to a surgeon at Edmonton and in 1815 he went to London to practice as a hospital pharmacist. In July 1816 he passed the examination at Apothecaries Hall, but shortly afterwards left pharmacy to become a poet.

BIBLIOGRAPHY.

Pharmacopoea Rossica, the Russian Pharmacopoeia.

Sir William Jackson Hooker: *Flora Scotica*.

F. Magendie: *Formulairé*, which introduced the alkaloids into therapeutics.

Schubarth: *Vergleichende Nomenklatur*.

A. B. Lambert publishes in London "An Illustration of the Genus *Cinchona*."

Ruiz and Pavon, two Peruvian botanists, between 1821 and 1826 wrote their *Nueva Quinologia*. This work, however, remained unpublished until it was purchased by John Eliot Howard, the English quinine manufacturer, who published it in London in 1862, folio, 163 pages and 30 beautiful colored plates. The illustrations of cinchona are taken from Pavon's specimens in the herbarium at Madrid together with 3 plates representing the structure of several barks.

Johann Peter Frank (1745-1821) published an important treatise on therapeutics, *i. e.*, "De curandis hominum morbis epitome," Vienna, 1792-1821.

The celebrated Magendie, whose name continues to live in pharmacy and medicine through Magendie's Solution of Morphine Sulphate, founded the first periodical devoted exclusively to physiology, *i. e.*, *Journal de physiologie expérimentale*.

Jules Germain Cloquet begins the publication of his splendid atlas, *Anatomie de l'homme*, consisting of 5 volumes, illustrated with 300 folio plates.

Johann Friedrich Meckel of Halle, called the younger Meckel and the German Cuvier, the greatest anatomist in Germany before Johannes Müller, publishes (1821-30) his great system of comparative anatomy.

Apotheker Stoltze edits (1821-25) *Deutsches Jahrbuch der Pharmazie*.

Berzelius begins the publication of *Jahresberichte über die Fortschritte der Chemie und Mineralogie*.

Karl Johann Bernhard Karsten, the mineralogist, publishes *Metallurgische Reise*.

Jean Marc Gaspard Itard publishes his "Treatise on Otology."

Apotheker J. M. Schiller, of Rothenburg, the promoter of the idea of one Pharmacopoeia for entire Germany, writes a Treatise how Pharmacopoeias and Dispensatories should be improved.

The second volume of De Candolle's *Regni vegetabilis systema naturale* is published in Paris.

Varnhagen, of Schmalkalden, apotheker and book dealer, undertakes to publish an almanach with biographies of eminent pharmacists, chemists and physicians.

Tax or price list for medicines in Darmstadt was published.

Already at this early date Apotheker Schmidt of Sonderburg calls attention to the practice that laboratories manufacture galenicals which should be prepared by the pharmacist himself.

James Cutbush, chemist and apothecary at 25 S. 4th St., Philadelphia, published his "Synopsis of Chemistry," which in alphabetical order contains chemical names, synonyms and definitions.

Charles W. Coindet: *Nouvelles Recherches sur les effets de l'iodine* (Bibl. univ. de Genève).

Claudii Galeni Opera Omnia in 20 volumes by Dr. Carolus Gottlob Kuhn, a Latin translation of Galen's Greek masterwork.

CONCLUSIONS.

Let me hope that even this short or abbreviated paper will help to arouse more interest in the much-neglected study of the history of pharmacy. It is no credit to pharmaceutical education that this subject is not taught in our colleges, but it is to be hoped that with the introduction of longer courses and graduate courses, history of pharmacy will find a place in the curriculum. By numerous historical papers the author has been trying to prove that even a little knowledge of the history of his calling will be of benefit to the pharmacist. In his own retail drug business the author makes daily use of this knowledge and turns it into dollars. As an educator, the author knows from his own experience that history of pharmacy will instill love for professional pharmacy into the student and will strengthen this love in the mature pharmacist. Last, but not least, the American Pharmaceutical Association is to be complimented on the establishment of a Section on Historical Pharmacy, and the author, as one of its former Secretaries and Chairmen, continues to take an interest so as to make this "baby" Section a success.

A SIMPLE COSTLESS WATER-BATH.*

BY J. C. PEACOCK.

Recently during the course of some experiments made in test-tubes a very handy water-bath was made from an empty ether can as follows:

The soldered seam at the shoulder of the can was heated by revolving in a flame until the top and body of the can could be separated by prying. With pliers several slight crimps were next made in the periphery of the lid; and the latter then placed inside of the body of the can, being inverted on the bottom so that the neck by supporting the lid made a false bottom.

This arrangement gave a very suitable apparatus for holding the test-tubes in a nearly upright position, as well as protecting them from the danger of breaking through "bumping" during boiling of the bath.

Of course this appliance will serve in heating beakers, dishes and similar apparatus of proportionate size.

Should the neck of the can become detached while heating the solder, the lid may be placed upright in the body of the can, with practically the same adaptability to use.

* Read before Pennsylvania State Pharmaceutical Association, 1921.