

JOHN MICHAEL MAISCH

AN IDEAL PHARMACIST

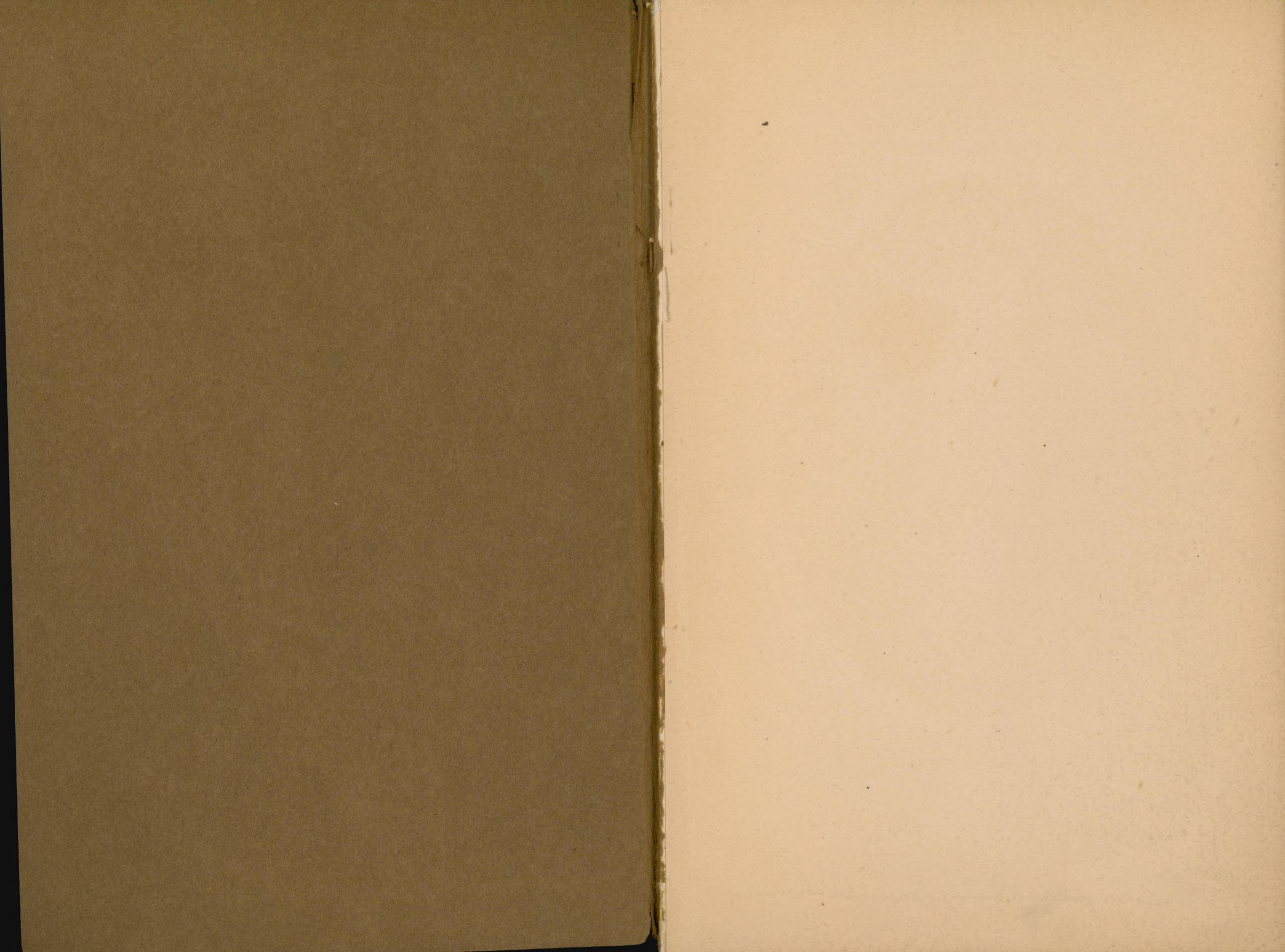
By
M. I. WILBERT

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JOHN MICHAEL MAISCH.

From a photograph by Gutekunst.

JOHN MICHAEL MAISCH, AN IDEAL PHARMACIST.

BY M. I. WILBERT,
Apothecary at the German Hospital, Philadelphia.

There are but few active workers in pharmacy that do not know and honor the name of John Michael Maisch, the one-time professor of materia medica and botany in the Philadelphia College of Pharmacy. So deeply impressed is his work on the everyday course of pharmaceutical progress in this country, that it is at times difficult to realize that his lips have been sealed and his pen has been stilled for nearly ten long years. Ten years constitute a period of time that is ample to indicate the value or worth of a life that has been lived; a period of time sufficiently long to demonstrate and point out to us the strong points of a noble nature, and to spread the name and fame of the few able and willing workers who, during their active life, thought little of themselves, but were constantly striving to improve the condition of others. The same period of time, on the other hand, has been amply sufficient to obliterate all trace of thousands that insisted on living for themselves alone.

In the annals of pharmacy, it would be difficult indeed to find a name that more nearly represents the ideal of what a pharmacist should strive to be, than does that of John M. Maisch. While there have been greater chemists whose early training was laid in the apothecary's shop, and while there have been more original and more thoroughly equipped botanists who at one time may have handled a mortar and pestle, there have been but few men connected with pharmacy that have had a more perfect knowledge of the facts that are needed in connection with a proper understanding of the

great variety of substances that come together on the shelves of the pharmacist.

Before going further, it may be well to consider what is necessary to constitute a good practical pharmacist.

Beside a good foundation in the elements of an ordinary education, including a working knowledge of at least several languages besides his own, the practical pharmacist should be sufficiently proficient in botany to recognize growing plants, by accepted methods of analysis. He should be an expert pharmacologist, at least thoroughly familiar with the appearance and properties of the materials that are likely to be used in the practice of medicine in his own particular neighborhood. To do this he must be so thoroughly grounded in the principles of chemistry, that he would be able to apply them in a practical way, not only for testing the chemical substances with which he comes in contact, for identity and purity, but he must also be able to do original work in the analysis and synthesis of compounds, or in the examination of organic substances for their proximate constituents.

He should also be thoroughly familiar with the construction and use of the microscope, so that he can, and does, use it in connection with his investigations in the field of botany and chemistry. Then he must have such a practical knowledge of the possible application and uses of the different substances with which he comes in contact that he can give intelligent and practical information to such as choose to inquire as to their uses.

In addition to these necessary rudiments that he should be well versed in, our practical pharmacist should have some knowledge of the various other subjects that are usually classed together as natural sciences, particularly zoology, geology and mineralogy. In addition to this necessary practical information he should be able to demonstrate that he has within himself the possibilities of doing original work, and of thinking for himself. And finally, to show that he has the interests of his fellowmen at heart, and has been able to raise his ambitions above the ordinary commercial tendencies of the times, he should be willing and able to impart his knowledge to others, so as to allow them to advance with, and if need be, to surpass him. To do this he must be able to write out his experiments and achievements in such a way that others may grasp his ideas and duplicate or perfect his discoveries. Such a man

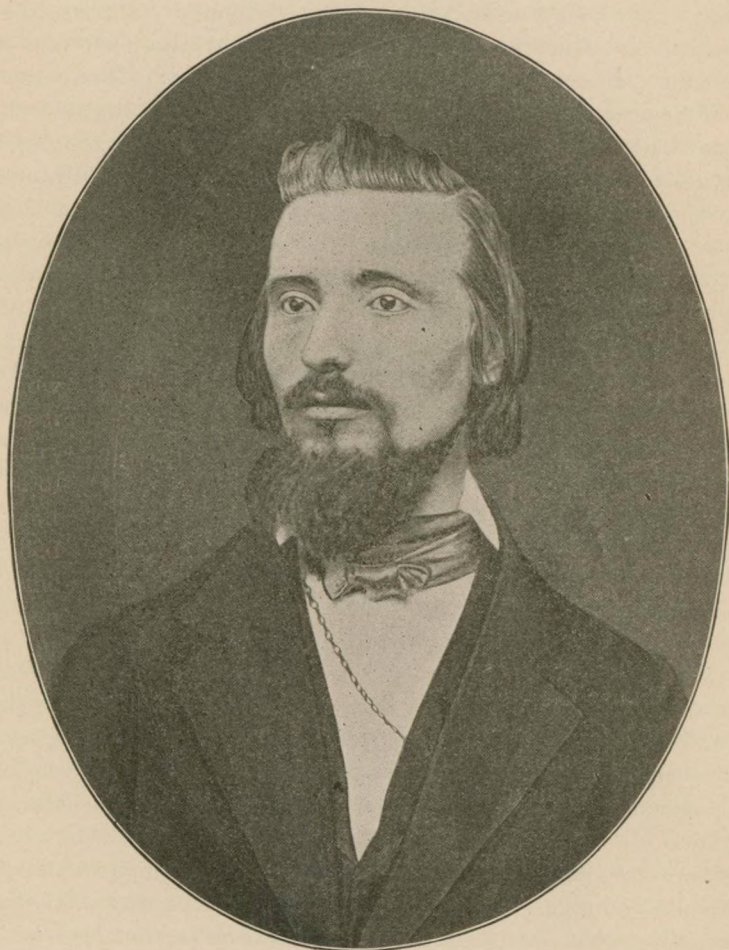
was John Michael Maisch. Who of the thousands that visited the historical exhibition that was held in Philadelphia in 1902, in connection with the semi-centennial celebration of the American Pharmaceutical Association, was not impressed with the number and variety of the exhibits bearing his name. A simple enumeration of these different objects would emphasize the fact that here, indeed, had been a fair example of the practical pharmacist. Then there is the other criterion: as a man who has the welfare of his fellowmen at heart, a true pharmacist will communicate the results of his researches to others. Here again, John M. Maisch comes fully up to the requirements, his published essays number upwards of 400, and are of such a high ethical and scientific standard that they may well be considered a proper and a lasting monument of a life that was spent for the betterment of his fellowmen.

Any one who will take even a casual survey of the number and variety of subjects that were inquired into, in these numerous papers, will naturally ask, What manner of man was John M. Maisch, and what phenomenal educational advantages did he enjoy, to bring him in contact with these numerous subjects, or to enable him to deal with them in the thorough and matter-of-fact way that immediately evidences the master?

Those who are interested in the more detailed accounts of his early history will find interesting material in the biographical sketches published in the *Alumni Report* of the P.C.P., by the editor (Vol. XXX, 1893, p. 5), in the *AMERICAN JOURNAL OF PHARMACY*, by Prof. Joseph P. Remington (1894, p. 1), and in the proceedings of the Philosophical Society, by Dr. Charles S. Dolley (1894, p. 345). The object of the present sketch is more to collate and record his achievements and the recognitions that were awarded to him. It may be well, nevertheless, to incorporate an outline of his early life so as to show that he not only did not enjoy any phenomenal educational advantages, but that he, in many respects, was sadly hampered and sorely disappointed, by the failure to realize his wish for a university training.

John Michael Maisch, who, as is well known, died September 10, 1893, was born in Hanau, Germany, on January 30, 1831. After attending the elementary schools of his native city he was apprenticed to one of the goldsmiths of Hanau, for which the city had been celebrated for a great number of years. This apprenticeship was of

short duration, however, lasting only a few days, as the boy, being only twelve years of age, was still required by law to attend school, and the necessary release, by the proper authorities, was not obtain-



JOHN M. MAISCH

at the age of 26, taken from an oil painting.

able. Young Maisch then attended the higher schools of his city, and also received private instruction in French, Latin, chemistry and the natural sciences, from several of his teachers, who took a

personal interest in him with a view of preparing him for a university course.

The physical strength of the young man had been overestimated, however, and before he had finished his preliminary studies he was prostrated by a prolonged illness that brought all his hopes of a university training to an abrupt termination.

The now seventeen-year-old boy, who had been brought in close contact with the higher ideas and ideals of the more progressive German scholars, was just in the proper frame of mind to be carried away by the agitation for personal rights that swept over the central part of Europe in 1848. It is not surprising therefore that we hear of him as having been arrested in a neighboring State for teaching and believing what was then considered a revolutionary doctrine—the necessity of a united fatherland with a constitutional government.

Like many other progressive Germans who were years ahead of their times, John M. Maisch emigrated to America, where free institutions such as his fancy had depicted already existed.

Mr. Maisch arrived in the city of Baltimore in 1849, and not finding any more congenial occupation was employed in a box factory for several months. Later he made the acquaintance of a Dr. Wiss, who was about to open a drug store, and who saw in the comparatively well-educated and studiously inclined young German the possibility of an able assistant. The store was opened in 1850, and from this time we may date John M. Maisch's connection with pharmacy.

This store, for some unknown reason, was sold a few months later, but young Maisch, seeing here a possibility for congenial occupation, continued in the drug business.

From Baltimore he went to Washington, from there to Philadelphia, and later to New York; this period constituting practically a series of "Wander-Jahre" in his now chosen profession.

That he was not idle during these years is evidenced by two silver medals, dated 1853, that were shown at the historical exhibition last year: one from the Maryland Institute for the Promotion of the Mechanic Arts, Baltimore, and the other from the Metropolitan Mechanic Institute; both of these were awarded to John M. Maisch for an exhibition of a collection of chemicals of his own manufacture. In 1856 Mr. Maisch returned to Philadelphia, where he was subsequently employed in the store of Robert Shoemaker & Co.

This constitutes practically the beginning of his active and serious career. In the same year he became a member of the American

PHILADELPHIA, October, 1859.

SIR:—

The undersigned takes this method to inform you that he has assumed the position of Superintendent of the practical department of

PARRISH'S SCHOOL OF PHARMACY.

It will be his endeavor to continue the course of instruction upon the same basis that has been pursued in this establishment heretofore, and he hopes thereby, to preserve the high reputation in which it has been held during the ten years of its existence.

The *Pharmaceutical classes* will consist of four students, the sessions will be held twice a week—one and a-half hour each.—The instructions will embrace all manipulations required in a pharmaceutical establishment.

Besides the instruction in practical pharmacy, a

Laboratory for Practical & Analytical Chemistry,

designed in particular for the wants of pharmacists and physicians, will be opened. A limited number of students can be accommodated.

The course of instruction in *Practical Chemistry* will embrace the preparation of elementary bodies and their compounds, researches on the properties, reactions, combinations and decompositions of the same, and the most approved modes for investigating their purity.

In *Analytical Chemistry*, the preparation of the test liquids, the qualitative and quantitative analysis of inorganic, and of the more prominent organic compounds, and the analysis by means of the blow pipe, will be taught. Instruction will also be given in the *proximate analysis* of crude vegetable bodies, to which the particular attention of medical and pharmaceutical students is visited.

For students sufficiently advanced, it is the intention to pursue a practical course of *toxicological analysis*, for which purpose the various organs and secretions of poisoned animals, as well as food, which has been intentionally poisoned, will be subjected to qualitative, and as far as possible, also to quantitative analysis.

The Chemical Laboratory will be open every day during the week, Saturdays excepted, from 9 A. M. to 4 P. M. A convenient hour will be set apart on each Saturday for examination, and to review and discuss the labors of the preceeding week.

TERMS—For a quarterly course, in practical pharmacy, \$10 00
Including the Lectures of Mr. Edward Parrish, 15 00
For Practical or analytical chemistry per month, 25 00
(The use of apparatus, tests, &c., included.)

Applications for instructions, or for further particulars, may be made at Mr. Parrish's Lectures, in College Avenue, on Wednesday and Saturday mornings between 8 and 9 o'clock, or at the Laboratory, 800 Arch Street.

J. M. MAISCH.

Leaflet Announcing J. M. Maisch's First Work as a Teacher.

Pharmaceutical Association, and three years later he joined the Philadelphia College of Pharmacy.

An interesting anecdote, illustrating the studious habits of the

young pharmacist, was at one time told by Mr. Shoemaker (*P.C.P. Alumni Report*, Vol. XXX, p. 7).

Some time after being employed by Robert Shoemaker & Co., Mr. Maisch was taken quite ill and went home. His employer, who took more than an ordinary interest in the young man, called several days later to inquire how he was progressing. He found him, still sick, propped up in bed, with a book on his lap and a table with retorts, test tubes and other chemical appliances alongside, carrying on chemical experiments. This anecdote also illustrates the indomitable spirit and the ceaseless activity that permeated his whole subsequent career.

A man with the scientific turn of mind possessed by young Maisch would naturally grasp at an opportunity to develop himself along lines of original research and the practical application of his knowledge. It is not surprising, therefore, that when Edward Parrish offered young Maisch the opportunity of superintending the practical instruction in his school of pharmacy, it was eagerly seized.

A reproduction of the small leaflet, published at the time, to advertise the new arrangement will be found on opposite page.

This advertisement represents, too, his first appearance as a teacher of pharmacy, an occupation which he continued in almost uninterruptedly to the time of his death.

In 1861 he was offered, and accepted, the chair of materia medica and pharmacy in the College of Pharmacy of the City of New York. His time here not being fully occupied, he was fortunate enough to connect himself with the manufacturing establishment of Dr. E. R. Squibb, and thus found an opportunity of cultivating a personal acquaintance and friendship that was not alone lasting, but was also of practical advantage to him.

It was on the personal recommendation of Dr. Squibb that Professor Maisch, in 1863, was appointed Superintendent of the Army Medical Laboratory, about being established in Philadelphia.

The story of this laboratory, the kind and amount of work that was done in it, and the political as well as commercial objections that were raised to it, would make interesting reading at the present time. Some insight into its history may be had from opinions and accounts published in the *AMERICAN JOURNAL OF PHARMACY* during the latter years of the Civil War; also from a statistical account of the work done, given in a paper by Professor Maisch, read before

the American Pharmaceutical Society in 1866. From this latter paper it appears that the aggregate value of the products amounted to several million dollars, while the net profits resulted in a saving to the United States Government of more than \$750,000.

We must go back here a few moments to outline the connection of John M. Maisch with the Philadelphia College and the AMERICAN JOURNAL OF PHARMACY. His contributions to the JOURNAL commenced in 1854 and continued uninterruptedly to the time of his death, a period of forty years, during which time by far the greater number of his original essays were published in its pages.



U. S. Army Laboratory, Philadelphia.

As noted before, he became a member of the College in 1859, and took an active part in the work of the institution from that time. He was elected to the Board of Trustees in 1860 and to the Publication Committee in 1861.

When, in the latter part of that year, 1861, he went as professor to the College of Pharmacy of the City of New York, he offered his resignation to the Philadelphia College of Pharmacy. This was not accepted, however. The secretary, *pro tem.*, at that time, Mr. Wm. C. Bakes, was instructed to notify Professor Maisch that his resig-

nation had been laid on the table, and that the annual dues connected with active membership had, on motion, been remitted for the time. On his return from New York, and while engaged at the Army Laboratory, Professor Maisch again entered actively in the work of the Philadelphia College.

After the close of the Civil War, the Army Medical Laboratory in Philadelphia was discontinued. Professor Maisch then opened a store at 1607 Ridge Avenue, Philadelphia. In the same year, 1866, he was elected to succeed Prof. Wm. Procter, Jr., in the chair of pharmacy in the Philadelphia College of Pharmacy. In the following year, 1867, with the sanction of the Board of Trustees, he exchanged chairs with Prof. Edward Parrish, who was teaching materia medica at that time. This latter branch was subsequently enlarged so as to include botany.

In this field, as professor of materia medica and botany, Professor Maisch continued for twenty-six years, striving earnestly to inculcate such rudiments of the science as would be most practical to the prospective pharmacists. How successful he was is best evidenced by the hundreds of his former students who have courted success by putting the knowledge obtained from him to practical uses.

When, in 1870, the Alumni Association decided to open the laboratory of practical chemistry and pharmacy, Professor Maisch was selected as the proper person to inaugurate the new laboratory and to direct it. The difficulties which he had to overcome in this direction are indicated in his report to the Secretary of the Alumni Association in 1872. (Eighth Annual Alumni Report.)

When Professor Procter decided that the AMERICAN JOURNAL OF PHARMACY should be published more frequently, and that his advancing years necessitated his retirement from the active direction of the editorial management, he nominated as his logical successor the occupant of the chair of materia medica and pharmacy.

This position, as editor of what was now a monthly publication, Professor Maisch filled for twenty-two years, to the satisfaction of officers of the college and to the material advantage of the contributors as well as subscribers of the JOURNAL.

As noted before, Professor Maisch as a young man had joined the American Pharmaceutical Association in 1856. He was quite a regular attendant at the meetings and a liberal contributor to the proceedings. He was elected corresponding secretary at the Phila-

delphia meeting in 1862, first vice-president at Baltimore in 1863, and in 1865, when he attended the meeting at Boston as one of the delegates of the Philadelphia College of Pharmacy, he was elected permanent secretary, which position he filled uninterruptedly to the time of his death, never missing a meeting until 1893, when failing health prevented his attendance.

His services for the American Pharmaceutical Association are amply evidenced in the twenty-seven volumes of the proceedings that were published under his direct supervision, and to which he not only contributed a large number of original articles and the regular and very complete annual reports of the permanent secretary, but his name also appears more frequently than any other among those that took an active part in the discussions of the various papers.

When, in 1870, the Philadelphia College of Pharmacy elected delegates to the decennial convention for the revision of the Pharmacopœia, John M. Maisch, with Wm. Procter, Jr., and Alfred B. Taylor, were selected to represent the College. John M. Maisch and Alfred B. Taylor were subsequently elected to serve on the revision committee, Professor Maisch serving through three decennial revisions.

This then brings us up to the period of his most active work. A review of the number of official occupations will give us a fair idea of the amount and variety of work he was able to accomplish regularly and uninterruptedly for more than twenty years.

We should, however, mention that again in 1870, at the suggestion of Professor Maisch, the Philadelphia College of Pharmacy decided to reinaugurate the system of monthly pharmaceutical meetings that had been allowed to lapse during the exciting days of the Civil War. These meetings were under the special patronage of Professor Maisch, who was a regular attendant, a liberal contributor and, what is more, was always on the outlook for new and original material from various sources.

In addition to the work in connection with these meetings, then, it will be remembered that Professor Maisch, during the same period, occupied the chair of materia medica and botany in the Philadelphia College of Pharmacy; was editor and a liberal contributor to the AMERICAN JOURNAL OF PHARMACY; was a member of the Board of Trustees of the Philadelphia College of Pharmacy; was

permanent secretary of the American Pharmaceutical Association, and a member of the Pharmacopœial Revision Committee.

In addition to these occupations, John M. Maisch took an active interest in the work of the Academy of Natural Sciences, Philadelphia, and also of the German Society, and in later years in the proceedings of the Philosophical Society.

In 1878 he was instrumental in founding the Pennsylvania State Pharmaceutical Association, in the annual meetings of which he always took an active interest, being a regular attendant and a frequent contributor to the proceedings. He, however, persistently refused to accept any office.

In addition to the numerous contributions to contemporary journal literature, Professor Maisch, in 1860, edited and revised a translation of Rochleder's Proximate Analysis of Plants and Vegetable Substances. This first appeared in serial form in the AMERICAN JOURNAL OF PHARMACY in 1861-62, and was later issued as a separate volume, sold by Charles Ellis & Son. (See review, A. J. P., 1862, p. 492.) In 1874 he edited and revised Griffith's Universal Formulary, the resulting volume being an octavo of about 500 pages, containing more than 5,000 formulas.

The first edition of the National Dispensatory appeared in 1879, followed in six months by the second. The third appeared in 1884, the fourth in 1887, the fifth in 1888, and the sixth, to which he had also contributed many corrections, in 1893, only a few months after his death.

The first edition of his Organic Materia Medica appeared in 1882, the second in 1885, the third in 1887, the fourth in 1890, the fifth in 1892, while a sixth, edited by his son, appeared in 1895. These last two works are so well and so favorably known that it will not be necessary to describe them, or even to refer to the huge amount of work that books of this kind usually represent.

The argument that working under such high pressure would have a tendency to shorten his life never appealed to Professor Maisch as a reason for relinquishing or even shirking any of the duties that fell to his lot. He gave to everything that his name was connected with his personal attention. It mattered little what the work at hand was, whether it was the writing or revision of a book or essay, the editing of the JOURNAL, the work in connection with the office of permanent secretary of the American Pharmaceutical Asso-

ciation, or as a member of a special or standing committee, he always managed to give the necessary work close and personal attention.

It would be surprising, indeed, if as a result of the gigantic amount of original work which he was able to accomplish, and did accomplish, he should not receive some material recognition of its value. That this recognition was meted out to him is evidenced by the list of honorary memberships in pharmaceutical or in scientific societies that is appended.

The one recognition that must have pleased Professor Maisch greatly, and the one that came as a fitting close to his eventful and active life, was the presentation of the Hanbury gold medal for original research in the natural history and chemistry of drugs.

This tribute, coming as it did on what was practically the eve of his death, has to us a particularly pathetic interest. It was brought to this country by Mr. Michael Carteghe, the then President of the Pharmaceutical Society of Great Britain, who had expected to present the same to Professor Maisch at the annual meeting of the American Pharmaceutical Association at Chicago, in 1893. The letter accompanying the medal, a reproduction of which is appended, fully explains the origin and significance of this award. The earlier recipients of the medal were: Flückiger, Dragendorff, John Elliot Howard, Dymock, Planchon and Hesse. This was the first, and so far the only, time it had been awarded to an American.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.
17 Bloomsbury Square.

LONDON, August 3, 1893.

Prof. John. M. Maisch.

DEAR SIR:—I have the pleasure to inform you that the adjudicators appointed under the deed of settlement of the Hanbury Memorial Fund have awarded the Gold Medal to you.

The fund, as you may be aware, was raised to establish a memorial to Daniel Hanbury, the memorial taking the form of a gold medal, which is awarded biennially for the prosecution or promotion of research in the chemistry and natural history of drugs.

The adjudicators of this award to you are the President of the Linnean Society, President of the Chemical Society, the President of the Pharmaceutical Society, the President of the British Pharmaceutical Conference, and Mr. Francis Ransom, a pharmaceutical chemist who was, prior to the award, nominated by the last named two presidents.

I am, yours faithfully,

RICHARD BREMRIDGE, *Secretary.*



Pharmaceutical Society of Great Britain.

17, BLOOMSBURY SQUARE, LONDON, W.C.

August 3rd 1893

Professor John M. Maisch
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I am, yours faithfully

Richard Bremridge
Secretary

Letter from the Secretary of the Pharmaceutical Society of Great Britain.

The appended synopsis of the accomplishments of, and the recognitions that were awarded to, the late Professor Maisch have been added to facilitate a review of the really wonderful amount and variety of lasting work that he was enabled to accomplish in addition to the everyday, and oftentimes irksome, duties of a teacher. Probably no one that did not come in close contact with Professor Maisch personally can ever appreciate the continued and painstaking care with which he followed each detail of a subject that he was interested in. Those who came in contact with him at the meetings

of the American, or Pennsylvania State, Pharmaceutical Association will remember how he was always willing to accord credit to anyone that had recorded or observed a new fact, and also how mercilessly he exposed any attempt at plagiarism.

The appended list of papers it was thought might be an incentive for others to either follow along the same lines, or at least take up and elaborate on some of the subjects that are here mentioned or partially developed.

Many of the included papers are, even to-day, of great practical interest, while all of them bear witness to an earnest attempt to discover and disseminate scientific truths. As a whole, they consti-



Obverse and Reverse of Hanbury Medal.

tute a monument to the industry and ability of an earnest and indefatigable worker, who, without exceptional educational advantages, without rare gifts of genius, and hampered with a marked accent that indicated his foreign birth, strove honestly and earnestly to cultivate and improve that portion of the field that was apportioned to him.

A SYNOPSIS OF THE ACHIEVEMENTS AND A LIST OF THE RECOGNITIONS
AWARDED TO JOHN MICHAEL MAISCH.

Member of the American Pharmaceutical Association, 1856.

Member of the Philadelphia College of Pharmacy, 1859.

Member of the College of Pharmacy of the City of New York,
1861.

Member of the Academy of Natural Sciences, Philadelphia, 1863.
Member of the American Chemical Society, 1876.

Member of the Pennsylvania State Pharmaceutical Association,
1878.

Member of the Deutsche Chemische Gesellschaft, 1879.

Member of the American Philosophical Society, 1884.

Member of the American Academy of Political and Social Sci-
ences, 1892.

OFFICIAL POSITIONS.

Superintendent of the practical department of Parrish's School of
Pharmacy, 1859-61.

Professor of Materia Medica and Pharmacy in the College of
Pharmacy of the City of New York, 1861-63.

Superintendent of the United States Army Laboratory, Philadel-
phia, 1863-66.

Professor of Pharmacy in the Philadelphia College of Pharmacy,
1866-67.

Professor of Materia Medica and Botany in the Philadelphia Col-
lege of Pharmacy, 1867-93.

Permanent Secretary of the American Pharmaceutical Associa-
tion, 1865-93.

Editor of the AMERICAN JOURNAL OF PHARMACY, 1871-93.

Author, with Alfred Stillé, M.D., LL.D., of the National Dispen-
satory, five editions, 1879-93.

Author of Organic Materia Medica, 5 editions, 1882-92.

A LIST OF THE PRINCIPAL PAPERS CONTRIBUTED BY PROF. JOHN M.
MAISCH TO PHARMACEUTICAL LITERATURE.

1854—

On the Adulteration of Drugs and Chemical Preparations. A. J. P.

On the Changes to Which Liquor Ferri Iodidi is Subject and its
Restoration. A. J. P.

1855—

On the Incompatibility of Sulphate of Quinia with the Acetates.

A. J. P.

Examination of Bitartrate of Potassa. A. J. P.

Effects of Sunlight on the Syrup of Iodide of Iron. A. J. P.

Translation of M. Strecker's Paper on Quinine. A. J. P.

Contributions to Toxicology. A. J. P.

1856—

- On Convenient Modes of Administering Cod-liver Oil. A. J. P.
 On the Relations of Physicians and Pharmacutists. A. J. P.
 Contributions to Toxicology (three articles). A. J. P.
 On an Expeditious Mode of Making Mercurial Ointment. A. J. P.
 On Solution of Gutta Percha. A. J. P.
 On Sulphate of Quinia and Carbonate of Ammonia in Pills.

A. J. P.

- On Wine of Colchicum Seed. A. J. P.
 On Effervescing Powders. *Proc. A. Ph. A.* (A. J. P., 1857.)

1857—

- On Protiodide of Mercury. A. J. P.
 Solubility of Iodides in Syrupus Ferri Iodidi. A. J. P.
 On Fluid Extract of Arnica. A. J. P.
 On Fluid Extract of Uva Ursi. A. J. P.
 On the Detection of a New Falsification of Oil of Almonds.

A. J. P.

- On the Use of Indigenous Plants. *Proc. A. Ph. A.*
 American Eclectic Resinoids. *Buch. Rept. f. Phar., Vol. VI.*

1858—

- Remarks on Some Pharmaceutical Preparations. A. J. P.
 On Diluted Acetic Acid. A. J. P.
 On the Preservation of Drugs from Insects. A. J. P.
 Note on Syrup of Hypophosphites. A. J. P.
 On the Decomposition of Quinia by the Acetates. A. J. P.
 Effervescing Powders. *Proc. A. Ph. A.*
 On the Detection of Adulterations of Volatile Oils. *Proc. A. Ph. A.*
 On the Sale of Poisons in the United States. *Buch. Rept. f. Phar., Vol. VII.*

- On Fluid Extracts in the United States. *Buch. Rept. f. Phar., Vol. VII.*

1859—

- On Extractum Ferri Pomatum. A. J. P.
 On the Preservation of Fluid Extracts. A. J. P.
 On the New System of German Weights. A. J. P.
 On the Proper Menstruum for Fluid Extracts. A. J. P.
 Notes on Fluid Extract of Buchu, Cimicifuga, Serpentina and Valerian. A. J. P.
 On the Solubility of Phosphate of Iron. A. J. P.

- On a New Mode of Preparing some Syrups. A. J. P.
 The Behavior of Essential Oils to Iodine and Bromine. *Proc. A. Ph. A.*
 Manufacturing Pharmacy in the United States. *Buch. Rept. f. Phar., Vol. XVIII.*

1860—

- Examination of Oil of Peppermint. A. J. P.
 On some Preparations of Calamus Root. A. J. P.
 Gleanings from German Journals (three articles). A. J. P.
 Alumen Exsiccatum. A. J. P.
 Analysis of Commercial Glacial Phosphoric Acid. A. J. P.
 Note on Benzoic Acid and some Benzoates. A. J. P.
 On the Detection of Croton Oil in Mixtures. A. J. P.
 Analysis of Milk. A. J. P.
 Chemical Notes. A. J. P.
 Alumen Ustum. *Buch. Rept. f. Phar., Vol. IX.*
 Pharmacy in the United States. *Buch. Rept. f. Phar., Vol. IX.*
 On Narcotic Fluid Extracts. *Proc. A. Ph. A.*
 Hydrobromic Acid. *Proc. A. Ph. A.*

1861—

- On Chelidonium Majus. A. J. P.
 On the Adulteration of Carmine. A. J. P.
 On Commercial Iron by Hydrogen. A. J. P.
 On the Importation of Mineral Waters. A. J. P.
 Analysis of the Chalybeate Waters of Sharon Springs, N. Y.
 A. J. P.
 On Anacahuite Wood. A. J. P.
 On the Tincture and Ferrated Tincture of Bark. A. J. P.
 On the Origin of Bay Rum. A. J. P.
 On the Volatile Oil of Myrcia Acris. A. J. P.
 On the Ferrated Tincture of Cinchona. A. J. P.
 On the Conversion of Monohydrated into Common Phosphoric Acid. A. J. P.
 Gleanings from the German Journals (four articles). A. J. P.
 Chemical Examination of Coca Leaves. A. J. P.
 Report of the Committee on Botany. A. J. P.
 On the Mineral Water Trade in the United States. *Buch. Rept. f. Phar., Vol. X.*
 On the Medicinal Flora of the Vicinity of Philadelphia. *Buch. Rept. f. Phar., Vol. X.*

1862—

- Gleanings from the German Journals (two articles). A. J. P.
 On Commercial Belladonna Leaves. A. J. P.
 Report of Committee on Herbarium. A. J. P.
 Report of Committee on Progress of Pharmacy. Proc. A. Ph. A.
 On the Standing of the Pharmacist in the United States Army.
 Buch. Rept. f. Phar., Vol. XI.
 On Snake-Bite Remedies in the United States. Buch. Rept. f. Phar., Vol. XI.

1863—

- On Copaiba Pills. A. J. P.
 Gleanings from the German Journals. A. J. P.
 Note on the Alkaloids of *Menispermum Canadense*. A. J. P.
 Note on *Podophyllum*. A. J. P.
 On the Solution of Tartaric Acid. Proc. A. Ph. A.

1864—

- Practical and Scientific Notes. A. J. P.
 On Impurities and Adulterations. A. J. P.
 Gleanings from the German Journals. A. J. P.
 On the Contamination of American Sulphuric Acid with Arsenic.
 A. J. P.
 On the Assay of French Brandy and Whiskey. Proc. A. Ph. A.
 On the Quality of the Sherry Wine of our Commerce and its Assay. Proc. A. Ph. A.
 On Some Medicinal Spirits. Proc. A. Ph. A.
 Report on Drug Market. Proc. A. Ph. A.

1865—

- On the Preparation of Heavy Oil of Wine. A. J. P.
 On the Active Principle of *Rhus Toxicodendron*. Proc. A. Ph. A.
 (A. J. P., 1866).

1866—

- Assays of Sherry Wine. Proc. A. Ph. A.
 Examination of Whiskey and Brandy. Proc. A. Ph. A.
 Specific Gravity of Medicinal Chloroform. Proc. A. Ph. A.
 (A. J. P., 1867).
 Statistics of the U. S. A. Laboratory at Philadelphia. Proc. A. Ph. A.

1867—

- On Liquor *Magnesiae Citratis*. A. J. P.

- On Liquor Ferri Acetatis. A. J. P.
 On Colchicia. A. J. P.
 On Tests for the Purity of Glycerin. A. J. P.
 On Carelessness in the Collection of Drugs. A. J. P.
 Note on Cheap Glycerin. A. J. P.
 Gleanings from the German Journals (two articles). A. J. P.
 On a Permanent Solution of Pyrophosphates of Soda and Iron.
 A. J. P.
 Review of the Pharmacopœia Helvetica (three articles). A. J. P.
 1868—
 Gleanings from the German Journals (three articles). A. J. P.
 On Chloroform. A. J. P.
 Note to Editor on False Jalap. A. J. P.
 Milky Juice of *Lactuca Elongata*. Mühl. Proc. A. Ph. A. (A. J. P., 1869.)
 1869—
 Gleanings from the German Journals (four articles). A. J. P.
 On some Panama Drugs. A. J. P.
 On the Nomenclature and Definitions of the United States Pharmacopœia. A. J. P.
 Valedictory Address. P. C. P. *Alumni Report*.
Lycopodium Clavatum. Proc. A. Ph. A. (A. J. P., 1870.)
 Preparations from *Lactuca Canadensis* Lin. Proc. A. Ph. A.
 1870—
 On the Weeds of the Western Peppermint Plantations. A. J. P.
 Gleanings from the German Journals (three articles). A. J. P.
 On Pharmaceutical Legislation. A. J. P.
 Solubility of Glue in Glycerin. A. J. P.
 1871—
 Decomposition of Acetate of Morphia in Aqueous Solutions.
 A. J. P.
 Detection of Turmeric in Powdered Rhubarb and Mustard. A. J. P.
 Ferrated Elixir of Cinchona. A. J. P.
 Gleanings from Foreign Journals. A. J. P.
 Gleanings from German Journals (four articles). A. J. P.
 Fluid Extract of Chestnut Leaves. A. J. P.
 Note on Amylo-Nitrous Ether. A. J. P.
 Note on Hydrocyanate of Morphia. A. J. P.
 Note on some Pill Masses. A. J. P.

- Precipitation of Quinia by Iodide of Potassium. A. J. P.
 Seeds of two Species of Strychnos. A. J. P.
 Solutions of Alkaloids in Medicated Waters. A. J. P.
 Syrupus Asafoetida. A. J. P.
 African Saffron. Proc. A. Ph. A. (A. J. P., 1872.)

1872—

- Gleanings from the European Journals (twelve articles). A. J. P.
 Loss of the Herbaceous Parts of Plants in Drying. A. J. P.
 Monobromated Camphor. A. J. P.
 On an Asserted Specific for Ague. A. J. P.
 On some Pectoral Powders of European Pharmacy. A. J. P.
 On the Botanical Origin of the Root of Cypripedium. A. J. P.
 Pharmacognostical Notes. A. J. P.
 Use of Petroleum Benzine in making Oleoresins. A. J. P.
 Valedictory Address. P. C. P. *Alumni Report*.

Report of the Superintendent of the Laboratory. P. C. P.

Alumni Report.

- Chinese Blistering Bugs. Proc. A. Ph. A.
 Sneezeweed. Proc. A. Ph. A.

1873—

- Chloride of Mercur ethyl. A. J. P.
 Impurities among Rhizomes of Cypripedium. A. J. P.
 Levico Mineral Water. A. J. P.
 Gleanings from European Journals (twelve articles). A. J. P.
 Medicinal Use of Green Soap. A. J. P.
 Remarks on Elixirs. A. J. P.
 Selected Formulas from the Pharm. Germ. (five articles). A. J. P.
 Spirit of Nitrous Ether as a Supposed Test for some Alkaloids.

A. J. P.

- Assay of Preparations of Cantharides. Proc. A. Ph. A.
 Reaction of Chloral Hydrate. Proc. A. Ph. A.
 Time of Collecting Biennial Plants. Proc. A. Ph. A.

1874—

- Balsams, Liquidambar Styraciflua and Orientale. A. J. P.
 Gleanings from European Journals (nine articles). A. J. P.
 Notes on some North American Plants. A. J. P.
 Occurrence of Arbutin in some Ericaceous Plants. A. J. P.
 Pharmacognostical and Chemical Notes. A. J. P.

- Remarks on Resin of Podophyllum. A. J. P.
 Introductory Address. P. C. P. *Alumni Report*.

1875—

- Constituents and Properties of Potentilla. A. J. P.
 Gleanings from European Journals (nine articles). A. J. P.
 Medicated Waters. A. J. P.
 Note on Tinctura Opii Muriatica. A. J. P.
 Remarks on Cinchoquinine. A. J. P.
 Valedictory Address. P. C. P. *Alumni Report*.
 Matico. Proc. A. Ph. A.

1876—

- Asserted Presence of Tannin in Gentian. A. J. P.
 Fucus Vesiculosus and Some Allied Species. A. J. P.
 Gleanings from the Foreign Journals (eleven articles). A. J. P.
 Notes on the Genus Teucrium. A. J. P.
 Notes on the International Exhibition (four articles). A. J. P.
 Notes on the Quinine Flower. A. J. P.
 Remarks on Cinchoquinine. A. J. P.
 Remarks on Extract of Jalap. A. J. P.
 Use of Metrical Weights in Prescriptions. A. J. P.

1877—

- Detection of Castor Oil in Copaiba. A. J. P.
 Examination of a Cure for Love of Liquor. A. J. P.
 Formulas and Preparations of New Medicaments (three articles).

A. J. P.

- Gleanings from Foreign Journals (eight articles). A. J. P.
 Note on Dialysed Iron. A. J. P.
 Note on Xanthium Spinosum. A. J. P.
 Note on the Permanent Exhibition. A. J. P.
 The Metrical System in Prescriptions. A. J. P.
 The Strength of Tinctura Opii. A. J. P.
 Introductory Address. P. C. P. *Alumni Report*.

1878—

- Aspidium Marginale. A. J. P.
 Berberis of the Pacific Coast. A. J. P.
 Gleanings from Foreign Journals (six articles). A. J. P.
 Notes on a few American Drugs. A. J. P.
 Useful Species of Viburnum. A. J. P.
 Valedictory Address. P. C. P. *Alumni Report*.

1879—

- Artificial Fruit Essences. A. J. P.
 Poisonous Species of Astragalus. A. J. P.
 Sulphocarbolate of Potassium. A. J. P.
 Supposed Alkaloids of Podophyllum. A. J. P.

1880—

- Note on Some American Species of Artemesia. A. J. P.
 Presence of Tannin in Gentian. A. J. P.
 Valedictory Address. P. C. P. *Alumni Report*.

1881—

- Compound Spirit of Cinnamon. A. J. P.
 Dose of Extractum Physostigmatis. A. J. P.
 Georgia Bark. A. J. P.
 Manufacture of Quinia in the United States. A. J. P.
 Oleum Betula Empyreumaticum. A. J. P.
 Gleanings in Materia Medica (four articles). A. J. P.
 Origin of False Senega. A. J. P.
 Orthography of the Metric Units. A. J. P.
 Poisonous Principle of Anacardium. A. J. P.
 Practical Notes from Foreign Journals (four articles). A. J. P.
 Stearopten of Buchu Leaves. A. J. P.
 Tinctura Rusci. A. J. P.
 Xanthorrhœa Resins. A. J. P.
 Introductory Address. P. C. P. *Alumni Report*.

1882—

- Gleanings in Materia Medica (ten articles). A. J. P.
 Practical Notes from Various Sources (ten articles). A. J. P.
 Preparation of Mercurial Ointment. A. J. P.
 Syrupus Ferri Protochloridi. A. J. P.
 Chia and Allied Species of Salvia. A. J. P.
 Useful American Myrtles. A. J. P.
 Introductory Address. P. C. P. *Alumni Report*.

1883—

- Comparison of Galenical Preparations (six articles). A. J. P.
 Galenical Preparations of the German Pharmacopœia (four articles). A. J. P.
 Practical Notes from Various Sources (six articles). A. J. P.
 Relative Strength of Certain Preparations. A. J. P.
 Valedictory Address. P. C. P. *Alumni Report*.

1884—

- Chemical and Pharmacognostical Notes. A. J. P.
 Laboratory Notes—Abstracts from Theses (two articles). A. J. P.
 Notes on Researches on Capillarity. A. J. P.
 Practical Notes. A. J. P.

1885—

- Gleanings in Materia Medica (eight articles). A. J. P.
 Materia Medica of the Mexican Pharmacopœia (eight articles). A. J. P.
 Pharmaceutical Preparations of the Mexican Pharmacopœia (four articles). A. J. P.
 Practical Notes (two articles). A. J. P.
 Commercial Spanish Saffron. A. J. P.
 Indigenous Species of Croton. A. J. P.
 Useful Plants of the Verbenaceæ. A. J. P.
 Introductory Address. P. C. P. *Alumni Report*.
 Purity of Commercial Spanish Saffron. Proc. A. Ph. A.

1886—

- Commercial Sulphate of Quinia. A. J. P.
 Gleanings in Materia Medica (six articles). A. J. P.
 Materia Medica of the New Mexican Pharmacopœia (four articles). A. J. P.
 Note on Yerba and Raiz del Indio. A. J. P.
 Valedictory Address. P. C. P. *Alumni Report*.
 Report on Legislation. Proc. A. Ph. A.
 Gotthilf Heinrich Ernst Mühlenberg as a Botanist. Hoffman's Phar. Rund.

1887—

- Chemical Notes from Theses. A. J. P.
 Gleanings in Materia Medica (six articles). A. J. P.
 Jalap Resin and Jalapin. A. J. P.
 Practical Notes from Various Sources (six articles). A. J. P.
 Remarks on a Cancer Cure. A. J. P.

1888—

- Blue Coloring Matter in Flowers. A. J. P.
 Gleanings in Materia Medica. A. J. P.
 Notes on Some New Remedies. A. J. P.
 Practical Notes from Foreign Journals. A. J. P.
 Notes on Some Old Remedies. A. J. P.
 The Genus Luffa. A. J. P.

1889—

- Note on Andromedotoxin in Ericaceæ. A. J. P.
 Note on Filicic Acid. A. J. P.
 Note on Use of Magnolia Leaves. A. J. P.
 Notes on Some Indigenous Remedies. A. J. P.
 On Soluble Gum Tragacanth. A. J. P.
 Origin of False Senega Root. A. J. P.
 Preparations of Mustard for Internal Use. A. J. P.
 Useful Plants of the Genus Psoralea. A. J. P.
 Valedictory Address. P. C. P. *Alumni Report*.

1890—

- Botanical Origin of Some Pharmacopœial Drugs. A. J. P.
 Gleanings in Materia Medica (two articles). A. J. P.
 Morphine Salts and Hydrocyanic Acid. A. J. P.
 Notes on Scopola. A. J. P.
 Pharmacopœial Assays of Drugs and Galenicals. A. J. P.
 Plant Groups and their Constituents and Properties. A. J. P.
 Practical Notes from Various Sources (two articles). A. J. P.
 Prospective Camphor Industry of Florida. A. J. P.
 Some North American Medicinal Plants. A. J. P.

1891—

- Galenical Preparations Added to the British Pharmacopœia. A. J. P.
 Some North American Medicinal Plants. A. J. P.
 Vegetable Drugs Used in Mexico (two articles). A. J. P.
 Introductory Address. P. C. P. *Alumni Report*.

1892—

- Polygala Alba. A. J. P.
 Soda Mint. A. J. P.
 Vanilla Plant an Epiphyte. A. J. P.
 Valedictory Address. P. C. P. *Alumni Report*.

1893—

- On the Tubers of Dioscorea Species. A. J. P.

A LIST OF HONORARY, ASSOCIATE AND CORRESPONDING MEMBERSHIPS TO
WHICH PROFESSOR MAISCH HAD BEEN ELECTED.

(Copied from a list that had been made out by himself.)

Associate member of the Société Pharmacie Royale de Bruxelles,
1867.

Honorary member of the Pharmaceutical Society of St. Petersburg,
1868.

Corresponding member of the Société de Pharmacie d'Anvers,
1870.

Honorary member of the New Jersey State Pharmaceutical Association,
1871.

Honorary member of the California State Pharmaceutical Association,
1871.

Honorary member of the Massachusetts College of Pharmacy,
1871.

Honorary member of the British Pharmaceutical Conference,
1872.

Honorary member of the Ontario College of Pharmacy, 1873.

Honorary member of the Cincinnati College of Pharmacy, 1873.

Honorary member of the St. Clair Pharmaceutical Society of
Southern Illinois, 1874.

Honorary member of the Camden Pharmaceutical Association,
1874.

Corresponding member of the Société Royale des Sciences Médicales et Naturelles, Bruxelles, 1874.

Corresponding member of the Académie Royale de Médecin de Belgique, 1874.

Honorary member of the New Hampshire State Pharmaceutical Association, 1875.

Honorary member of the Société Royale de Pharmacie de Bruxelles, 1876.

Corresponding member of the Académie Royale de Médecin de Bruxelles, 1876.

Corresponding member of the Sociedad Mexicana de Historia Natural, 1876.

Corresponding member of the Sociedad Mexico Pharmaceutica-Medica de Yucatan, 1878.

Honorary member of the Neu Yorker Apotheker Verein, 1878.

Honorary member of the Pharmaceutical Association of South Carolina, 1878.

Honorary member of the Pharmaceutical Society of Victoria,
1878.

Honorary member of the Schweizerische Apotheker Verein, 1878.

Honorary member of the Zeta Phi Alpha, P. C. P., 1879.

Honorary member of the Pharmaceutical Society of New South Wales, 1880.

Corresponding member of the Wetterauische Gesellschaft der Gesammten Naturheilkunde, 1881.

Honorary member of the Louisiana State Pharmaceutical Association, 1882.

Honorary member of the Alabama State Pharmaceutical Association, 1882.

Honorary member of the Ohio State Pharmaceutical Association, 1882.

Honorary member of the New York State Pharmaceutical Association, 1882.

Honorary member of the Wisconsin State Pharmaceutical Association, 1882.

Honorary member of the Iowa State Pharmaceutical Association, 1883.

Honorary member of the Virginia State Pharmaceutical Association, 1883.

Honorary member of the Pharmaceutical Association of the Province of Quebec, 1885.

Honorary member of the Société de Pharmacie d'Anvers, 1885.

Honorary member of the Maryland State Pharmaceutical Association, 1886.

Honorary member of the Pharmaceutical Society of Great Britain, 1887.

Honorary member of the Nebraska State Pharmaceutical Association, 1887.

Honorary member of the Alumni Association of the Philadelphia College of Pharmacy, 1888.

Honorary member of the Georgia State Pharmaceutical Association, 1890.

Honorary member of the Trinity Historical Society of Dallas, Tex., 1891.

Honorary member of the Philadelphia Botanical Club, 1892.

Honorary member of the Colorado State Pharmaceutical Association, 1892.

Honorary member of the Association Internationale pour le Progrès de l'Hygiène, Bruxelles, 1893.

THE HONORARY DEGREES CONFERRED ON PROFESSOR MAISCH WERE:

Degree of Graduate in Pharmacy, by the Maryland College of Pharmacy, 1871.

Degree of Doctor in Pharmacy, Maryland College of Pharmacy, 1871.

Degree of Master of Pharmacy, by the Philadelphia College of Pharmacy, 1889.

