

## SEASONABLE DISPLAYS FOR DECEMBER AND JANUARY.

Perfumes and Toilet Articles.	Atomizers and Syringes.
Brushes.	Thermometers.
Flavoring Extracts and Spices.	Chest Protectors.
Olive Oil.	Hot Water Bottles and Warming Pads.

## ACTIVITIES OF W. J. M. GORDON.\*

## HISTORICAL NOTES ON THE EARLY MANUFACTURE AND USE OF GLYCERIN IN THE MIDDLE WEST.

BY JOHN URI LLOYD.

Sixty years ago, September, 1864, the AMERICAN PHARMACEUTICAL ASSOCIATION held its meeting in Cincinnati.<sup>1</sup> That was the first meeting attended by the writer of this paper, who though but a lad, recalls most vividly incidents connected therewith. My employer, W. J. M. Gordon, took the most active part of any Cincinnati member and at that meeting was made *President* of the A. PH. A.

With a respect approaching veneration the writer viewed the semi-official visit made by a party of the "celebrities" present to the Gordon establishment. Among them, conspicuous to memory, are Procter, Parrish, Ellis, Taylor of Philadelphia, Sharp and Caspari of Baltimore, Markoe of Boston, as well as others whose faces rise before me as recollection bridges the sixty-year chasm between that day and this.

Reference to the PROCEEDINGS of that year shows that the members present embraced many whose records stand as milestones in the progress of American Pharmacy. For example: John M. Maisch, Frederick Stearns, Enno Sander, H. N. Rittenhouse, P. W. Bedford, H. A. Elliott, may be mentioned as among many others well known, taking part on that occasion. This introduction brings us to the subject of our present paper, namely—Glycerin.

At that time glycerin was just coming into pharmaceutical and therapeutical service. The writer has particular reasons for remembering this material, because at that date his employer, Mr. Gordon, was absorbed in this "wonderful new menstruum," being the only manufacturer west of the Allegheny Mountains. He was the earliest Cincinnati investigator concerned in the applications of glycerin to medicine and its use in the arts, and naturally an enthusiast concerning the glycerin problem as a whole. His factory, located in Deer Creek, was at that date largely devoted to glycerin and the newly introduced glycerin products.

Let us first consider the name itself, pronounced so differently by different persons. It was varyingly accented as glycerine'—glycerène'—glicerine'—and occasionally glycerin, the preferred name as I remember it being glycerène', although glicerène' was also a favorite, spelled with the final e.<sup>2</sup> This demonstrates

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<sup>1</sup> Hall of the Catholic Institute of Cincinnati, Wednesday, September 21, 1864, 3 P.M.

<sup>2</sup> The use of superheated steam enabled Mr. Gordon to make his "Pure Concentrated Glycerine," which process, see the *Report of the British Association for the Advancement of Science*, had been introduced in England in 1855. Note the spelling of the word, *Report*, 1855, p. 75 of the *Abstracts*.

how the name of a chemical curiosity discovered by Scheele in 1779 (when preparing lead plaster from olive oil<sup>1</sup>—Thorpe) could be variedly pronounced nearly a hundred years thereafter.

Let us now turn to Mr. Gordon and the glycerin subject as introduced by him during the AMERICAN PHARMACEUTICAL ASSOCIATION meeting of 1864.

Query No. 14: Glycerine, its mission (so to speak) in Pharmacy as a remedy, as an adjuvant and as a solvent.

"Mr. W. J. M. Gordon read a report on this query and showed samples of various preparations made with glycerin instead of sugar, where sugar is ordered by the Pharmacopœia. This elicited considerable discussion, in which surprise was exhibited at the low price at which glycerin is produced, and the quality and mode of manufacture was alluded to. On motion the paper was referred to the Executive Committee for publication."

Turn now to the article in question, page 237, in which Mr. Gordon introduces the subject by stating: "Not having investigated it as thoroughly as desirable, I will present what I have accomplished in connection with much that is not new."

He refers to the sweet taste, to the fact that it is almost equal to cane sugar syrup without being liable to fermentation, "resembling oils but unlike oils, miscible with alcohol and water in any proportion; not volatile at ordinary temperatures and not becoming hard at the freezing point of mercury."

He states—"The high price heretofore, no doubt, has kept it from many uses to which it is now applied." Then he considers its "nutritive and alterative effect" its "soothing effect in coughs," and its "more important medicinal value as a vehicle for the preparation of a great variety of remedies for both internal and external use." He lauds it as a menstruum in the making of Syrup of Hypophosphites.<sup>2</sup> He commends it in the making of syrups, mentioning "ipecac, senega and especially syrups liable to fermentation." For chapped skin and hands he says "it has no equal." "For sore nipples, skin diseases, ulcers of various kinds, to prevent excessive suppuration and cleanse the secreting surfaces." He states "it is highly recommended in deep abscesses with diseased bone, combined with iodine which it dissolves," adding that "it is the favorite mode of applying iodine and its salts." He commends it in cerates and ointments which it preserves from rancidity, especially Goulard's cerate and for Kino preparations, the "glycerole of which does not gelatinize." Glycerole of starch (1 oz. glycerine to 70 grains of starch) he introduces as a substitute for lard or cerate. It will prevent moldiness and keep vegetable extracts soft; he states.

In the preparation of fluidextracts it will be found to supply the place of alcohol and sugar to much advantage, presenting fluidextracts of Jalap, Veratrum, Cinchona aromat and Iris versicolor as examples thereof. He states—"It dissolves the vegetable acids, most of the vegetable alkaloids, sulphuret of potassium, permanganate of potassa, sulphate of copper, zinc, iron and potassa, alkaline and some of the metallic chlorides."

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<sup>1</sup> "It was discovered in 1779 by Scheele who obtained it in the preparation of lead plaster by saponifying lard with lead oxide."—"Watts' Dictionary of Chemistry."

<sup>2</sup> A preparation just then conspicuous by reason of its being introduced by Dr. Churchill of England as a "specific for consumption."

Indeed scarcely any pharmaceutical preparation requires a menstruum but that, in the opinion of Mr. Gordon, would be improved by glycerin. Unquestionably this paper of Mr. Gordon and the specimens exhibited did much to make the illogical use of glycerin in plant preparations of the Pharmacopœia of 1870.<sup>1</sup>

In the arts and industries likewise, Mr. Gordon introduces or at least urges the use of glycerin. The writer of this remembers how the printers who had previously used molasses for their gelatin rollers displaced this by glycerin, one great advantage being that it did not attract flies which formerly had swarmed in the printing offices.

Scarcely an art, from tobacco and liquor manufacture to the lubricating of machinery but could, as shown by Mr. Gordon's paper, employ glycerin to advantage.

Turn now to the *Eclectic Medical Journal*, 1916, page 509, and note a contribution by this writer, giving the conspicuous uses and different qualities of glycerin as sold by Mr. Gordon in 1864, all of which have passed out of use excepting "Gordon's pure, odorless glycerine," now official as glycerin.<sup>2</sup>

In conclusion, the writer would state, he has made no effort to trace the original uses of glycerin as recorded by others, or to touch the subject outside of a few references. My aim is to record my personal experience with Mr. Gordon who was the pioneer in the glycerin industry in the Middle West, which may be demonstrated as follows:

Procter and Gamble, manufacturers of soap and candles, were established between Central Avenue and the Canal, a few squares from Mr. Gordon's pharmacy. As a worthless by-product an immense amount of the "sweet water" refuse in the making of candles was run into the adjacent canal, as the easiest method of its disposal. Mr. Gordon arranged to catch that "sweet water," freely given him without charge. In horse-drawn tanks it was carried to his factory in Deer Creek where it was refined. The sweet water cost him nothing. Glycerin sold for \$1.25 per pound.

In this connection it may be recalled that Mr. Gordon protected his apparatus and process with the utmost care. His employees were all loyal and could not be induced to give the secrets of his factory to any one. Very indignant was Mr. Gordon when he learned that a newly risen competitor had begun the manufacture of glycerin, and that for weeks he had worked as a common laborer in Mr. Gordon's laboratory, his chief duty being the wheeling of ashes from the furnace as well as that of a general roustabout. Seemingly that opportunity was all-sufficient.

Of old it was recorded—"the fashion of this world passeth away." (1 Cor. 7:31.) The manufacturers of soap and candles gradually turned to the refining of glycerin as a part of their opportunity. Mr. Gordon then became dependent upon crude glycerin from abroad, chiefly from Germany. Competition was impossible. The result to Mr. Gordon was financial disaster.

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<sup>1</sup> Out of the 46 official fluidextracts in the Pharmacopœia of 1870, glycerin was a constituent of the menstruum of 33.

<sup>2</sup> The only glycerin I remember as a competitor of Gordon was Bower's glycerin made in Philadelphia. If I mistake not it had a reputation before Mr. Gordon began glycerin manufacture and was the standard glycerin of that date.