

**A MONOGRAPH  
ON GLYCERIN AND  
ITS USES**

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A Monograph on Glycerin and Its Uses by Henry Hartshorne

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**HENRY HARTSHORNE**

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ON GLYCERIN.

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## P R E F A C E.

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THE only treatises upon Glycerin with whose existence I am acquainted, those of M. Démarquay and of Dr. William Abbotts Smith, are almost unknown in this country. Most of the facts concerning it are scattered about in various journals; especially in those connected with Pharmacy.

I hope it may prove a not unserviceable task, to the advantage both of physicians and pharmacists, to collate anew these facts; and, without exaggerating anything, to show that in glycerin we have an article with a very wide range of uses, not yet all well determined. Much of the indifference which both druggists and practitioners have displayed toward it may be explained by disappointment resulting from the use of an imperfectly purified article. But, since the means of testing it are now understood to be very simple, it may be hoped that, in the future, its remarkable powers

as a solvent, and advantages as a vehicle, as well as other available properties, may become better known and appreciated.

While claiming the credit only of a compiler in this little *brochure*, I have, at the same time, taken pains to verify the statements given, as far as was possible; and a few suggestions are made in regard to applications of glycerin, to which I venture to ask the attention of practitioners.

For aid in confirming, correcting and extending the accounts of authors in regard to the solvent powers of glycerin, I am especially indebted to Thomas S. Wiegand, chemist, of this city.

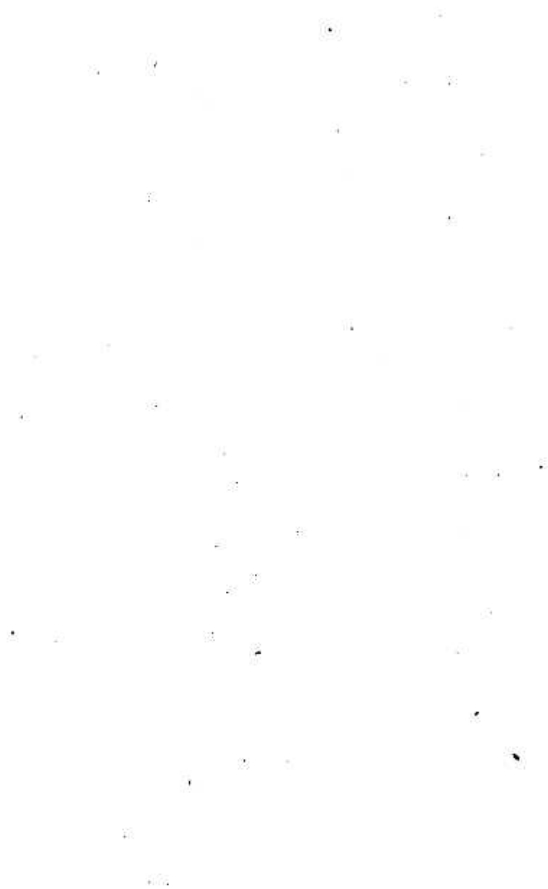
H. H.

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## ON GLYCERIN.

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### History.

GLYCERIN was discovered by Scheele, about 1779,<sup>1</sup> in the residuum from the manufacture of lead plaster. It was investigated more fully in 1811, by Chevreul and Pelouze; by the former of whom its present name was given. Gay-Lussac and Chevreul patented a process for separating the fatty acids in 1825; but glycerin was hardly known in commerce in its pure state until the beautiful discovery and invention of Mr. Richard Albert Tilghman, of Philadelphia, patented in 1854; by which it was found to be obtainable absolutely pure by a very simple process.

It was first introduced into medical use by T. De La Roche,<sup>2</sup> in 1844; and, at his suggestion, by Mr. J. Startin, in the London Hospital for Diseases of the Skin. Mr. Warrington patented, in 1846,<sup>3</sup> a method for preserving meat in it; and

<sup>1</sup> Gerhardt gives this date. An account is given of the discovery in the *Transac. of the Royal Academy of Sweden* for 1783.

<sup>2</sup> *Vide London Pharmaceut. Journal*, Nov. 1855.

<sup>3</sup> *Ibid.*

also pointed out its value in preparing and preserving objects for the microscope.

Cap and Garot investigated it anew, and published their observations in 1854.<sup>1</sup> By them and by M. Surun<sup>2</sup> its solvent powers were principally determined. Many other chemists, pharmacists, and medical men have since given attention to its properties and relations; although, in the language of G. Fergusson Wilson, "not a tithe of its uses have yet been developed."

#### Occurrence in Nature.

Glycerin does not exist uncombined in nature. It is present in the fat of all animals, including man, in natural *glycerids* or compounds with fatty acids. It is, therefore, evolved in the saponification, by alkalies or basic oxides, of all oily and fatty substances. Spermaceti and wax, however, contain none of it. Gobley<sup>3</sup> found it in the yolk of eggs and in the human brain, in the condition of *phospho-glyceric acid*, or phosphate of glycerin. Berthelot asserts its existence in cod-liver oil,<sup>4</sup> as *triacetin*, or teracetate of glycerin. Pasteur<sup>5</sup> states

<sup>1</sup> Journ. de Pharm. et de Chimie, April, Aug., and Oct., 1854.

<sup>2</sup> Vide W. A. Smith, M.D., on Glycerine, p. 23.

<sup>3</sup> Comptes Rendus, T. 21, pp. 766-769, et 988-992.

<sup>4</sup> Miller's Organic Chemistry, vol. iii. p. 259.

<sup>5</sup> Comptes Rendus, May, 1858.