Different workers have presented what they considered to be improved methods of preparation. Chapman,[1] in his report, discussed the formula offered by Squibb, which differed in that the amount of iron used was less than the U. S. P. formula. His method of preparation was slightly different too.

A cold percolation process was worked out by Hunstock.[2] It was essentially the method used for simple syrup prepared by cold percolation, the solution of ferrous iodide being used as the percolating liquid. Klie[3] used a very similar process a few years later.

Tizier,[4] after considerable work, concluded that technique was an important factor. He stated that the faster the reaction the better the syrup would be.

Cloughly[5] introduced a method that was decidedly different, in that the iron wire was first placed in a solution of potassium hydroxide to remove any oxide that might be present and would cause the solution to be darkened.

Toplis[6] substituted reduced iron for iron wire; he gave two reasons for this substitution—the first to prevent oxidation and the second to save time.

Borisch[7] modified the U. S. P. directions by requiring that the iodine be slowly added and the mixture be stirred with a bright iron spatula, which served as a catalytic agent.

Other changes have been suggested from time to time, but as they were generally intended to increase the stability of the preparation, they will be considered under the "Preservation."

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(*To be continued*)

PHARMACEUTICAL EVENTS IN 1776.*

BY OTTO RAUBENHEIMER.

The Sesqui-Centennial of the Declaration of Independence is duly celebrated this year in Philadelphia. Inasmuch as the A. PH. A. holds its convention this year in that historical city, a paper on a Sesqui-Centennial of Pharmaceutical Events will be in order. This is my excuse for the treatise herewith presented to the Historical Section of the A. PH. A. The arrangement is similar to my previous annual papers on Pharmaceutical Events.

GENERAL.

The Declaration of Independence adopted by The Second Continental Congress. It might be of interest to learn that Dr. Benjamin Rush was one of the signers. Benjamin Franklin sent to France as Commissioner for the United States. A very severe winter in Paris on which Lavoisier wrote a meteorological paper.

[1] Chapman, *Am. J. Pharm.*, 31, 559 (1859).
[2] Hunstock, *Ibid.*, 47, 390 (1873).
[3] Klie, *Ibid.*, 53, 4 (1881).
[4] Tizier, *Ibid.*, 23, 89 (1851).
[5] Cloughly, A. PH. A. YEAR BOOK, 1, 65 (1912); *Proc. Mo. Pharm. Assoc.*, 133 (1912).
[6] Toplis, PROC. A. PH. A., 58, 1258 (1910).
[7] Borisch, A. PH. A. YEAR BOOK, 21, 76 (1913).
* Section on Historical Pharmacy, A. PH. A., Philadelphia, 1926.

EVENTS PHARMACEUTICAL.

In August 1776 Congress appointed Dr. William Smith, of Philadelphia, as "Druggist to the Continental Army" with a salary of $30.00 monthly.

Congress ordered Charles Marshall of the apothecary shop at the "Golden Ball" to look after the sick and wounded in the Philadelphia hospital.

Scheele became manager of Pohler's Apotheke in Koeping, Sweden.

Ernst Wilhelm Martius (1756–1849), father of the celebrated pharmacognosist Theodore Wilhelm Christian Martius (1796–1863), completes five years apprenticeship in the Wels-Weinl Hofapotheke in Erlangen.

Apothecary-General created in the Revolutionary Army, reënacted in 1789, abolished 1812, revived in 1812 and again abolished in 1822.

Calumba came into European Materia Medica.

Daries in Leipzig studies the effect of the internal administration of Belladonna.

Perhaps the most important event, pharmaceutical and medical, is the introduction of Digitalis. It was in 1776 that William Withering (1741–99) learned from an old grandame in Shropshire that Foxglove was good for dropsy.

EVENTS CHEMICAL.

Lavoisier appointed superintendent of saltpeter and gunpowder manufacture in France.

Priestley as librarian of Lord Shelburne (1772–79) finds plenty of time for chemical investigations.

Frederick the Great, King of Prussia, makes the Swedish chemist Bergmann a tempting offer to join the Berlin Academy of Sciences, which is refused, however. Scheele corrects Baumé's Report that Aluminum Silicate is formed by fusing together SiO_2 and NaOH.

EVENTS MEDICAL.

Benjamin Rush, 1776–78 Surgeon-General Medical Department Continental Army.

John Hunter becomes Surgeon to the King of England.

Scarlatina pandemic in both hemispheres, 1776–1805. Jasser, Prussian Army Surgeon, operates successfully on mastoid.

Cruikshank investigates the reunion and regeneration of divided nerves. Friedrich Anton Mesmer practices in Vienna. Ergot used by midwives in France; in 1777, Dr. J. B. Desgranges of Lyons brings it into regular medical practice.

FOUNDATION OF SOCIETIES AND LIBRARIES.

Societé royale de Médicins, in Paris, abolished 1792 by the French Revolution. Medical Library of the New York Hospital.

EDUCATIONAL EVENTS.

Louis Bernard Guyton de Morveau (1737–1816), the founder of a national chemical nomenclature, delivers chemical lectures in Dijon, his birthplace. Hahnemann, father of Homeopathy, studied at the University Erlangen, taking his M.D. degree in 1779. Philipp Friedrich Theodor Meckel (1756–1803), of anatomy fame, studies at Strassburg.

Thomas Fowler, apothecary of York, studies medicine at Edinburg, taking his M.D. degree in 1778. Maria Theresa of Austria abolishes torture of criminals. Laura Maria Catrina Bassi-Varati, who took the double doctorate in Philosophy and Medicine at the University of Bologna, becomes Professor of Medicine there.

INVENTIONS AND DISCOVERIES.

Oxalic Acid by the oxidation of sugar with nitric acid—therefore its name "Zuckersäure"—independently by Scheele and Bergmann.

Hydrogen from Zn and NaOH independently by Scheele and de Lassone.

Uric Acid in urine and calculi by Scheele and Bergmann. Hippuric Acid in the urine of cows and camels by Hilaire Marie Ronelle. At first thought to be benzoic acid.

Borax discovered in Lagone di monte rotondo by Herbert Franz Hoefer, manager of the Court Pharmacy in Florence. Thus an apothecary became the father of the Borax industry in Italy.

Priestley describes N_2O and CO_2. Eudiometric Analysis of CH_4 by Volta.
Spielmann explains the fermentation of milk and formation of Kumys.
Wm. Cruikshank discovers that severed nerves will again grow together.
Lavoisier determines approximately O and CO_2 content of air.
Lavoisier observed that the combination product of the diamond was CO_2 only.
Lavoisier discovers that all nitrates contain oxygen.
Matthew Dobson proves that the sweetness of urine and blood in diabetes is due to sugar.

BORN—1776.

CHEMISTS.

Gerard Troost (1776–1850). This American chemist was born in Holland, studied chemistry, geology and allied sciences at Leyden obtaining the M.D. degree, and at Amsterdam where he obtained the Pharm. Mag. degree. In 1810, he settled in Philadelphia and, in 1812, he was one of the founders and first President of the Academy of Natural Sciences. From 1821 to 1822, he was the first professor of pharmaceutical and general chemistry at the Philadelphia College of Pharmacy. In 1827 he went to Nashville, Tenn., helped to found the University and became professor of chemistry, geology and mineralogy. Here he died in 1850. An important zinc mineral (anhydrous zinc silicate) found near Franklin, N. J., is named Troostite after him. Further particulars can be found in "The First Century of Philadelphia College of Pharmacy and Science, p. 397 and in Smith's "Old Philadelphia," p. 82.

Amedeo Avogadro (1776–1856), Italian chemist and professor of mathematics and physics at the University of Turin since 1820. The first to demonstrate that the molecules of many elements are composed of more than one atom.

PHYSICIANS.

Carl Friedrich Burdach (1776–1847), German professor of anatomy and physiology at Dorpat, Königsberg and Breslau. His name survives in the "Column of Burdach."

Thomas Hubbard (1776–1838), American physician and statesman.

BOTANIST.

Christian Gottfried Nees von Esenbeck (1776–1858), born in Reichenwald in the Odenberg, studied since 1796, in Jena. In 1817 he became professor in Erlangen, 1818 in Bonn and from 1830–1848 in Breslau. Taking part in the revolutionary action in 1848 in Berlin he lost his professorship, retired to Breslau, where he died in destitute circumstances; thus ended the life of a celebrated botanist and naturalist!

DIED IN 1776.

PHYSICIANS.

Robert James (1703–1776), practiced in Sheffield, Litchfield, Birmingham and finally in London; originator of the famous James' Fever Powder.

Anton de Haen of the Hague (1704–1776), pupil of Boerhaave and a colleague of van Swieten and associated with him in the foundation of the celebrated Vienna School of Medicine.

Theophile de Bordeu (1772–1776), anatomist at University Montpelier; one of the originators of the doctrine of vital force.

SCIENTIST.

David Hume (1711–1776), English sceptical philosopher and classic historian.

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Magellans: "Artificial Mineral Waters."

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CONCLUSION.

Let me hope that these Sesqui-Centennial Pharmaceutical Events in connection with the Sesqui-Centennial at Philadelphia will stir up a little more interest in that much neglected subject History of Pharmacy. It was Goethe who rightly said, "The History of a Science is Science Itself."

"STOP, LOOK, LISTEN!"*

BY JOHN URI LLOYD.

Venturesome seems it, in the face of the well-founded science of pharmacy that then existed, for any one to voice the lines transcribed in the paper written in 1887 entitled "The Handwriting on the Wall."[1] No attempt need be made to recite details therein contained. Be it enough to state that the forecast, based on well-grounded studies in which the writer was an incident only, has been not only fulfilled, but in many directions, more than fulfilled. Is not the apothecary of the present time afar from pharmacy as then taught?

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* Section on Historical Pharmacy, A. PH. A., Philadelphia meeting, 1926.

[1] A forecast indicating that events to come would shatter ideals and destroy processes then considered as the very foundations of the art and practice of pharmacy.